


Berrien County Trails Master Plan

BERRIEN COUNTY, MICHIGAN

2022

A photograph of a paved trail winding through a lush, green wooded area. In the foreground, a woman wearing a blue helmet, a dark blue tank top, and bright blue shorts is riding a bicycle towards the camera. In the background, a man in a light blue t-shirt and khaki shorts is walking away from the camera. The path is shaded by the surrounding trees, and the overall atmosphere is peaceful and recreational.

Visit www.BerrienTrails.org/bcmasterplan.asp for an interactive map and digital copy of this document.

ACKNOWLEDGMENTS

The Berrien County Trails Master Plan would not have been possible without the dedication and support of all of these individuals and organizations that have been involved in the planning process. The numerous municipalities that financially supported this Plan truly indicates the county-wide desire for a comprehensive and connected active recreation and transportation network.

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Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, concept drawings, cost estimates, etc. contained in this Plan are based on the data, information, and existing conditions provided to planners and are subject to change. Further analysis and engineering design are necessary prior to implementing any of the recommendations contained in this Plan.

CONTENTS

1	INTRODUCTION	
	Vision Statement & Themes	2
	Executive Summary	4
	Where is Berrien County?	7
	What is the Master Plan?	8
	What is the Significance of this Plan?	9
	Regional Connectivity Opportunities	10
	Planning Process	11
2	PUBLIC ENGAGEMENT	
	Public Engagement Process	13
	Municipal Assessment	14
	Community Survey	16
	Community Open Houses	21
	Youth & Young Adult Engagement	26
3	EXISTING NETWORK	
	Definitions & Standards	30
	Existing Network	34
	National & Regional Connectors	35
	Local Community Connectors	36
	Park & Recreation Based Trails	37
	Water Trails	38
	Equestrian Trails	39

4	ANALYSIS	
	Methodology	41
	Demand Analysis	42
	Needs Analysis	43
	Health Analysis	44
	Stress Analysis	45
	Key Findings	46
5	RECOMMENDATIONS	
	Infrastructure	48
	Construction & Maintenance	99
	Planning & Evaluation	103
	Policy	105
	Education & Safety	106
	Marketing & Engagement	107
	Aspiration	108
6	IMPLEMENTATION TOOLBOX	
	Implementing this Plan in Your Community	110
	Local Planning & Evaluation	111
	Best Practices for Design, Construction & Maintenance	115
	Funding for Planning & Construction	123
7	APPENDIX	
	Community Survey Results	A-2
	Benefits of Active Recreation & Transportation	A-3
	Example Plan Adoption Resolution	A-5
	Estimated Construction Costs	A-6
	Estimated Maintenance Costs	A-7



1

INTRODUCTION

Berrien County Trails Master Plan

VISION STATEMENT

The Friends of the Berrien County Trails envisions a future in which walking, paddling, and bicycling opportunities are easily accessible throughout Berrien County for people of all ages and abilities. Berrien County has numerous natural and community assets that uniquely position it to become a national leader in trail development and achieve benefits such as improved personal wellbeing and community health, reduced traffic congestion, better resident and talent attraction, and enhanced quality of life.

The Berrien County Trails Master Plan will provide the tools to achieve this vision, engaging a broad group of stakeholders in a process that will build community consensus on future project priorities and investments. This plan will support the case for integration of trails as foundational to future overall transportation and recreation planning activities.



Galien River Water Trail

THEMES FOR ACTIVE RECREATION & TRANSPORTATION

The Friends of Berrien County Trails have identified a bold vision for the future of trails in Berrien County that, in conjunction with the supporting goals and objectives, will provide the foundation for all physical and policy recommendations in the Plan. As a means of supporting the vision, recommendations were developed along the following key themes for active recreation and transportation:

CONNECTIVITY

These networks will better connect both residents and visitors to each of the municipalities and destinations within Berrien County.

SAFETY

Encourage public and private efforts to educate community members on safe walking, bicycling, and driving habits, as well as informing local law enforcement and public officials on ways to promote pedestrian and bicycle friendly laws and policies.

ACCESSIBILITY

Encourage coordinated planning, infrastructure design, and maintenance procedures to ensure that existing and future network investments result in an integrated transportation network accessible to residents of all ages and abilities.

THEMES FOR ACTIVE RECREATION & TRANSPORTATION

EQUITY

Emphasize opportunities to increase the accessibility and availability of active recreation and transportation options, particularly in areas that need walking, bicycling, and public transit.

HEALTH

Provide opportunities for residents and visitors to achieve a healthier lifestyle by actively moving in their everyday lives in safe places for physical activity. Aim to improve community health by creating options for active living and spending more time with family outdoors.

CULTURE

Create awareness of the benefits of supporting a culture of active living through reducing dependence on single-person vehicle travel and prioritizing opportunities for active recreation.

QUALITY OF PLACE & TALENT ATTRACTION

Promote the county's network, programs, and events to build the reputation of Berrien County municipalities as walk-, bike-, and trail-friendly destinations.

ECONOMIC IMPACT

Highlight the importance of linking active recreation and transportation policies with land use policies to encourage sustainable community economic growth.

COLLABORATION

Form, maintain, and grow partnerships between the public and private sectors to encourage development and connectivity of the network.

MAINTENANCE

Emphasize the importance of continued maintenance to ensure the success and safe use of the network now and into the future. This also refers to the maintenance of this Plan, which should be updated regularly to adapt to changing conditions in Berrien County.

“We need a[n] unpaved and paved, well-maintained hiking and biking trail system that connects our communities...it’s essential for attracting new, younger residents. Our quality of life must be competitive with the coasts, and given the beauty of our area, we’re missing an opportunity.”

– SURVEY RESPONDENT

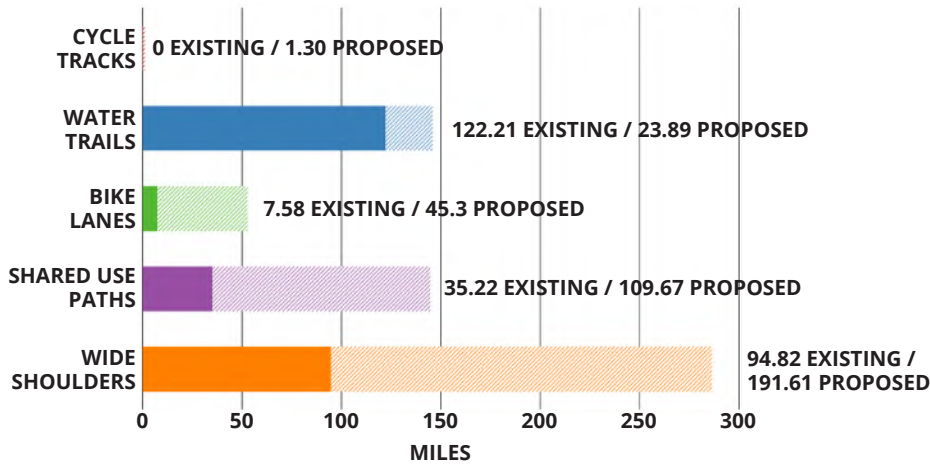
EXECUTIVE SUMMARY

The Berrien County Trails Master Plan will guide the future development of the active recreation and transportation network. The proposed routes will connect significantly more residents and destinations to this network by increasing the mileage of infrastructure by 372 miles. This network will provide new transportation and recreation options for residents and visitors and become an asset for Berrien County and the region.

71,235
POPULATION WITHIN A 5 MIN WALK TO THE **EXISTING** NETWORK*
* 82,413 including water trails

104,241
POPULATION WITHIN A 5 MIN WALK TO THE **PROPOSED** NETWORK *
* 112,690 including water trails

EXISTING AND PROPOSED MILEAGE BY TYPE



LEGEND

Proposed Routes

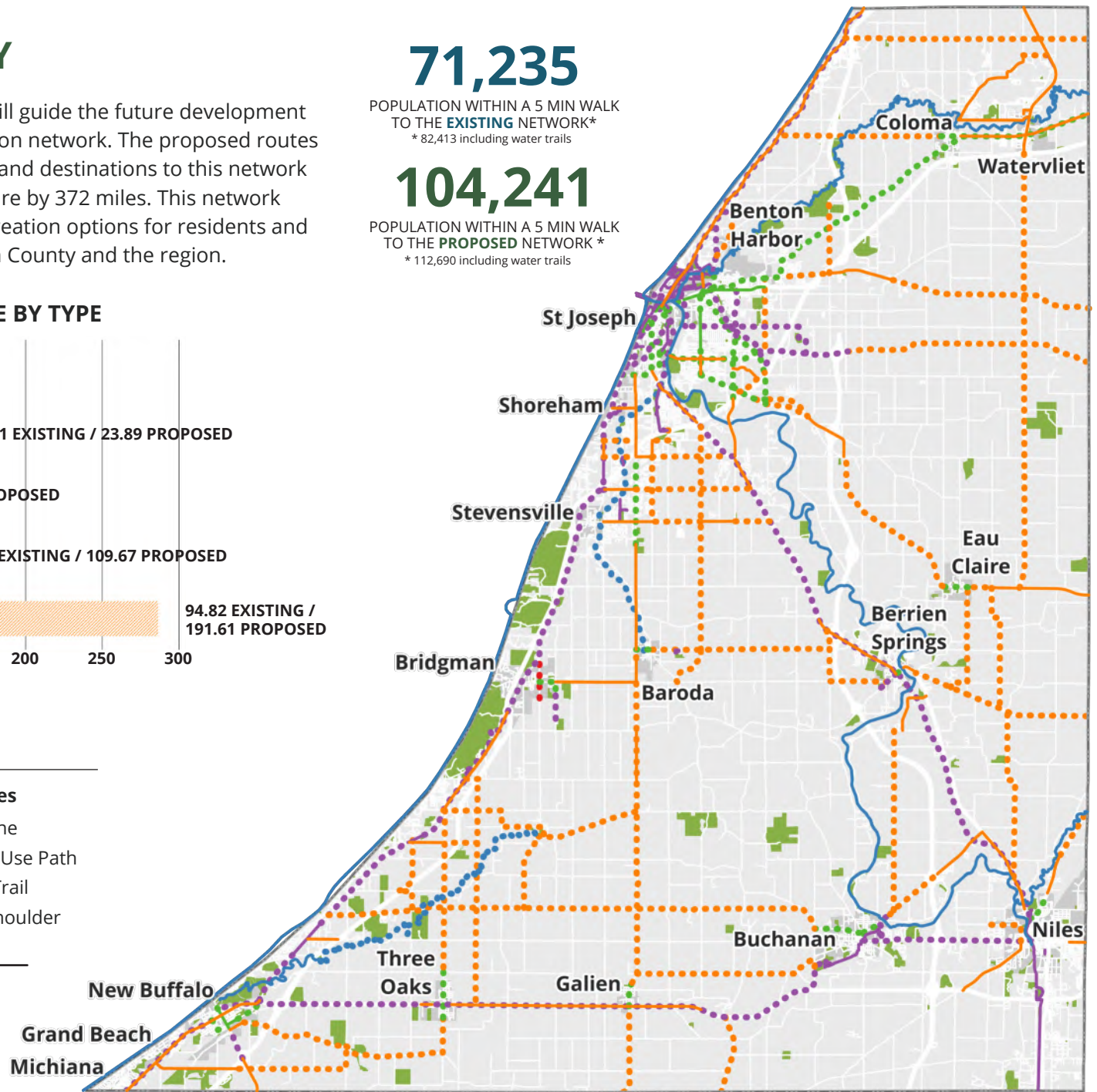
- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- Park
- Water
- City or Village

1" = 6 Miles



EXECUTIVE SUMMARY

Accompanying the recommended routes are a set of recommendations to ensure the success of the recommended network.

PLAN RECOMMENDATIONS

INFRASTRUCTURE RECOMMENDATIONS

	ESTIMATED TIME FRAME
I-1 Complete three regionally significant routes that will create a backbone of the proposed network. These routes include: Marquette Greenway/Red Arrow Linear Park/Lakeview Trail; Indiana-Michigan River Valley Trail; Old Sauk Trail; and McCoy's Creek Trail.	ONGOING
I-2 Build upon the backbone of active recreation & transportation routes created in I-1 and develop the local community connectors within your jurisdiction.	ONGOING
I-3 Strive to complete the "last mile" connections from destinations, homes, and trip generators to the current and proposed active recreation & transportation network.	ONGOING
I-7 Encourage the development of new parks based trails by local institutional and business partners, promote successful systems such as the mountain bike trails at Whirlpool and Andrews University, and connect any new parks based trails to the overall system.	ONGOING
I-8 Explore the development of equestrian trails in the new county park site located north of Watervliet and/or in the DNR/Andrews University property south of Berrien Springs.	SHORT TERM
I-9 Consider allowing equestrian use at existing and proposed large parks and along shared use paths if conditions permit.	SHORT TERM
I-4 Develop a water trail along Hickory Creek and extend the Galien River water trail to New Troy.	SHORT TERM
I-5 Improve and install new high-quality access sites for Berrien County's water trails that include ADA boat and kayak launches, adequate parking, and restrooms.	MEDIUM TERM
I-6 Connect existing and new parks, recreation areas, and other outdoor activities and amenities to the active recreation and transportation network.	LONG TERM

CONSTRUCTION & MAINTENANCE RECOMMENDATIONS

CM-1 Encourage local municipalities to incorporate funding for construction and maintenance of the existing and recommended active recreation and transportation network as part of local capital improvement planning.	ONGOING
CM-7 When constructing new routes, work with the hired consultants to provide estimated maintenance costs to decision makers and other interested parties to aid maintenance and capital planning.	ONGOING
CM-9 Establish a sustainable funding source for maintenance such as a county-wide endowment for maintenance that can be accessed by the local municipalities.	SHORT TERM
CM-5 Leverage modern technology in mapping and capital management to aid in unifying condition assessment and maintenance efforts by all participation organizations and individuals. This should be championed by one organization in partnership with all interested parties to ensure centralization and consistency.	SHORT TERM
CM-6 Explore integrating trail locations and real-time conditions in popular apps such as Trailforks.	SHORT TERM
CM-3 Develop and implement a centralized condition assessment process for consistency and unification of assessment and maintenance efforts.	SHORT TERM
CM-8 Establish a process to share project plans, construction costs, and maintenance cost estimates with the Friends of Berrien County Trails to aid in future planning and the monitoring of trends.	SHORT TERM
CM-2 Rollout a comprehensive network of conveniently located bicycle racks and lockers.	MEDIUM TERM
CM-4 Organize consistent volunteer efforts to assess the condition of infrastructure and perform clean-up/maintenance events as part of the overall condition assessment and maintenance process.	MEDIUM TERM

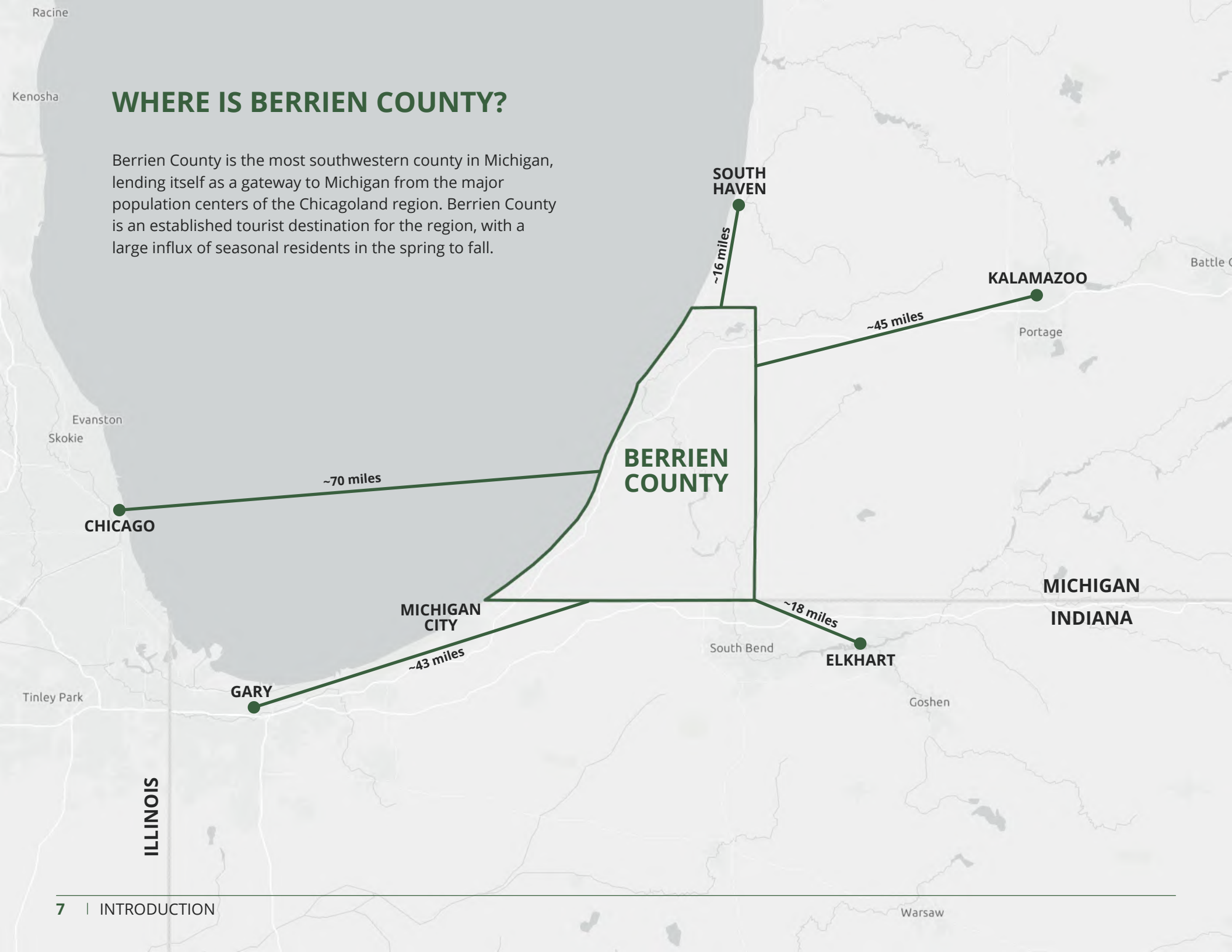
EXECUTIVE SUMMARY

PLAN RECOMMENDATIONS

PLANNING & EVALUATION RECOMMENDATIONS	ESTIMATED TIME FRAME
<p>PE-5 Maintain this data with consistent updates and make planning data publicly available.</p>	<p>ONGOING</p>
<p>PE-4 Beyond the condition and maintenance data gathering mentioned earlier, gather data to aid in planning and evaluation such as trail counts and community input. This should be championed by one organization in partnership with all interested parties to ensure centralization and consistency.</p>	<p>MEDIUM TERM</p>
<p>PE-1 Adopt a resolution committing to implement the Berrien County Trails Master Plan.</p>	<p>SHORT TERM</p>
<p>PE-2 Integrate the recommendations of the Berrien County Trails Master Plan into other local plan updates (comprehensive plans, parks plans, etc.).</p>	<p>SHORT TERM</p>
<p>PE-3 When implementing the routes and recommendations in this Plan, use the Implementation Toolbox to ensure there is equitable community engagement.</p>	<p>SHORT TERM</p>
POLICY RECOMMENDATIONS	
<p>P-2 Encourage Berrien County and the local municipalities to adopt a complete streets policy that promotes consistency across the county.</p>	<p>ONGOING</p>
<p>P-1 Modify public policy/ordinances to support active recreation and transportation (require sidewalks with new development, sidewalk maintenance requirements, require trail/sidewalk connections, require minimum bicycle parking, etc.).</p>	<p>SHORT TERM</p>
EDUCATION & SAFETY RECOMMENDATIONS	
<p>ES-1 Encourage experiential walks, hikes, paddles, or rides of existing and proposed infrastructure by involved parties, government officials, law enforcement agents, decision makers, and consultants.</p>	<p>SHORT TERM</p>
<p>ES-2 Partner with local law enforcement agencies to ensure there is education and training in place on pedestrian and cyclists and encourage the commitment to protect pedestrian and cyclists.</p>	<p>SHORT TERM</p>
<p>ES-4 Increase education of how cyclists and pedestrians should interact with equestrian trail users as part of the educational program and increased signage at trail heads.</p>	<p>SHORT TERM</p>
<p>ES-3 Develop an educational program to hold events, engage over social media, or other similar methods to share information that promotes cyclist and pedestrian safety specifically targeted at all audiences, including drivers, cyclists, pedestrians.</p>	<p>MEDIUM TERM</p>
MARKETING & ENGAGEMENT RECOMMENDATIONS	
<p>ME-3 Use trail tourism events to promote the existing and proposed network and diversify and expand the length of the tourist season (i.e. off-season events, new tourists).</p>	<p>ONGOING</p>
<p>ME-1 Establish county-wide branding/wayfinding program that promotes the existing and recommended active recreation and transportation system as a cohesive system.</p>	<p>SHORT TERM</p>
<p>ME-2 Establish the Friends of Berrien County Trails as the central organization for data gathering, coordination of local volunteer organizations, event promotion, and implementation of this Plan.</p>	<p>SHORT TERM</p>
ASPIRATION RECOMMENDATIONS	
<p>A-1 Encourage Berrien County and the local municipalities to aspire to achieve Pure Michigan Trails and Trail Towns of Pure Michigan designations.</p>	<p>MEDIUM TERM</p>
<p>A-2 Encourage Berrien County and the local municipalities to aspire to achieve Bike Friendly Community status to enhance their image and reputation both regionally and nationally.</p>	<p>MEDIUM TERM</p>
<p>A-3 Encourage Berrien County, local municipalities, and businesses to aspire to achieve Walk Friendly Community status to enhance their image and reputation both regionally and nationally.</p>	<p>MEDIUM TERM</p>

WHERE IS BERRIEN COUNTY?

Berrien County is the most southwestern county in Michigan, lending itself as a gateway to Michigan from the major population centers of the Chicagoland region. Berrien County is an established tourist destination for the region, with a large influx of seasonal residents in the spring to fall.



ILLINOIS

MICHIGAN CITY

BERRIEN COUNTY

MICHIGAN INDIANA

WHAT IS THE MASTER PLAN?

The Friends of Berrien County Trails is spearheading the development of the Berrien County Trails Master Plan, a county-wide planning process that captures the vision of the residents, stakeholders, and municipalities within Berrien County, Michigan.

This Plan will guide future trail planning and implementation throughout Berrien County.

WHAT TRAILS WILL BE ADDRESSED?

All trails offering active recreation and transportation are included:

- Existing trail network
- Shared-use paths, wide shoulders, bike lanes, signed routes (sharrows)
- Water trails
- Park-based trails for hiking, biking, equestrian, and cross-country ski

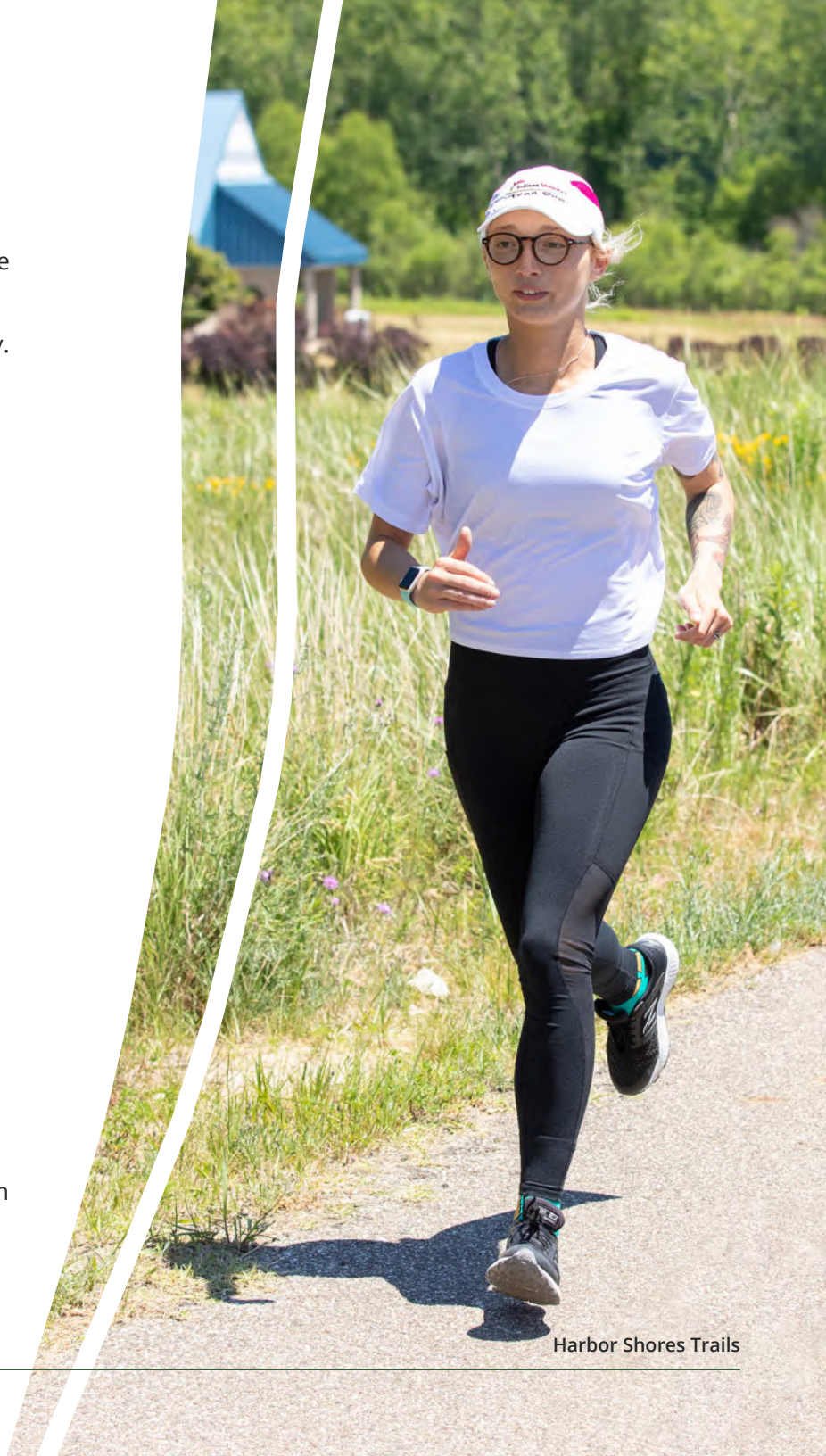
HOW WILL THE MASTER PLAN BE USED?

- Link parks, recreational assets, and Berrien County communities
- Promote comprehensive connectivity and collaboration in our region
- Provide a toolbox for groups and municipalities to plan, fund, build, and maintain trails and future infrastructure projects

HOW WILL THE MASTER PLAN BE UPDATED?

- Continuously reviewed to be relevant with current conditions, practices, policies, and projects
- Future trail network projects should be added to the Master Plan
- Friends of Berrien County Trails will be responsible for Master Plan amendments

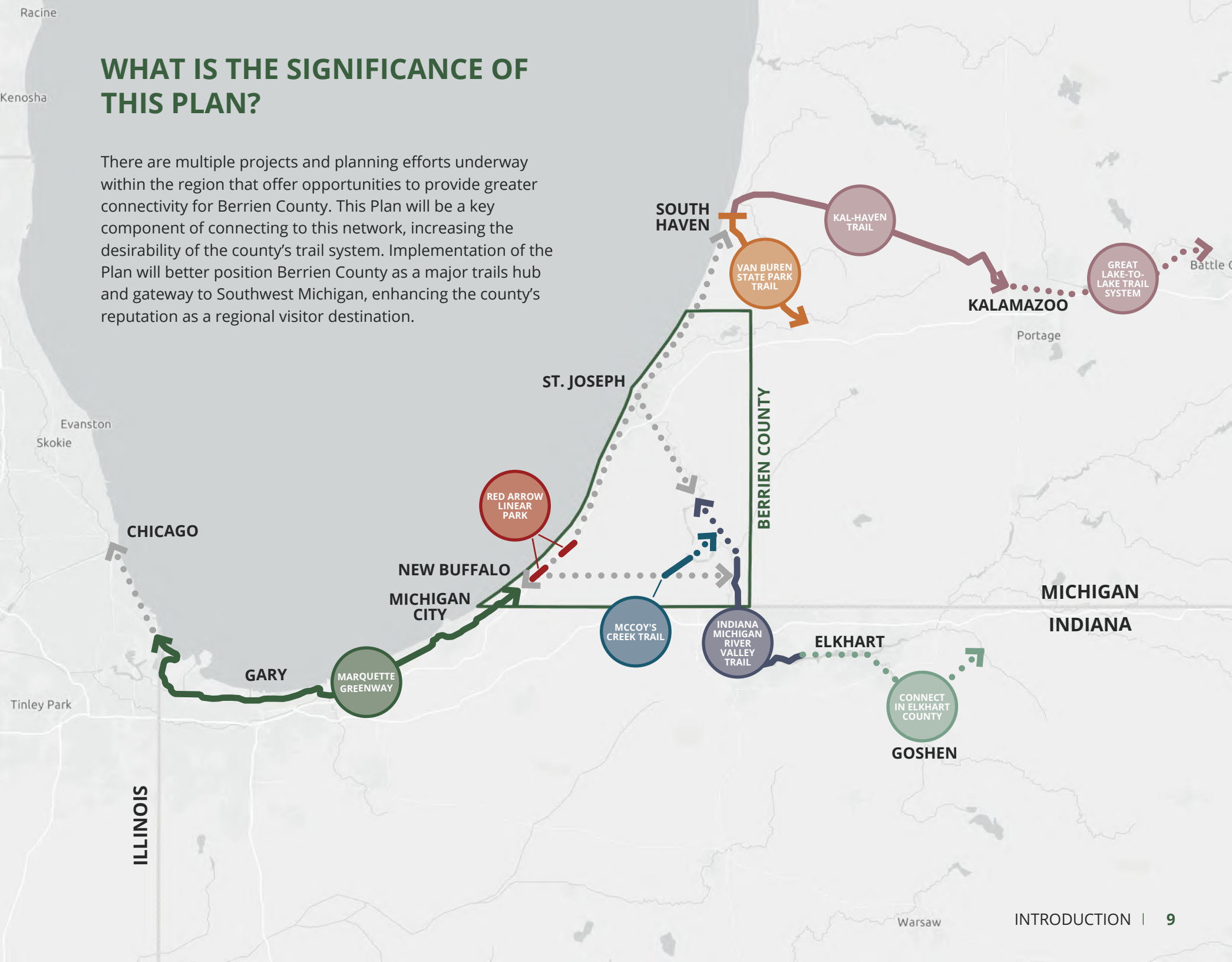
Our hope is that this Plan continually fosters collaboration and ownership across Berrien County in the national drive for new trail development. Updates will be posted on the Friends of Berrien County Trails website: www.berrientrails.org.



Harbor Shores Trails

WHAT IS THE SIGNIFICANCE OF THIS PLAN?

There are multiple projects and planning efforts underway within the region that offer opportunities to provide greater connectivity for Berrien County. This Plan will be a key component of connecting to this network, increasing the desirability of the county's trail system. Implementation of the Plan will better position Berrien County as a major trails hub and gateway to Southwest Michigan, enhancing the county's reputation as a regional visitor destination.



REGIONAL CONNECTIVITY OPPORTUNITIES

This section includes descriptions of regional trail planning initiatives and in-progress projects that could have the greatest impact if connected to the Berrien County active recreation and transportation network.

MARQUETTE GREENWAY

This significant national & regional connector trail is currently under development and has been substantially funded since 2022. At approximately 60 miles long, it will connect Berrien County to Chicago. The Marquette Greenway offers regional connectivity and trail tourism opportunities. Connecting to and extending this trail should be a high priority.



INDIANA MICHIGAN RIVER VALLEY TRAIL

The Indiana Michigan River Valley Trail is an interstate, 17-mile paved pedestrian/ bicycle trail connecting Niles, Michigan, to South Bend and Mishawaka, Indiana. Future phases of this trail will continue southeast and northwest to connect to Elkhart and Berrien Springs then St. Joseph/ Benton Harbor. The Michigan segment of the trail system is 6 miles long.

VAN BUREN STATE PARK TRAIL

The Van Buren Trail State Park is a 14-mile dirt/gravel shared use path that runs between Hartford and South Haven. Birders, equestrians, and hikers all enjoy this facility.

RED ARROW LINEAR PARK

Red Arrow Linear Park is a shared use path that will run along Red Arrow Highway. This trail will be an essential piece of the regionally significant system in this Plan and makes up what will be a shared use path running the length of the County along the lakeshore.

MCCOY'S CREEK TRAIL

The existing McCoy's Creek Trail is an approximately 5-mile shared use path that primarily serves the City of Buchanan. Future improvements are currently underway and will provide a key connection from Buchanan to the proposed extension of the Indiana Michigan River Valley Trail.

KAL-HAVEN TRAIL / GREAT LAKE-TO-LAKE TRAIL SYSTEM

Kal-Haven Sesquicentennial State Park is a 34-mile crushed limestone/slag path on an abandoned railroad corridor connecting South Haven and Kalamazoo. Kal-Haven is a component of a larger trail system called the Great Lake-to-Lake Trail System that is over 270 miles long running from Lake Michigan to Huron.

CONNECT IN ELKHART COUNTY

The Community Foundation of Elkhart County initiated the Connect in Elkhart County planning process in 2021/2022, with a vision to create a 125-mile interconnected network of trails, streets, and public spaces. The goal of the plan is to connect the communities of Elkhart County to each other and the region, especially Elkhart to Mishawaka. If completed, this would result in a direct connection from Shipshewana to Niles (and beyond) via the IN/MI River Valley Trail from downtown Mishawaka.

PLANNING PROCESS

The planning process for the Berrien County Trails Master Plan involved all municipalities from across the county, an extensive stakeholder group, residents, and visitors. The process was done in four phases:

EXISTING CONDITIONS

The planning team collected data from public sources and the municipal partners to get an understanding of what network currently exists in Berrien County.

PUBLIC ENGAGEMENT

Engagement during this phase captured the values of the community which helped to establish the themes. The process involved multiple activities to engage the community residents, stakeholders and municipal officials, utilizing approaches to achieve equitable participation.

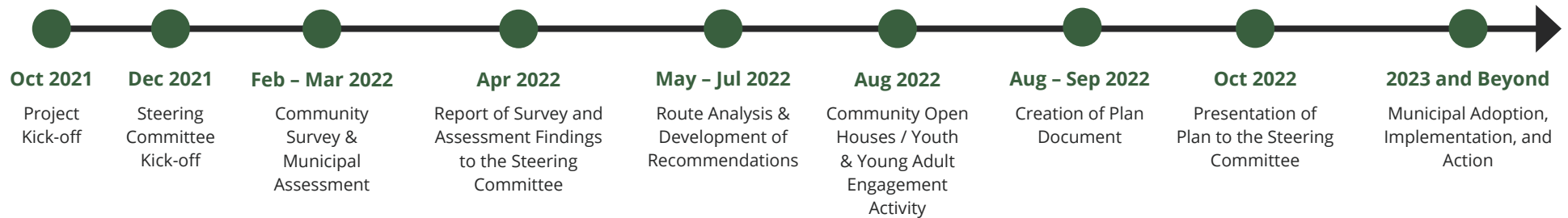
ANALYSIS & ROUTE PLANNING

The analysis and route planning phase looked at the data gathered from the earlier phases through the lens of each of the established themes. The analysis in this phase guided route planning and prioritization, along with policy, aspiration, and best practice recommendations.

IMPLEMENTATION TOOLBOX & ACTION

In this phase, the tools, funding sources, and best practices were developed to support the municipalities and county in the future implementation of the recommendations. Once the Plan was finalized, it was adopted by each of the municipalities and Berrien County. With this Plan, each municipality and Berrien County will be guided in the implementation of the recommendations of this Plan to help develop a connected and comprehensive active recreation and transportation network for its residents and visitors.

PROJECT TIMELINE





Equestrian Outreach Meeting

2

PUBLIC ENGAGEMENT

Berrien
County
Trails
Master Plan

PUBLIC ENGAGEMENT PROCESS

Robust community engagement was an important element of the planning process. A variety of activities solicited participation from community residents, visitors, municipal officials and identified stakeholders. These varied approaches ensured that a full representation of the community residents, issues, and needs were integrated into the process. To generate awareness of the planning process, the Friends of Berrien County Trails added a page to their website with ongoing updated information about the Trails Master Plan. Berrientrails.org/bcmasterplan.asp included the purpose, process, participation opportunities, maps, key findings and recommendations.

Specific public engagement activities that were undertaken included the following:

- Implementation of an Online Community Survey;
- Distribution of Municipal Assessment;
- Facilitation of Community Open Houses; and
- Completion of a Youth and Young Adult Engagement Activity

The Municipal Assessment and Community Survey were completed as a part of the existing conditions phase of the planning process. These activities were designed to ensure the planning team included relevant information related to active recreation and transportation facilities, plans, and policies, along with a current understanding of resident behaviors, perceptions, and values related to biking and walking in Berrien County.

The community open houses were designed and implemented to capture input and feedback on the results of the plan analysis and proposed recommendations. Finally, a selection of youth and young adults were engaged to communicate their perspectives related to the values and issues of the local trails system through a unique photo-voice project.

PUBLIC ENGAGEMENT EVENTS



MUNICIPAL ASSESSMENT

A component of the public outreach process included the distribution of an assessment to each municipality in Berrien County. The assessment was delivered as an online survey tool. The primary intent of the survey was to collect information on how each municipality addresses active recreation and transportation, trails planning, and implementation. Communities were asked to provide all relevant plans, policies, or ordinances (if any) that specifically address active recreation & transportation activities or priorities as a part of the assessment tool.

All 39 Berrien County municipalities completed at least a portion of the assessment. For many communities the response was limited to providing the names and contact information for trail champions and staff who share responsibilities for planning and implementation within their organization. This is a valuable win for the process, as understanding who is responsible and the limits of their available resources will provide insight into the communities' capacity for future engagement and investment in planning and implementation.

As part of the assessment process, municipalities were asked to provide plan or policy documents related to current and future active recreation and trail planning and investment. Eleven municipalities uploaded files into the shared drive, providing relevant excerpts from community master plans, park and recreation plans, and zoning ordinances. Communities who provided documents were fairly diverse in overall population and community size, with the cities of Niles and St. Joseph being the largest communities to provide planning documents. A cluster of Harbor Country municipalities provided planning documents. Overall, these plans incorporated the goals and recommendations included within the January 2010 Harbor Country Hike and Bike Plan.

Active recreation and transportation and trail planning values, policies, and goals are typically included as a part of the development of local community master plans and park & recreation master plans. Additionally, community parks & recreation master plans include more detailed information related to local community park-based trails.

MUNICIPAL ASSESSMENT

The majority of municipalities who provided planning and policy information addressed active recreation and transportation in both the community master plan and the park & recreation master plan. There are differences in how these issues are discussed and addressed based on the type of plan.

Community master plans typically include active recreation and trail planning as a part of the larger community transportation, mobility, or parks systems. Policies and goals included in these planning documents typically relate more

to increasing access, connectivity and equity within the local transportation system, including integration of sidewalks.

Policies and plans addressing these issues in the Park and Recreation Master Plans or recreation components of the master plan typically focus more on the development of trails for recreation purposes, or as a part of providing connectivity for residents to parks and recreation opportunities.

14 out of the 39 municipalities have trails included in various plans and are indicated in the table below.

TRAILS INCLUDED IN MUNICIPAL ASSESSMENT RESPONSES

MUNICIPALITY	INCLUDED IN MASTER PLAN (MP)	TRAIL SPECIFIC PLAN	GOALS & OBJECTIVES	SPECIFIC PROJECTS IDENTIFIED	INCLUDED IN PARKS & REC PLAN	GOALS & OBJECTIVES	SPECIFIC PROJECTS IDENTIFIED	ADDRESSED IN ZONING ORDINANCE	ADDRESSED IN DOWN-TOWN PLAN
Berrien Township	✓		✓	✓					
Chikaming Township	✓		✓	✓	✓				
City of Bridgman	✓		✓		✓			✓	
City of Niles	✓		✓	✓	✓		✓		
City of St. Joseph	✓	✓	✓	✓	✓	✓	✓		✓
City of Watervliet	✓		✓		✓	✓			
Lake Charter Township					✓	✓			
Lincoln Township	✓		✓		✓	✓	✓	✓	
New Buffalo Township	✓	✓	✓	✓					
Oronoko Township					✓	✓	✓	✓	
Village of Stevensville	✓		✓	✓					
Berrien County	✓		✓		✓	✓	✓		N/A
Village of Berrien Springs	✓		✓		✓		✓		
Coloma Charter Township					✓		✓		

COMMUNITY SURVEY

In addition to the municipal assessments a community survey was developed to capture resident input within five key areas:

- Bicycling Behaviors and Preferences;
- Walking Behaviors and Preferences;
- Use of Other Recreational Trail Types;
- Community Values Related to Trails; and
- Demographics.

The survey was launched in February 2022 and was live for a total of five weeks. The survey was distributed via email, social media posts, and promoted through multiple local media channels. 1,928 total responses were collected. Respondents included full- and part-time residents from every municipality in Berrien County, along with non-residents from neighboring counties in Michigan and Indiana.

The full results can be found on the Friends of Berrien County website or by using this [link](#).

WHO TOOK THE SURVEY?

Overall, respondents to the survey tended to be older than the general county population. Survey respondents tended to be highly educated, with over 70% having obtained a Bachelor’s Degree or Post Graduate Degree. The high levels of academic achievement contributed to over 40% indicating that they earn over \$100,000 annually. While the demographics of the survey respondents did not offer a full representation of the Berrien County population, the survey still provides a snapshot and baseline information for values and items that can be emphasized and compared to in future planning efforts.

52

AVERAGE AGE OF RESPONDENTS
42.1 in Berrien County

Over 70% of survey respondents are employed, either full- or part-time, or are active students. An additional 20% of survey respondents indicated that they are retired. Factoring out survey respondents who work from home or don’t work or attend school, nearly 75% reported that they live less than 12 miles from work or school. Over 80% drive alone as their primary mode of transportation for commuting, while almost 15% currently walk or bike.

In looking at the basic behaviors of the over 1,900 respondents who completed the survey, there were over 1,400 responses related to bicycling participation and over 1,600 responses related to walking participation.

HIGHEST EDUCATION ATTAINMENT

	SURVEY RESPONDENTS	BERRIEN COUNTY
No High School Diploma	0.4%	9.7%
High School Graduate	4.9%	27.2%
Some College, No Degree	14.1%	25.4%
Associates Degree	8.4%	10.7%
Bachelors Degree or Higher	72.2%	27.0%

COMMUNITY SURVEY

PARTICIPATION LEVELS ARE HIGH

To determine the level of activities among both bikers and walkers, the survey posed questions about how confident respondents feel in their experience levels of using various types of active recreation and transportation facilities, how often they participate in bicycling and walking activities, and how far they typically walk or ride. As indicated in the data to the right, survey respondents reported high levels of confidence and activity levels, and demonstrated a willingness to ride or walk up to 60 minutes or more.

Given the high percentage of respondents who live within about an hour's bicycle ride to either school or work, the fact that 30% of bicyclists ride more than 10 miles presents an opportunity to reduce the percentage of commuters who choose to drive alone if given safe and accessible alternative transportation options.

BIKER BEHAVIOR

70%

IDENTIFIED AS CASUAL OR EXPERIENCED RIDERS

44%

RIDE ONCE OR MORE A WEEK

60%

RIDE MORE THAN 5 MILES PER TRIP

WALKER BEHAVIOR

78%

IDENTIFIED AS CASUAL OR EXPERIENCED WALKERS

80%

WALK ONCE OR MORE A WEEK

60%

WALK MORE THAN 2 MILES PER TRIP



Harbor Shores Trails

COMMUNITY SURVEY

PRIMARY PURPOSE IS RECREATIONAL & MOTIVATION IS HEALTH

Understanding what motivates individuals to use active recreation and transportation networks as well as the primary purpose of their trips is important information that can help understand and inform the facility network gaps and needs. Berrien County residents who responded to the survey largely reported that recreational uses were their primary trip purpose, and that their primary motivation is to improve health. Top destinations reported included parks and trails and visiting friends.



“That exercise does not have to be on a treadmill ... I think that people are missing out and that they need to get out there and enjoy [the] nature around us.”

– PHOTOVOICE PARTICIPANT

70%

BIKE FOR RECREATIONAL PURPOSES ONLY

70%

WALK FOR RECREATIONAL PURPOSES ONLY

RECREATIONAL BIKER AND WALKER – Top Destinations



Parks & Trails



Visit Friends

COMMUNITY SURVEY

CYCLING & WALKING FOR TRANSPORTATION PURPOSES

While the primary purpose for most of the bicycle and walking trips is recreational in nature, almost a third of survey respondents indicated that they ride and walk for both transportation and recreation purposes.

Both bicyclists and walkers have expressed interest in making more non-recreational trips on trails; however, survey respondents say a lack of connectivity, comfort, and safety prevent them from doing so.

Traditionally, investments in the active recreation transportation infrastructure have been focused on facilities designed for those on the trails recreationally. That does track with the current primary demand generators. But, there is strong evidence that improvements that ultimately provide safe, comfortable access, and connectivity to community resources would result in higher levels of demand and use of these facilities, too.

“Bike lanes and paths to use a bike for transportation do practically not exist where I live.”

– SURVEY RESPONDENT

TRANSPORTATION BIKER & WALKER – Top Destinations



Grocery Store



Work



Restaurant



Medical Facilities

30%

BIKE FOR RECREATIONAL AND TRANSPORTATION PURPOSES

30%

WALK FOR RECREATIONAL AND TRANSPORTATION PURPOSES

72%

DESIRE TO BIKE MORE FOR TRANSPORTATION PURPOSES

63%

DESIRE TO WALK MORE FOR TRANSPORTATION PURPOSES

COMMUNITY SURVEY

CONNECTIVITY & SAFETY ARE SIGNIFICANT BARRIERS TO MORE USE

The factors noted as being the primary barriers to increased use of the active recreation & transportation facilities fall into two main categories – connectivity and safety. Safety concerns were largely driven by vehicle traffic levels and speed and poor conditions of road and trail surfaces. Connectivity factors were related to the lack of trails and bike paths, no connections available to desired destinations, and facilities that abruptly end. These same themes of connectivity, safety and surface conditions were highlighted when respondents were asked what elements were most in need of improvements.

“Safe walking along the roads is important to me. Connecting sidewalks to be able to get from one place to another.”

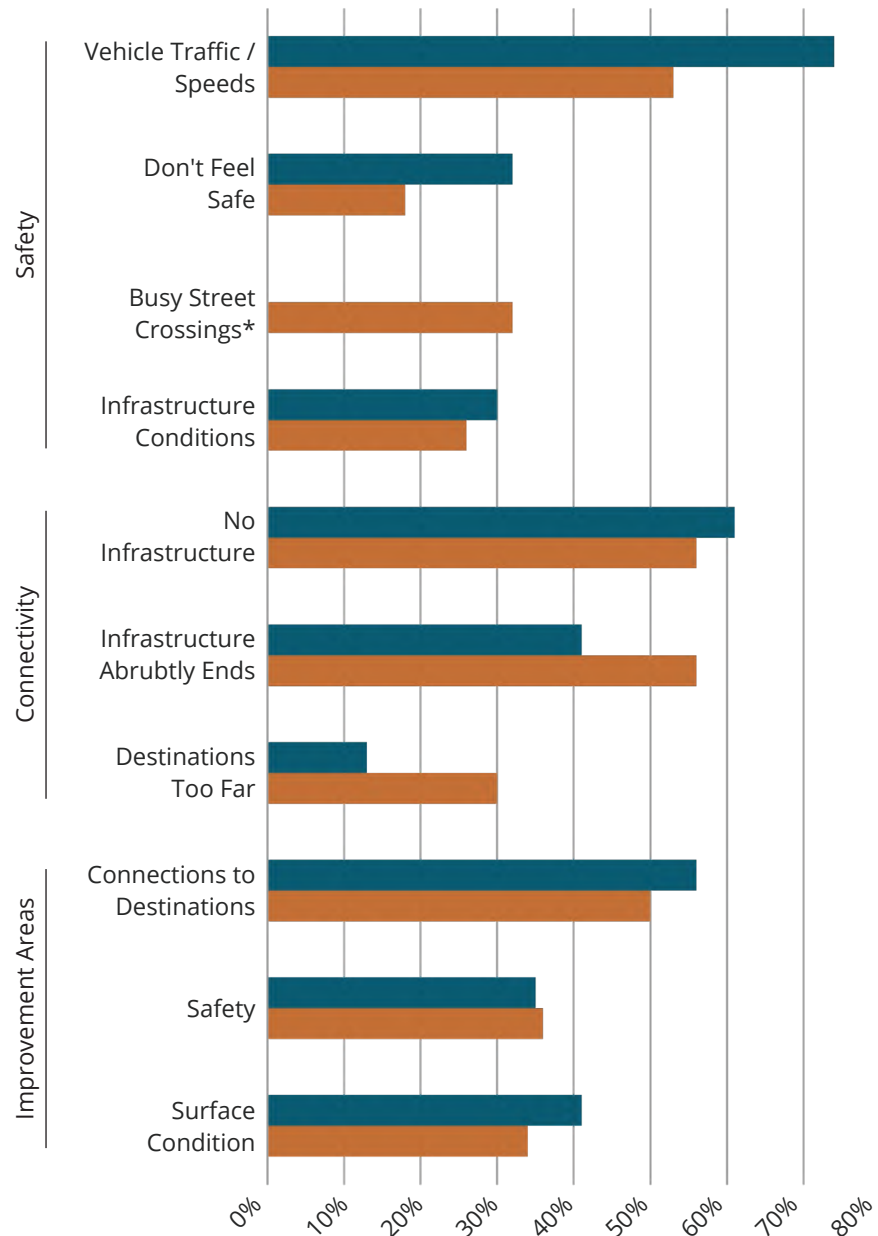
– SURVEY RESPONDENT

LEGEND

- Biker
- Walker

* This question was asked only on the walker survey and there was no similar question for bikers.

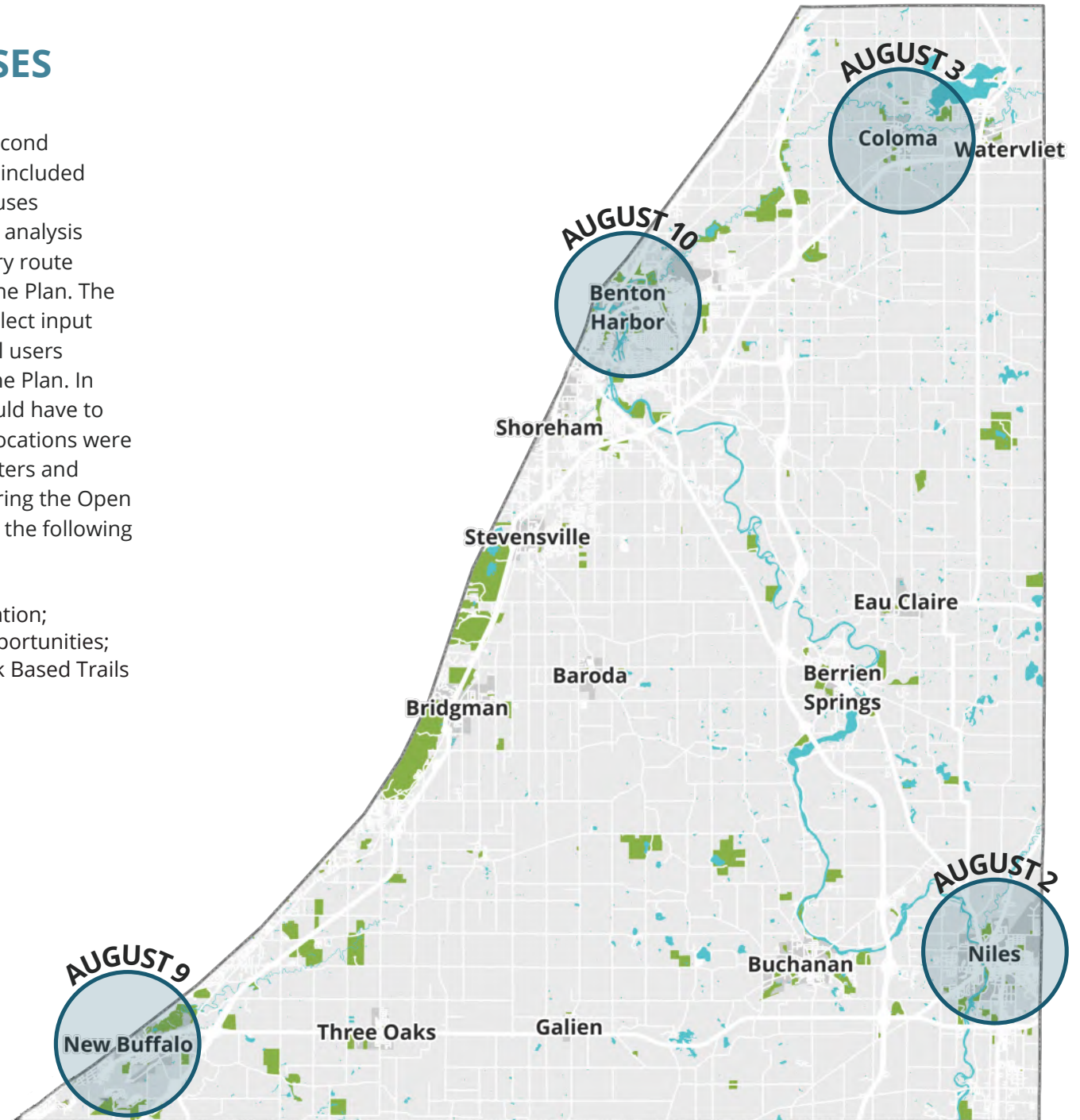
BARRIERS TO MORE USE



COMMUNITY OPEN HOUSES

A series of Community Open Houses was the second significant community engagement component included as a part of the planning process. The Open Houses were facilitated after the completion of the Plan analysis activities and the development of the preliminary route recommendations proposed to be included in the Plan. The primary purpose of the Open Houses was to collect input and insights from community residents and trail users related to the routes being recommended for the Plan. In an effort to minimize the distance residents would have to travel to attend the Community Open Houses, locations were chosen in close proximity to key population centers and spread throughout 4 sections of the county. During the Open Houses, attendees were invited to participate in the following 4 separate activities:

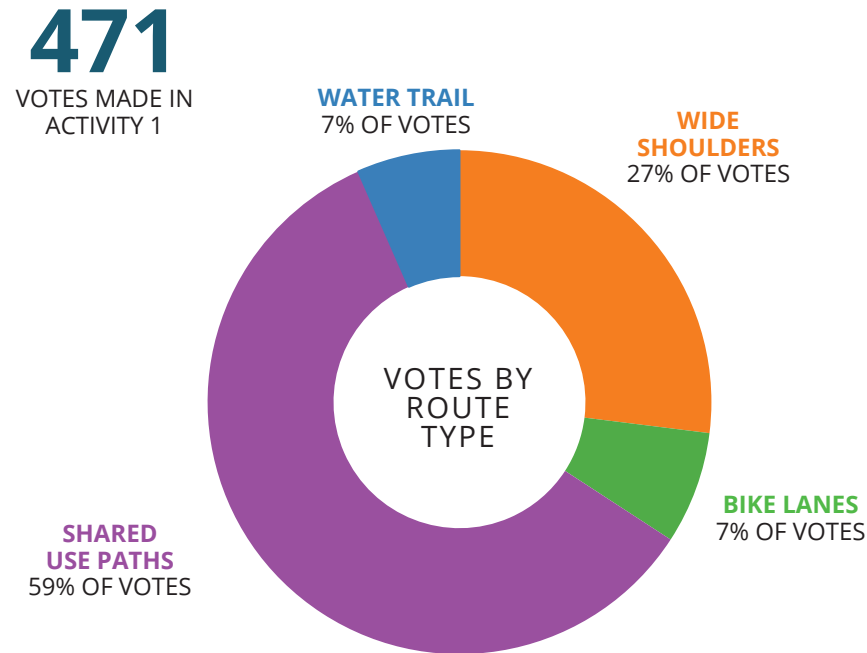
- Activity 1 – Recommended Route Prioritization;
- Activity 2 – Identification of Issues and Opportunities;
- Activity 3 – Discussion of Water Trails, Park Based Trails and Equestrian Trails; and
- Activity 4 – Postcards from the Future.



COMMUNITY OPEN HOUSES

ACTIVITY 1 – RECOMMENDED ROUTE PRIORITIZATION

The goal of this activity was to engage the community members in the development of priorities among the recommended routes. Large format maps showing the recommended routes were displayed, and participants were provided 5 votes to be used to identify routes they would most likely use or most strongly support being developed. Trail segments that make up portions of the Red Arrow Linear Park, the Indiana-Michigan River Valley Trail, and a proposed East-West corridor that connects Niles and New Buffalo received the highest levels of community support.



Community Open Houses

COMMUNITY OPEN HOUSES

ACTIVITY 2 - IDENTIFICATION OF ISSUES AND OPPORTUNITIES

The primary goal of this activity was to provide a forum for local community residents and trail users to share their local knowledge and expertise related to the recommended routes proposed for the Plan. Using larger format maps of the routes, participants were asked to identify specific issues or information about the routes that might cause concern or provide better alternatives to be considered in the final route recommendation process. Dots were provided and placed on the specific locations of the comments and aggregated across the four Open Houses.

71
COMMENTS FROM
ACTIVITY 2

LEGEND

••• Proposed Route

● Opportunities

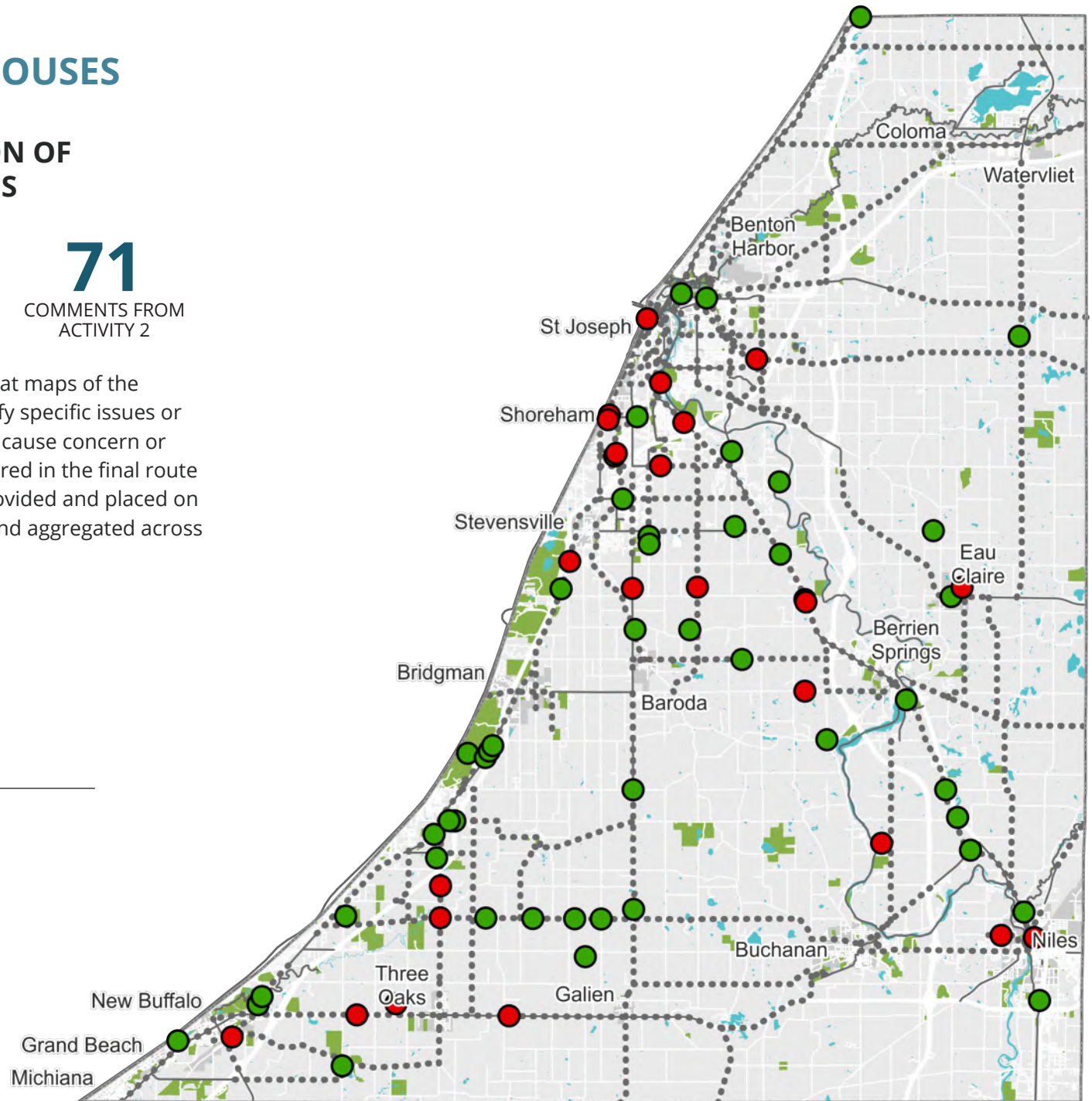
● Issues

— Park

— Water

— City or Village

1" = 6 Miles



COMMUNITY OPEN HOUSES

ACTIVITY 3 – DISCUSSION OF WATER TRAILS, PARK BASED TRAILS AND EQUESTRIAN TRAILS

While the first two activities were utilized to gather information and feedback specific to the proposed active recreation and transportation network improvements, Activity 3 was focused on information related to other types of trail facilities in Berrien County, including water trails, park-based hiking trails, mountain biking trails, and equestrian Trails. Maps displaying the existing locations of these trails were available for participants to provide specific details about trail and facility conditions, gaps, issues, and new opportunities.



Community Open Houses

COMMUNITY OPEN HOUSES

ACTIVITY 4 – POSTCARDS FROM THE FUTURE

After completing the previous activities, Open House participants were asked to write a postcard from the future describing their experience using Berrien County Trails based. The primary intent of this activity was to collect information on the vision of community residents on the future state of active recreation and transportation systems in the county, and the role and impact of the planning process. Participants were encouraged to write an honest vision, whether positive or negative about the experience and associated community impacts.

ACTIVITY 4: POSTCARD FROM 2040



Imagine Berrien County in 2040. Write a postcard to a friend or family member describing the experience of using the County's active recreation and transportation system (trails, bike lanes, sidewalks, etc.). What has changed from today and how has that impacted your experience as a Berrien County resident and the experience of all Berrien County residents?

Responses might reflect the goal themes identified in the plan and listed below:

Connectivity	Culture
Safety	Economic Impact
Accessibility	Quality of Place & Talent Attraction
Equity	Collaboration
Health	Maintenance

DEAR,

I am so delighted to see the multi-use trails in the urban areas of Benton Harbor, St. Joseph and Stevensville. To be able to walk, run, cycle, paddle and even ride a horse (woah!) from the house to the library, bar, restaurant and back is living with a capital L! I could only hope for all of that 18 years ago.

FIRST NAME

LAST NAME

EMAIL (OPTIONAL, FOR UPDATES)

YOUTH & YOUNG ADULT ENGAGEMENT

In order to represent youth voice in this assessment, we employed photovoice as a methodology. This process engages youth to answer questions through photography and narrative. Participants were asked to answer the following four questions:

- What is most important to you when walking or riding your bike?
- What type of places do you walk or bike to?
- When thinking about designating biking or walking trails for recreation, what features are important?
- Thinking about your community, what are some barriers to walking or riding a bike?

In total, seven students took part in this project, representing youth participating in programs in Benton Harbor, Benton Heights, and Niles. The narrative responses were then analyzed to identify the top themes. This processes revealed that the themes mentioned by the most students were safety, the condition of infrastructure, connection to amenities, and nature.



Photo in response to the question "Thinking about your community, what are some barriers to walking or riding a bike?"

SAFETY

Safety was mentioned by all seven participants as something that is most important to them for walking and biking or that the lack of safety features is a barrier that prevents them from walking or bike riding. Participants discussed the need for the separation of traffic from pedestrians and cyclists (e.g., safe pedestrian crossing and designated biking lanes) as well as the need for lighting for safe exercise and transportation. Lastly, they also discussed how the conditions of sidewalks and trails impact user safety, specifically how poor conditions can cause falls or other injuries.

Photo submitted when asked "What is most important to you when walking or riding your bike?"



"There is not a specific time for pedestrians to cross, nor a button to press to signal someone is there. I was uncomfortable and I am capable of crossing the street but others may not."

– PHOTOVOICE PARTICIPANT

YOUTH & YOUNG ADULT ENGAGEMENT

CONDITIONS

The second theme that participants discussed was infrastructure conditions, with six out of seven participants mentioning it as something that is important for walking and biking and also as a barrier. In addition to conditions impacting user safety, as previously mentioned, the conditions of sidewalks, amenities such as exercise equipment near trails, and lack of proper signage and crossing support were stated as concerns that can limit accessibility for the elderly, those in wheelchairs, and for individuals pushing strollers. Participants also discussed how sidewalk conditions can damage property (e.g., bikes).

"This photo shows the handicapped swing...I like this because it brings inclusivity to our park, but I also dislike it because of the condition it is in."



"For example if someone gets a new bike and...rides over a hole and messes their new bike up, I know how they would feel because I have been there before."

- PHOTOVOICE PARTICIPANT

CONNECTION & PROXIMITY

Five out of seven participants mentioned the importance of having trails in proximity to amenities or that connect to areas that they travel to. Amenities such as other opportunities for exercise (e.g., skate parks and exercise equipment) and places to gather (e.g., pavilions) were discussed, and the most frequently mentioned destinations for transportation via trails were local stores, work, and family.

Photo submitted when asked "What features are most important?", titled "Great Entertainment!"



"I wanted to share this picture because it is a great spot for people to gather, that not everyone knows about. Sometimes there are local bands that play such as during the Riverfest. It shows a feature I enjoy when going to the trail because it's something to watch or listen to while walking."

- PHOTOVOICE PARTICIPANT

YOUTH & YOUNG ADULT ENGAGEMENT

NATURE & SCENERY

Tied with proximity, nature and scenery was mentioned by five out of seven participants. When they discussed this topic, they primarily mentioned the enjoyment that pleasant scenery and nature provided, specifically greenery such as trees, water features, bird song, and fresh air. Participants discussed how these features contribute to relaxation, mindfulness, and peace.

This photo indicates the beautiful scenery we have while walking on our trail. You can see all kinds of beautiful things while walking.



“I feel safer knowing that I can walk in a peaceful area without having to watch for cars or hearing people argue or be loud where I am located.”

– PHOTVOICE PARTICIPANT

KEY FINDINGS

Photovoice participants highlighted several important features that should be considered when planning biking and walking trails for travel and recreation.

- To ensure safety, assess current sidewalk and road conditions and features when creating trail plans; there may be existing infrastructure that residents are not utilizing due to safety concerns such as poor conditions, suboptimal traffic control measures, and lack of lighting.
- When selecting locations for trails, select locations which feature natural scenery. Participants mentioned the mental health benefits of walking in peaceful, natural settings.
- Select trail locations which maximize connections to existing, desirable amenities such as gathering spaces and shopping locations.



Photovoice participant response to the question “What type of places do you walk or bike to?”



3

EXISTING NETWORK

**Berrien
County
Trails**
Master Plan

EXISTING ACTIVE RECREATION & TRANSPORTATION NETWORK

The existing active recreation and transportation network in Berrien County includes a mix of bike lanes, shared use paths, water trails, and wide shoulders. This Plan includes all types of facilities, including those that are exclusively used for recreation purposes and facilities that are integrated into a larger transportation network.

DEFINITIONS & STANDARDS

Definitions and standards in this document were formulated using the Michigan Department of Transportation (MDOT) Bicycle and Pedestrian Terminology, 2014. National & regional connector, local community connector, and parks-based trails are classifications developed by the planning team to understand how the existing and proposed network connects within and outside of Berrien County.

To help provide even more insight into the existing network, respondents of the community survey identified what types of infrastructure they preferred to use the most with 1 being the lowest and 6 being the highest preferred.

SHARED USE PATH

A path or trail physically separated from motor vehicle traffic by an open space or barrier, either within the highway right of way or an independent right of way. Shared use paths may be used by cyclists, pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. Most shared use paths are designed for two-way travel. Its minimum width is 10 feet. It is separated from vehicular traffic either by a barrier or a minimum lateral separation of 5 feet. A shared use path typically has a surface that is asphalt, concrete, or firmly packed crushed aggregate.

HARD SURFACE

4.8 OUT OF 6
CYCLIST PREFERENCE

3.8 OUT OF 6
WALKER PREFERENCE

SOFT SURFACE

3.6 OUT OF 6
CYCLIST PREFERENCE

3.5 OUT OF 6
WALKER PREFERENCE



Indiana-Michigan River Valley Trail

DEFINITIONS & STANDARDS

BIKE LANE

A bike lane is a portion of roadway that has been designated for preferential or exclusive use by bicyclists with pavement markings and signs, if used. It is intended for one-way travel, usually in the same direction as the adjacent traffic lane, unless designed as a contra-flow lane. A contra-flow bike lane is a bicycle lane that allows bicyclists to travel the opposite direction of motor vehicle traffic on a one-way street. A buffered bike lane is a bicycle lane accompanied by a designated buffer space, separating the bicycle lane from the adjacent travel lane. Most bike lanes are 5 feet wide.

3.3 OUT OF 6
CYCLIST PREFERENCE



Bike Lane, Traverse City, MI

SEPARATED BIKE LANE

A separated bike lane is a bicycle facility separated from motor vehicle travel lanes, as well as sidewalks and pedestrians, by a physical barrier, such as on-street parking or a curb, or is grade-separated.

4.5 OUT OF 6
CYCLIST PREFERENCE



Separated Bike Lane, Rural Design Guide

DEFINITIONS & STANDARDS

CYCLE TRACK

A bicycle facility separated from motor vehicle travel lanes, as well as sidewalks and pedestrians, by a physical barrier, such as on-street parking, a curb, or is grade-separated. Cycle tracks are usually 10 feet wide with an additional 1-2 feet of buffer area.

4.5 OUT OF 6
CYCLIST PREFERENCE



Cycle Track in Charlotte, NC

*Cycle track was not specifically referenced in the community survey infrastructure preference question, but it is similar in nature to a separated bike lane.

WIDE SHOULDER

A wide shoulder is the portion of the roadway contiguous with the traveled way that accommodates stopped vehicles, emergency use, and lateral support of sub-base, base, and surface courses. Shoulders, where paved, are often used by bicyclists. To accommodate pedestrian and bicycle travel, paved shoulders should be a minimum of 4 feet wide and in more heavily traveled areas, may be increased up to 8 feet wide.

2.9 OUT OF 6
CYCLIST PREFERENCE

1.9 OUT OF 6
WALKER PREFERENCE



Wide Shoulder along Mall Drive, Benton Harbor, MI

DEFINITIONS & STANDARDS

SHARED LANE MARKING (“SHARROW”)

A shared lane marking is a pavement marking symbol that assists bicyclists with lateral positioning in lanes too narrow for a motor vehicle and a bicycle to travel side-by-side within the same traffic lane.

2.0 OUT OF 6
CYCLIST PREFERENCE



Shared Lane Marking or "Sharrow"

BIKE ROUTE

A bike route is a segment of road designated by a jurisdiction having authority with appropriate directional and informational markers but without striping, signs and pavement markings for the preferential or exclusive use of bicyclists. A route does not require any special facility for bicyclists or pedestrians. A U.S. Bicycle Route is an interconnected network of roads and/or paved shared use pathways that are officially designated by AASHTO and connect one state with another, a state with an international border, or two U.S. Bicycle Routes. In Michigan, U.S. Bicycle Routes are intended for long-distance touring bicyclists who are comfortable riding with traffic. U.S. Bicycle Routes are mapped and may or may not have signs.

2.0 OUT OF 6
CYCLIST PREFERENCE



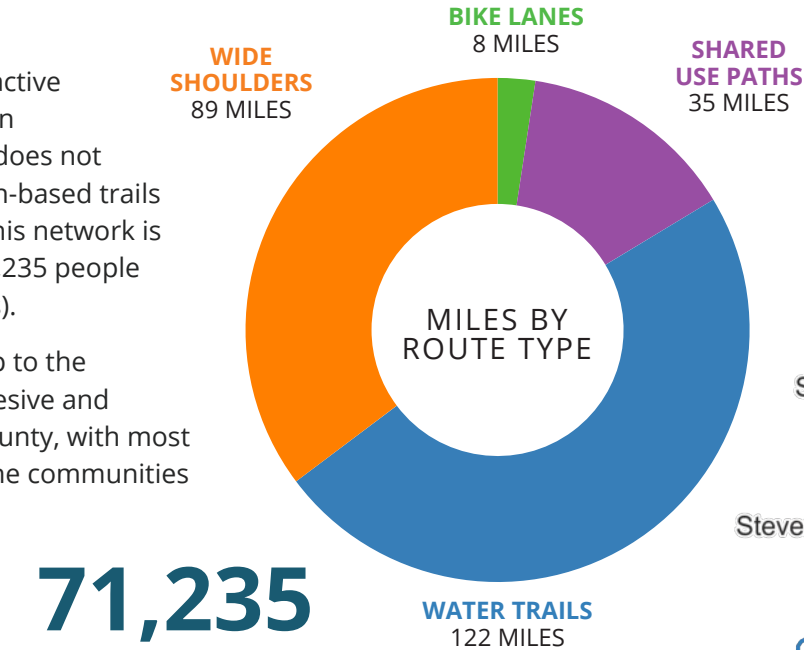
U.S. Bicycle Route 35 along MI 109

EXISTING NETWORK

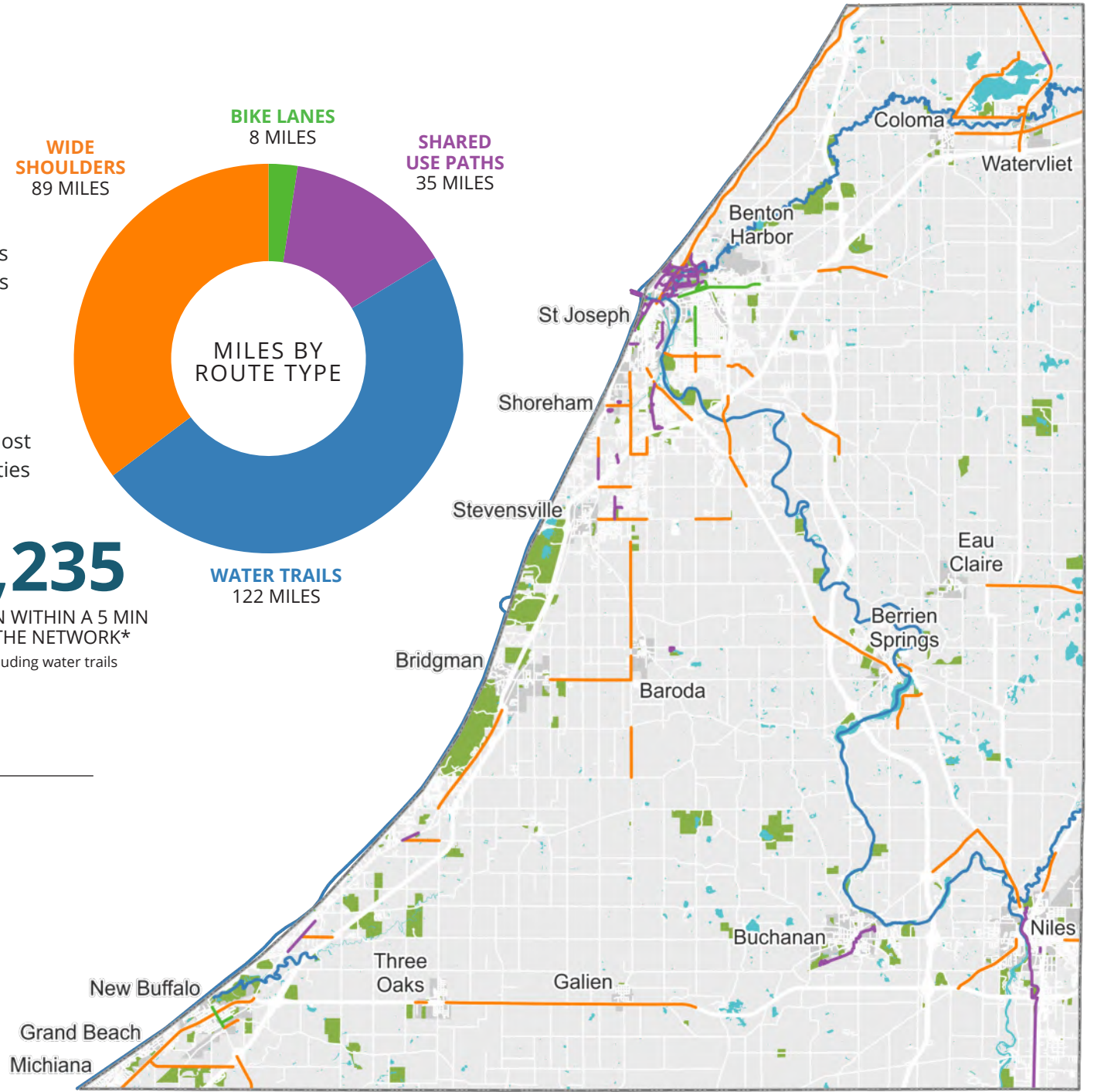
Berrien County is served by approximately 254 miles of active recreation and transportation infrastructure. This mileage does not include parks- and recreation-based trails found later in this section. This network is within a 5-minute walk of 71,235 people (82,413 including water trails).

As you can see from the map to the right, there is a lack of a cohesive and connected network in the county, with most infrastructure serving only the communities in which they are located.

According to Strava data, there were 56,200 walking trips and 26,700 bicycle trips taken in Berrien County in 2021.



71,235
POPULATION WITHIN A 5 MIN WALK TO THE NETWORK*
* 82,413 including water trails



LEGEND

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- — Park
- — Water
- — City or Village



NATIONAL & REGIONAL CONNECTORS






National and regional connectors are trails that are or have the potential to provide significant connections to areas surrounding Berrien County. As noted in Section 1, the Indiana-Michigan River Valley Trail (5.9 miles) and the U.S. Bicycle Route 35 (47.59 miles) are the two national and regional connectors in Berrien County. The opportunity for Berrien County communities is to continue the development of these trails as both key contributors to tourists visiting the community and to serve resident connectivity goals. Consideration should be given to building out these corridors as dedicated off-road paths as part of a long-term strategy to drive maximum use and value.


More information about the U.S. Bicycle Route system can be found at <https://www.adventurecycling.org/routes-and-maps/us-bicycle-route-system/>.

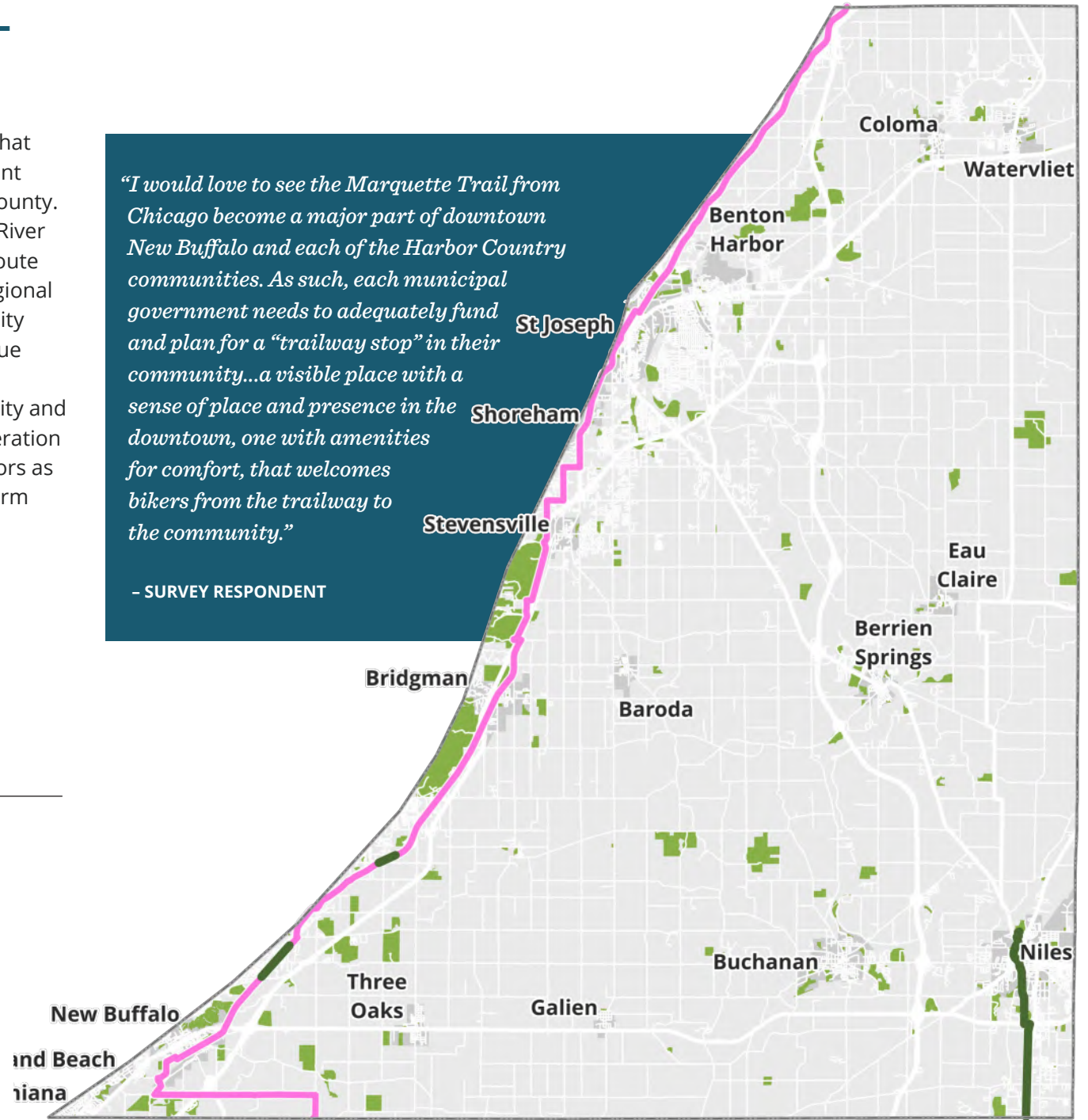
"I would love to see the Marquette Trail from Chicago become a major part of downtown New Buffalo and each of the Harbor Country communities. As such, each municipal government needs to adequately fund and plan for a "trailway stop" in their community...a visible place with a sense of place and presence in the downtown, one with amenities for comfort, that welcomes bikers from the trailway to the community."

- SURVEY RESPONDENT

LEGEND

-  US 35 Bike Route
-  National & Regional Connector
-  Park
-  Water
-  City or Village

1" = 6 Miles 



LOCAL COMMUNITY CONNECTORS

For the purposes of this Plan, typical elements of the local community connectors system include corridors that accomplish the following:

- Connections to destinations within and between local communities;
- Serve as primary “arteries” that connect to other more local or regionally significant corridors; and
- Often include significant existing or planned on- or off-road systems.

Facilities incorporated into this planning process were obtained through existing GIS data obtained from the SWMPC and local communities, as well as a review of regional and local planning documents received as a part of the municipal assessment process.

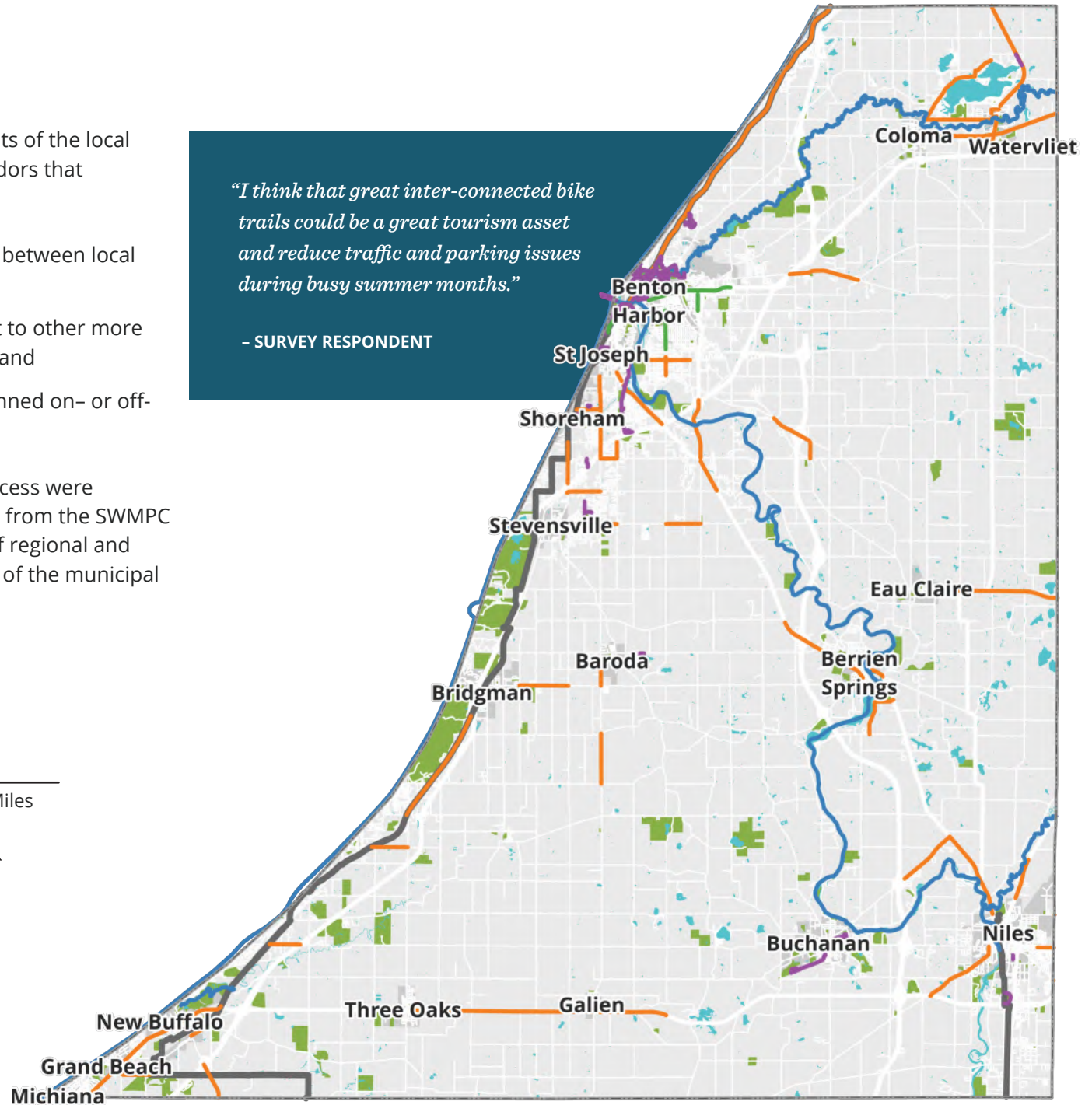
“I think that great inter-connected bike trails could be a great tourism asset and reduce traffic and parking issues during busy summer months.”

- SURVEY RESPONDENT

LEGEND

-  Bike Lane
-  Shared Use Path
-  Water Trail
-  Wide Shoulder
-  National & Regional Connector
-  — Park
-  — Water
-  — City or Village

1" = 6 Miles



PARK & RECREATION BASED TRAILS

Park-based trails are found in parks (state, county, township, city, and village), land preserves, nature centers, college and school campuses, and private lands (wineries, business campuses). These trails are mainly used for recreational purposes as they mainly provide routes within these parks and not to destinations outside of them. This includes hiking trails, nature trails, mountain bike/fat tire bike trails, and cross-country skiing trails. Currently there are no public equestrian trails in Berrien County.

4.9 OUT OF 6
HIKING TRAIL WALKER PREFERENCE

Data for identifying these types of trails were compiled from two primary sources. First, local communities that provided trail locations within parks and recreation plans as a part of the municipal assessment exercise were mapped. Additionally, Pat Fisher, President of the Harbor Country Hikers, provided a comprehensive list of hiking trails that he has compiled over years of local hiking experience. As many of these trails do not provide connectivity outside the boundaries of the parks, only park locations are included on the map. In the development of the Plan, connecting residents to parks was a key demand factor included in the analysis.

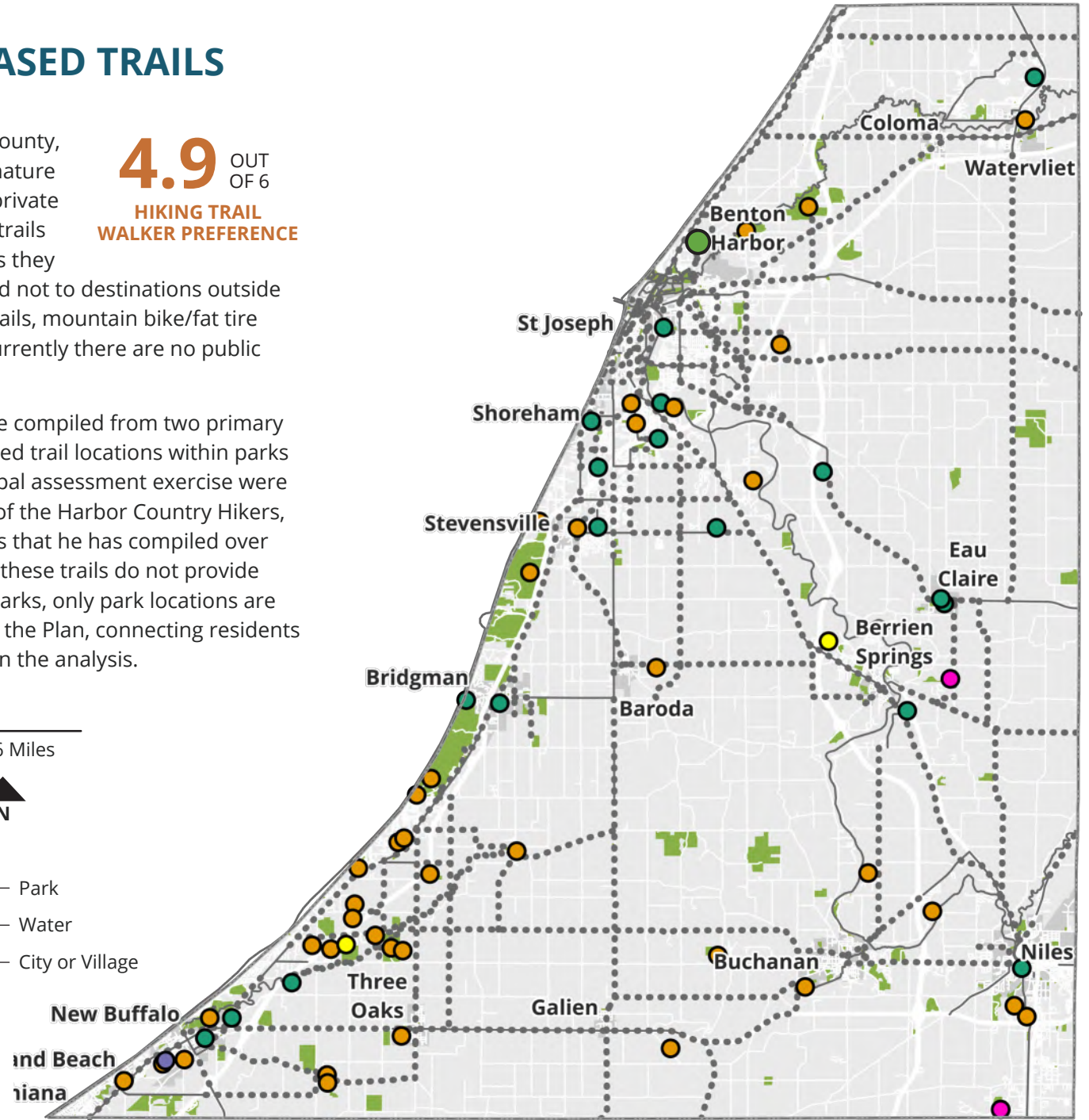
LEGEND

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- Walking Path
- Hiking
- Hiking, Cross Country Ski
- Hiking, Cross Country Ski, Mountain Bike
- Hiking, Mountain Bike

1" = 6 Miles

N

- — Park
- — Water
- — City or Village



WATER TRAILS

Water trails are designated routes along bodies of water used for canoeing, kayaking, and other water activities. These trails are usually accompanied with boat launches or public access sites. Water trails sometimes have barriers, such as dams, where you must walk around on land. Berrien County has 5 existing water trails on its major navigable waterways: Lake Michigan, Galien River, St. Joseph River, Dowagiac River, and Paw Paw River.

Satisfaction with water trails was the highest of the niche trail types, scoring 3.13 out of 5. Some of the most prominent feedback that was received during the community survey and open houses included the need for better maintenance and clearing of debris along water trails, improvements of access sites (parking, boat launches, restrooms), and increased signage and wayfinding. The public responded very positively to the new ADA-compliant kayak launches, including users without mobility issues, citing the ease of getting in and out of the water. Overall, the public is supportive of new and expansions of water trails, scoring 3.38 out of 5 on the community survey.

Visit michiganwatertrails.org for more information on existing water trails and access sites.





“Water trails are so nice for the area in the summer for kayaking and paddle boarding. It would be great if they could be more accessible and well marked.”

- SURVEY RESPONDENT

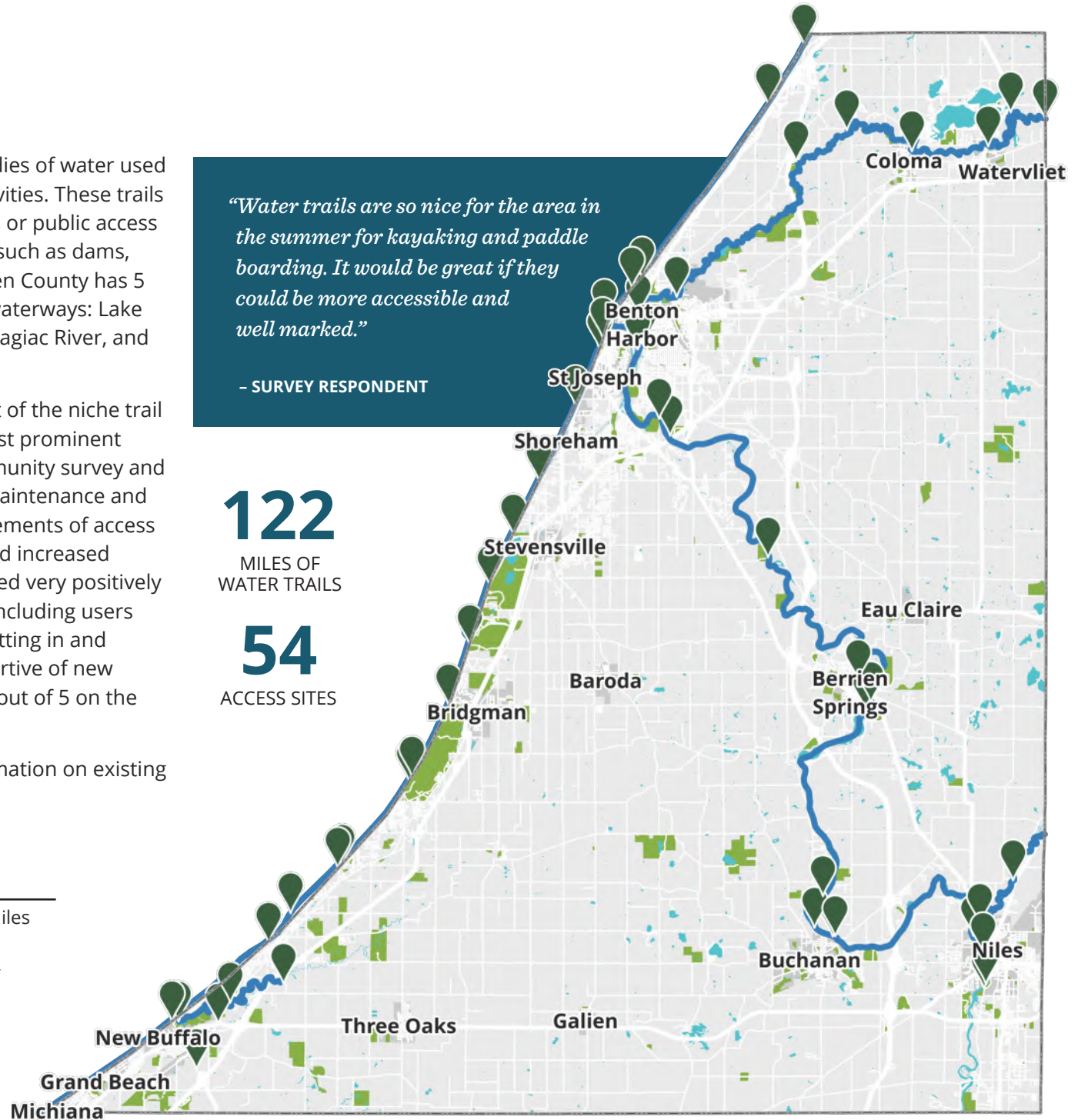
122
MILES OF
WATER TRAILS

54
ACCESS SITES

LEGEND

-  Water Trail
-  Access Site
-  Park
-  Water
-  City or Village

1" = 6 Miles



EQUESTRIAN TRAILS

Equestrian trails are exclusively used by horses or sometimes shared by other users or developed alongside and parallel to shared use paths. Currently, there are no equestrian dedicated facilities in Berrien County. Equestrian enthusiasts have been vocally supportive throughout the planning process for dedicated facilities in the county.

Due to the unique needs of equestrian trail users, they are often destination trail users, meaning they travel to specific locations to enjoy trails with their horses. Due to the lack of equestrian trails in Berrien County, enthusiasts in the county are traveling to neighboring counties in Michigan and Indiana.

More information on equestrian trails in Michigan can be found at www.michiganhorsetrails.com.

\$321m

CONTRIBUTION TO THE MICHIGAN ECONOMY BY EQUESTRIAN RECREATION

(2017 American Horse Council Foundation)

6,677

MICHIGAN JOBS SUPPORTED BY EQUESTRIAN TOURISM

(2017 American Horse Council Foundation)



Equestrian Trail User

“We need to support safe places for people to ride their horses and increase the miles of trails available for horses.”

- SURVEY RESPONDENT



Route Planning Work Session

4 ANALYSIS

Berrien
County
Trails
Master Plan

METHODOLOGY

This section includes a review of the previously planned and existing active recreation and transportation network as identified in Section 3, including the municipal assessment results. Various analyses were undertaken to provide an in-depth look into existing conditions for bicycling and walking and to provide a sense of where the greatest need for infrastructure and improvements is located, and which roads might be most suitable for new routes. An essential part of this analysis for Berrien County was the ability to relate to the central themes of the Plan, including safety, accessibility, connectivity, equity, health and economic impact. To capture, visualize, and geographically represent the data that was needed to understand the county through these themes, the analysis was broken down into four maps:

- Demand Analysis
- Needs Analysis
- Health Analysis
- Stress Analysis

Looking at the results of these analyses you can begin to see where gaps in the existing network are and what needs to be connected.

DEMAND, NEEDS, & HEALTH ANALYSIS

These maps were generated by aggregating data from Esri, Census, and Corewell Health South (which uses data from the CDC). Points for key demographics and destinations were used to generate heat maps to visually represent concentrations of identified data sets. This allowed a geographic representation of gaps in the existing network.



Love Creek County Park

STRESS ANALYSIS

Stress Analysis used factors that would contribute to uncomfortable situations were aggregated and mapped to show how stressful segments of roads were for walkers and bikers. The different factors were assigned a value and weighted depending on how much the factor attributed to stress.

DEMAND ANALYSIS

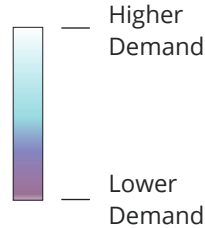
Demand for active recreation and transportation is essential to understand where this infrastructure should be located. The demand factors that were chosen are potential trip generators for active recreation and transportation. Demand analysis was generated using the following factors:

- Population density, residents with income 200% and below poverty level, residents that walk, bike, or use transit to get to work, Strava data, and locations of schools, employment, retail, entertainment, and parks.

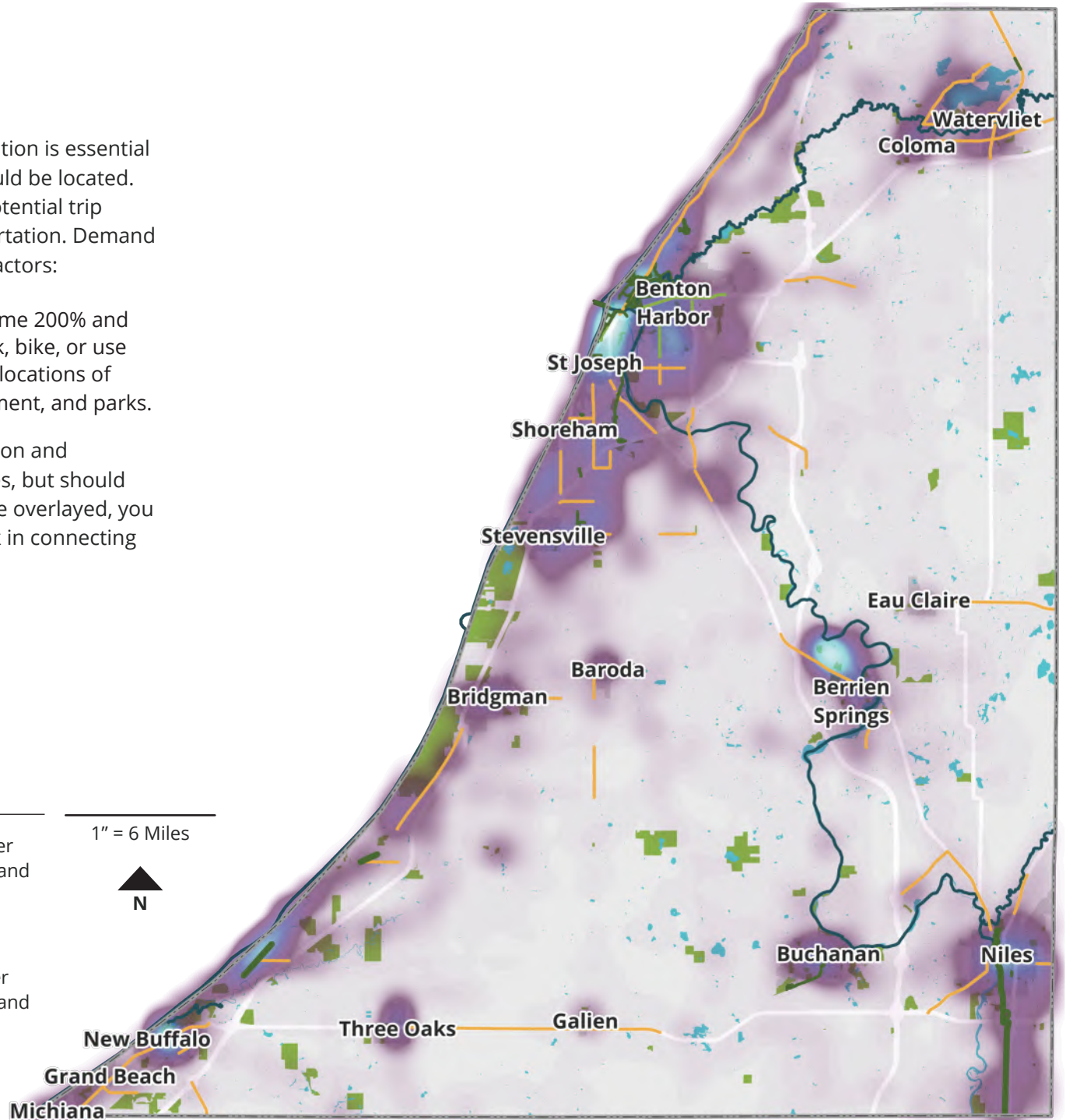
Clusters of high demand need active recreation and transportation connections within themselves, but should also be connected to one another. With these overlaid, you can begin to see gaps in the existing network in connecting these clusters.

LEGEND

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- Park
- Water
- City or Village



1" = 6 Miles



NEEDS ANALYSIS

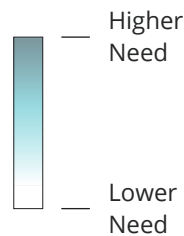
Certain factors increase the need for individuals to rely on active transportation to get to work, school, and do everyday tasks. Ensuring access to pedestrian and bicycle infrastructure to meet the needs of these people is essential to create an equitable active transportation system.

Areas of high need should be prioritized for bicycle and pedestrian improvements because it is likely that the residents in these areas rely more heavily on active transportation options for getting around. Needs analysis was generated using the following factors:

- Minority race groups, no high school diploma, no vehicle available, residents below the poverty line, youth, older residents, limited English speaking, and residents with a disability.

LEGEND

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- Park
- Water
- City or Village



1" = 6 Miles



HEALTH ANALYSIS

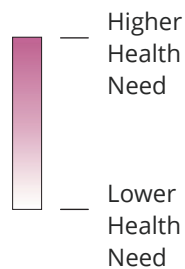
Health was another Theme when determining the recommendations in this Plan. As stated in the Benefits section, access to active recreation and transportation provides opportunities for people to be healthier and live healthier lifestyles. Factors that were used to create the Health Analysis were the following:

- Disability, Youth, Older Adults, Health Facilities, and prevalence of the following health conditions in adults: cancer (excluding skin), coronary heart disease, diagnosed diabetes, mental illness, stroke, and obesity.

This map shows the clusters of populations in Berrien County that experience these conditions or are vulnerable from a health perspective. Providing opportunities for active recreation and transportation within these areas could potentially alleviate the symptoms and prevalence of these and other numerous health conditions.

LEGEND

-  Bike Lane
-  Shared Use Path
-  Water Trail
-  Wide Shoulder
-  Park
-  Water
-  City or Village



1" = 6 Miles



STRESS ANALYSIS

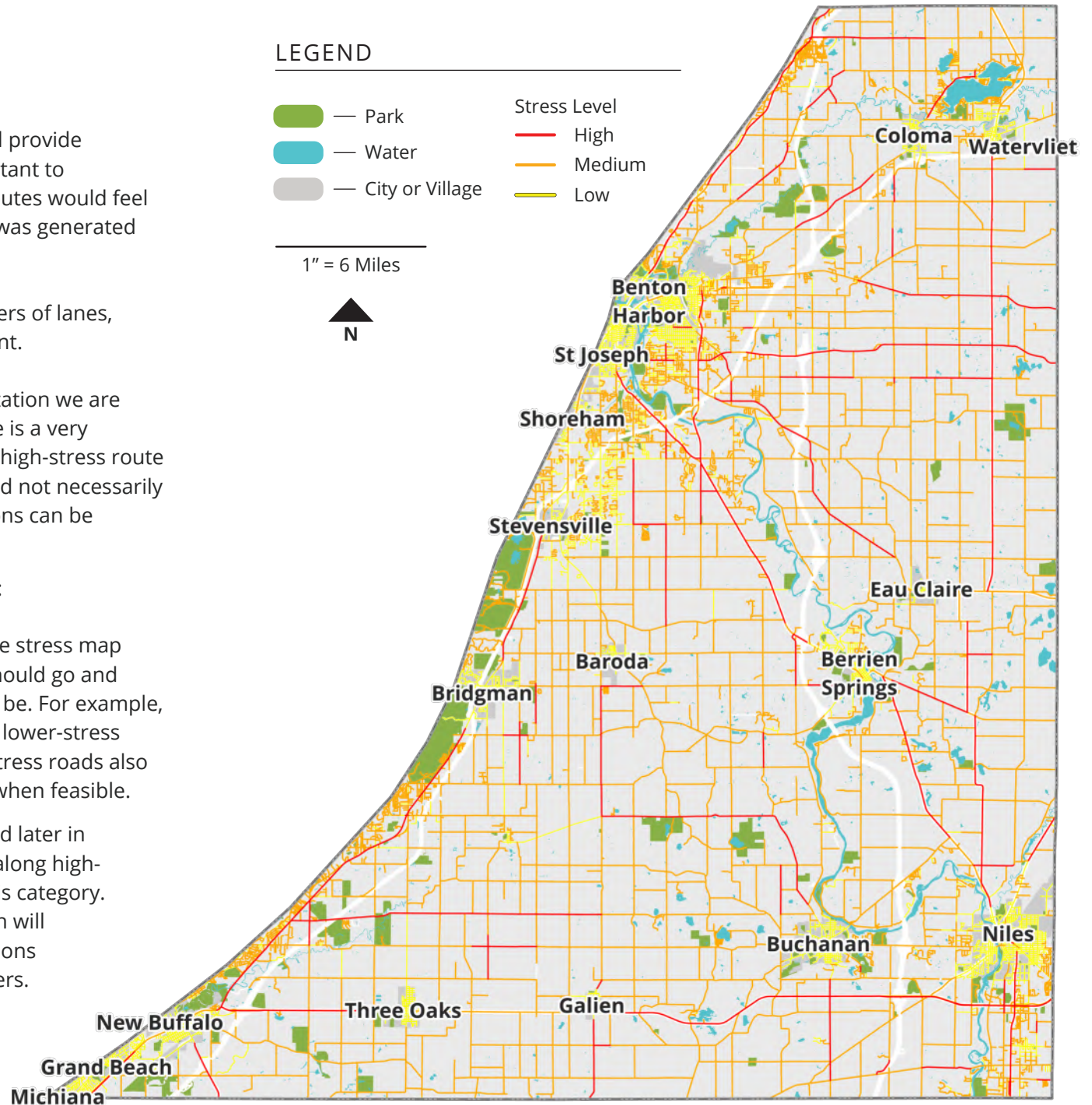
To provide comfortable and safe routes, and provide appropriate recommendations, it was important to understand how stressful certain on-road routes would feel for pedestrians and cyclists. Stress Analysis was generated using the following factors:

- AADT Traffic, crash, speed limits, numbers of lanes, lane width, and if sidewalks were present.

Since the modes of recreation and transportation we are concerned with are active ones, convenience is a very important factor that can't be overlooked. A high-stress route that proves to be the most convenient should not necessarily be avoided, as most stress-inducing conditions can be mitigated with appropriate infrastructure.

This analysis was used in two different ways:

1. During the **route selection process**, the stress map was used to determine where routes should go and what type of infrastructure they should be. For example, high-stress roads were avoided when a lower-stress alternative route was present. Higher-stress roads also require more protected infrastructure when feasible.
2. During the **prioritization process** found later in the Recommendations Section, routes along high-stress roads received more points in this category. The route recommendations in this Plan will help mitigate these high-stress interactions by providing safer infrastructure for users. Creating safer active recreation and transportation opportunities should be implemented first.



KEY FINDINGS

The planning team was able to take the results of each of the separate analyses and begin to overlay the various factors and identify gaps between areas of demand and need and the presence of and connectivity to the existing and planned routes. With this information, the project Steering Committee was engaged in a work session to identify opportunities to enhance the efficiencies and effectiveness of the system, specifically related to accessibility, connectivity and safety. The analysis leveraged investments in route developments that are currently in progress while acknowledging routes that have been included in previous county-wide and local jurisdictional plans. Through the analysis process, the study team identified the following key findings:

- There is a significant opportunity to **complete the Marquette Greenway connections** into downtown New Buffalo, connecting the region to Chicago with a dedicated shared use path.
- The Red Arrow Linear Park and the IN/MI River Valley Trail offer opportunities to **create high-value, regionally significant connections** from the Marquette Greenway in New Buffalo to Van Buren County and the Kal-Haven Trail, as well as connections from St Joseph-Benton Harbor to Niles and into South Bend and Mishawaka in Indiana.
- There is a strong desire to **create an East-West corridor** connecting New Buffalo to Niles utilizing the existing McCoy's Creek Trail.
- The Berrien County Road Department has initiated construction of wide paved shoulders along some corridors connecting communities in Berrien County, but these are currently scattered with limited connectivity. There is an opportunity to **formalize the connectivity process** using appropriate road corridors.
- While many municipalities have pedestrian/bicycle infrastructure and trail planning, there is an opportunity to better **incorporate wider system planning to ensure connections** to surrounding jurisdictions.
- There is a density of trails, both existing and planned, in the St. Joseph/Benton Harbor communities. Increasing the accessibility of these trails and improving connectivity to shopping, employment and education centers can **better serve populations with limited access to car transportation**.
- Key non-governmental organizations including Whirlpool, Andrews University and Lake Michigan College have made significant investments in trail infrastructure, and represent key allies in the **further development of and advocacy for active recreation and transportation investments**.

Finally, new routes were proposed and suggested as desired facility types based on the road conditions analysis. The results of the work from the steering committee work session were vetted by the study team and local stakeholder groups prior to being presented to the public during the four Community Open Houses.

“When traveling to other communities I usually notice when they have trails or multi-use paths and think it would be nice if we could have these features in our community.”

-SURVEY RESPONDENT



5

RECOMMENDATIONS

Berrien
County
Trails
Master Plan

RECOMMENDATIONS

Recommendations in this Plan were developed from the opportunities identified throughout the planning process. Achieving these recommendations will require a coordinated effort of Berrien County, the local municipalities, Friends of Berrien County Trails, volunteer organizations, major businesses and institutions, and residents. Through these efforts, the proposed network can be implemented in the highest possible quality that will promote everyday use for active recreation & transportation by residents and tourists alike.

The recommendations in this Plan are based on the data, information, and existing conditions provided to planners and are subject to change. Further analysis of the routes and engineering design are necessary prior to implementing any of the recommendations contained in this Plan.

To view the maps in more detail, please visit the online interactive maps found at <https://southwest-michigan-planning-commission-swmpc.hub.arcgis.com/>.

The recommendations are organized into the following categories:

- Infrastructure (I)
- Construction & Maintenance (CM)
- Planning & Evaluation (PE)
- Policy (P)
- Education & Safety (ES)
- Marketing & Engagement (ME)

The recommendations are then assigned an estimated time frame of completion:

- **Short Term**
- **Medium Term**
- **Long Term**
- **Ongoing**

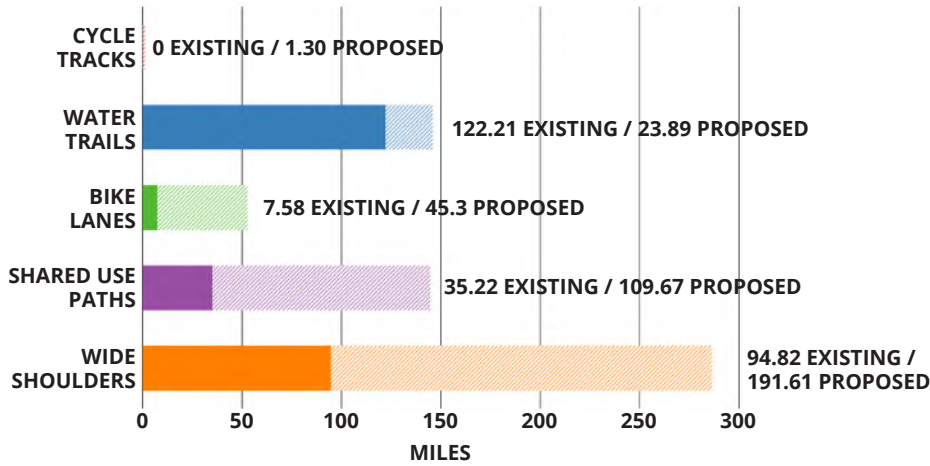


Paw Paw River Water Trail

INFRASTRUCTURE RECOMMENDATIONS

The Infrastructure Recommendations include the proposed routes and general infrastructure recommendations. The proposed routes are displayed by significance (national and regional connector or local community connector) and then by jurisdiction. Each jurisdiction includes a map and an associated table to display information about each segment including infrastructure type, miles within that jurisdiction, and PASER along the route. Lower PASER scores indicate poor condition of the roadway and some of these recommendations could be done concurrently with imminent road improvements.

EXISTING AND PROPOSED MILEAGE BY TYPE



LEGEND

Proposed Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

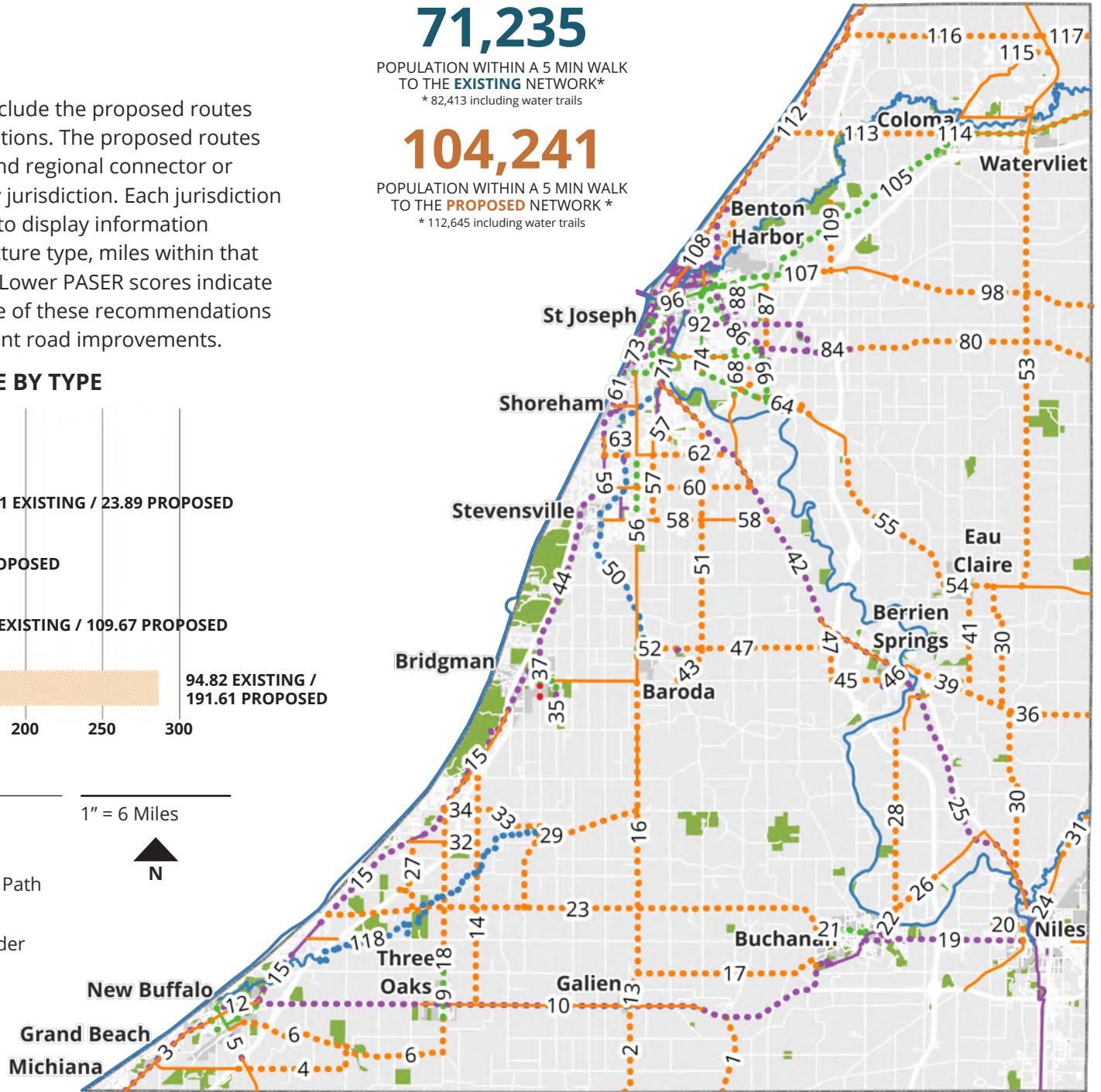
- — Park
- — Water
- — City or Village

1" = 6 Miles



71,235
POPULATION WITHIN A 5 MIN WALK TO THE EXISTING NETWORK*
* 82,413 including water trails

104,241
POPULATION WITHIN A 5 MIN WALK TO THE PROPOSED NETWORK*
* 112,645 including water trails



INFRASTRUCTURE RECOMMENDATIONS

Segment #	Name	Status	Type	Miles	Priority
1	MACOG Plan Connection	Desired	Wide Shoulder	2.45	Medium
2	Cleveland Wide Shoulder B	Planned	Wide Shoulder	2.72	Medium
3	Marquette Greenway	In Progress	Shared Use Path	3.48	Very High
4	Grand Beach to Three Oaks	Planned	Wide Shoulder	4.02	Medium
5	M239	Planned	Shared Use Path	1.03	High
6	New Buffalo to Three Oaks - South	Planned	Wide Shoulder	7.56	Medium
7	Willard-Clay Bike Lane	Planned	Bike Lane	0.67	Medium
8	Clay Bike Lane	Planned	Bike Lane	0.87	Medium
9	Three Oaks Bike Lane	Planned	Bike Lane	1.41	Medium
10	Old Sauk Trail	Planned	Shared Use Path	18.65	Very High
11	Whittaker Bike Lane	Planned	Bike Lane	0.25	High
12	Red Arrow Linear Park E	Planned	Shared Use Path	1.14	Very High
13	Galien Bike Lane	Planned	Bike Lane	0.75	Medium
14	Flynn Wide Shoulder	Planned	Wide Shoulder	7.40	Medium
15	Red Arrow Linear Park D	In Progress	Shared Use Path	11.65	Very High
16	Cleveland Wide Shoulder A	Planned	Wide Shoulder	9.33	High
17	Gallien to McCoy's Creek Trail	Desired	Wide Shoulder	6.03	Medium
18	Three Oaks Wide Shoulder	Planned	Wide Shoulder	4.99	Medium
19	Niles - Buchanan Trail	Desired	Shared Use Path	5.40	Very High
20	Pratt / Lincoln Wide Shoulder	Desired	Wide Shoulder	1.49	Very High
21	Buchanan Bike Lanes	Desired	Bike Lane	2.30	Very High
22	McCoy's Creek Trail Extension	In Progress	Shared Use Path	0.87	Very High
23	Warren Woods Wide Shoulder	Planned	Wide Shoulder	15.50	Very High
24	M51 Bike Lane	Desired	Bike Lane	1.03	Very High
25	Indiana Michigan River Valley Trail	In Progress	Shared Use Path	8.40	Very High
26	Walton Wide Shoulder	In Progress	Wide Shoulder	1.93	Very High
27	Prarie Wide Shoulder	Planned	Wide Shoulder	2.89	Medium
28	Rangeline Wide Shoulder	Desired	Wide Shoulder	5.80	Very High
29	New Troy Wide Shoulder B	Desired	Wide Shoulder	5.58	Medium
30	M140 Wide Shoulder	Planned	Wide Shoulder	9.23	Medium
31	M51 Wide Shoulder	Desired	Wide Shoulder	1.62	Medium
32	Harbert Wide Shoulder	Planned	Wide Shoulder	1.01	Medium
33	New Troy Wide Shoulder A	Desired	Wide Shoulder	2.87	Medium
34	Sawyer Wide Shoulder	In Progress	Wide Shoulder	1.06	Very High
35	Lake Township Park	In Progress	Shared Use Path	0.93	Very High
36	Pokagon Wide Shoulder	Desired	Wide Shoulder	3.87	Medium
37	Church Cycle Track	Planned	Cycle Track	1.30	Medium
38	Bridgman Bike Lanes	Planned	Bike Lane	0.91	Medium
39	Pokagon Wide Shoulder	In Progress	Wide Shoulder	1.73	Very High
40	Snow Road Trail	In Progress	Shared Use Path	0.26	Very High
41	Huckleberry Wide Shoulder	In Progress	Wide Shoulder	4.33	Very High
42	IN MI River Valley Trail Extension	Desired	Shared Use Path	12.47	Very High
43	Hollywood Wide Shoulder B	Desired	Wide Shoulder	1.45	Medium
44	Red Arrow Linear Park C	Planned	Shared Use Path	6.63	Very High
45	Shawnee Wide Shoulder	Desired	Wide Shoulder	1.78	High
46	Ferry Street Trail	Desired	Shared Use Path	0.36	High
47	Lemon Creek Wide Shoulder	Planned	Wide Shoulder	7.08	High
48	Ferry Bike Lane	Desired	Bike Lane	0.24	High
49	Cleveland Wide Shoulder C	Planned	Wide Shoulder	0.27	Very High
50	Hickory Creek Water Trail	Planned	Water Trail	10.69	High
51	Hollywood Wide Shoulder A	In Progress	Wide Shoulder	6.87	Very High
52	Lemon Creek Bike Lane	Planned	Bike Lane	0.50	Medium
53	M140 Wide Shoulder	Planned	Wide Shoulder	13.38	Medium
54	Eau Claire Bike Lane	Desired	Bike Lane	0.78	Medium
55	Sodus Parkway	Desired	Wide Shoulder	6.90	Medium
56	Cleveland Bike Lane A	Desired	Bike Lane	2.69	High
57	Washington Wide Shoulder	Desired	Wide Shoulder	2.84	Very High
58	John Beers Wide Should	In Progress	Wide Shoulder	2.56	Very High
59	Red Arrow Connection	Desired	Shared Use Path	0.43	Very High

Segment #	Name	Status	Type	Miles	Priority
60	Marquette Woods	In Progress	Wide Shoulder	3.57	Very High
61	Red Arrow Linear Park B	Planned	Shared Use Path	2.70	Very High
62	Glenlord Rd	Desired	Wide Shoulder	3.30	Very High
63	Lakeshore Alternative Connection	Desired	Wide Shoulder	1.00	High
64	Sodus Parkway Alternate	Desired	Wide Shoulder	1.62	Medium
65	Shoreham Village Park Connection	Desired	Shared Use Path	0.15	High
66	Pipestone Bike Lane B	Desired	Bike Lane	1.66	Very High
67	Sodus Bike Lane B	Desired	Bike Lane	1.10	Very High
68	M139 Bike Lane	Planned	Bike Lane	1.92	Very High
69	Cinema Way Wide Shoulder	Desired	Wide Shoulder	1.04	High
70	Sodus Bike Lane A	Planned	Bike Lane	1.10	Very High
71	Riverfront Trail	Planned	Shared Use Path	2.48	Very High
72	Hilltop Bike Lane	Planned	Bike Lane	0.99	Very High
73	Red Arrow Linear Park A	Planned	Shared Use Path	2.51	Very High
74	Colfax Bike Lane B	Desired	Bike Lane	0.79	Very High
75	M63 Bike Lane	Planned	Bike Lane	1.50	Very High
76	Morton Bike Lane	Planned	Bike Lane	0.86	Very High
77	Ox Creek Trail B	Desired	Shared Use Path	1.59	Very High
78	St. Joseph E-W Trail	Planned	Shared Use Path	2.08	Very High
79	Lakeshore Road Trail	Planned	Shared Use Path	1.16	Very High
80	Napier Ave Wide Shoulder	Desired	Wide Shoulder	7.65	Medium
81	Napier Bike Lane A	Planned	Bike Lane	1.86	Very High
82	Napier Bike Lane B	Desired	Bike Lane	1.25	Very High
83	Langley Bike Lane	Planned	Bike Lane	0.16	Very High
84	Napier Ave Shared Use Path	Desired	Shared Use Path	2.76	High
85	Lake Michigan College	Desired	Shared Use Path	1.04	High
86	Pipestone Bike Lane A	Planned	Bike Lane	2.47	Very High
87	Crystal Wide Shoulder	Planned	Wide Shoulder	2.24	Very High
88	M139 Shared Use Path	Planned	Shared Use Path	1.52	Very High
89	Lake Court Connection	Desired	Shared Use Path	0.07	High
90	Ox Creek Trail A	In Progress	Shared Use Path	1.55	Very High
91	Empire Shared Use Path B	Desired	Shared Use Path	2.23	Very High
92	Empire Shared Use Path A	Planned	Shared Use Path	1.27	Very High
93	Riverview Trail	Planned	Shared Use Path	1.04	Very High
94	Broad Bike Lane	Planned	Bike Lane	0.72	Very High
95	Riverview Trail Connection	Desired	Shared Use Path	0.13	High
96	Twin Cities Bike Lanes	Planned	Bike Lane	1.25	Very High
97	Colfax Bike Lane A	Desired	Bike Lane	0.46	High
98	Territorial Road	Desired	Wide Shoulder	6.26	Medium
99	North Bank Trail	Planned	Shared Use Path	0.95	Very High
100	Upton Shared Use Path	In Progress	Shared Use Path	0.26	Very High
101	Whitwam Shared Use Path	Planned	Shared Use Path	0.64	High
102	Territorial Bike Lane A	Desired	Bike Lane	0.07	High
103	Paw Paw Bike Lane	Planned	Bike Lane	0.54	Very High
104	Territorial Bike Lane B	Planned	Bike Lane	1.62	Very High
105	Red Arrow North	Desired	Bike Lane	11.84	Very High
106	Trail Gap Crossing	Desired	Shared Use Path	0.05	High
107	Territorial Wide Shoulder	In Progress	Wide Shoulder	1.32	Very High
108	Lakeview Trail A	In Progress	Shared Use Path	2.46	Very High
109	Benton Charter Wide Shoulder	Planned	Wide Shoulder	2.22	Medium
110	Benton Harbor to Whirlpool	In Progress	Shared Use Path	1.41	Very High
111	Paw Paw Ave	Planned	Wide Shoulder	1.63	High
112	Lakeview Trail B	Desired	Shared Use Path	7.80	Very High
113	Coloma Wide Shoulder	Desired	Wide Shoulder	5.01	Medium
114	Coloma Bike Lane	Desired	Bike Lane	0.73	High
115	Blatchford Wide Shoulder	Desired	Wide Shoulder	0.76	Medium
116	Hagar Shores Wide Shoulder A	In Progress	Wide Shoulder	5.99	Very High
117	Hagar Shores Wide Shoulder B	Desired	Wide Shoulder	1.48	Medium
118	Galien River Water Trail	Desired	Water Trail	13.20	Medium

INFRASTRUCTURE RECOMMENDATIONS

RECOMMENDATION

ONGOING

I-1

Complete four regionally significant routes that will create a backbone of the proposed network. These routes include:

- Marquette Greenway/Red Arrow Linear Park/Lakeview Trail
- Indiana-Michigan River Valley Trail
- Old Sauk Trail
- McCoy's Creek Trail

CHAMPIONS

- Friends of Berrien County Trails
- Berrien County
- Local Municipalities
- Michigan Department of Transportation (MDOT)
- Be Healthy Berrien
- Whirlpool
- Cornerstone Alliance

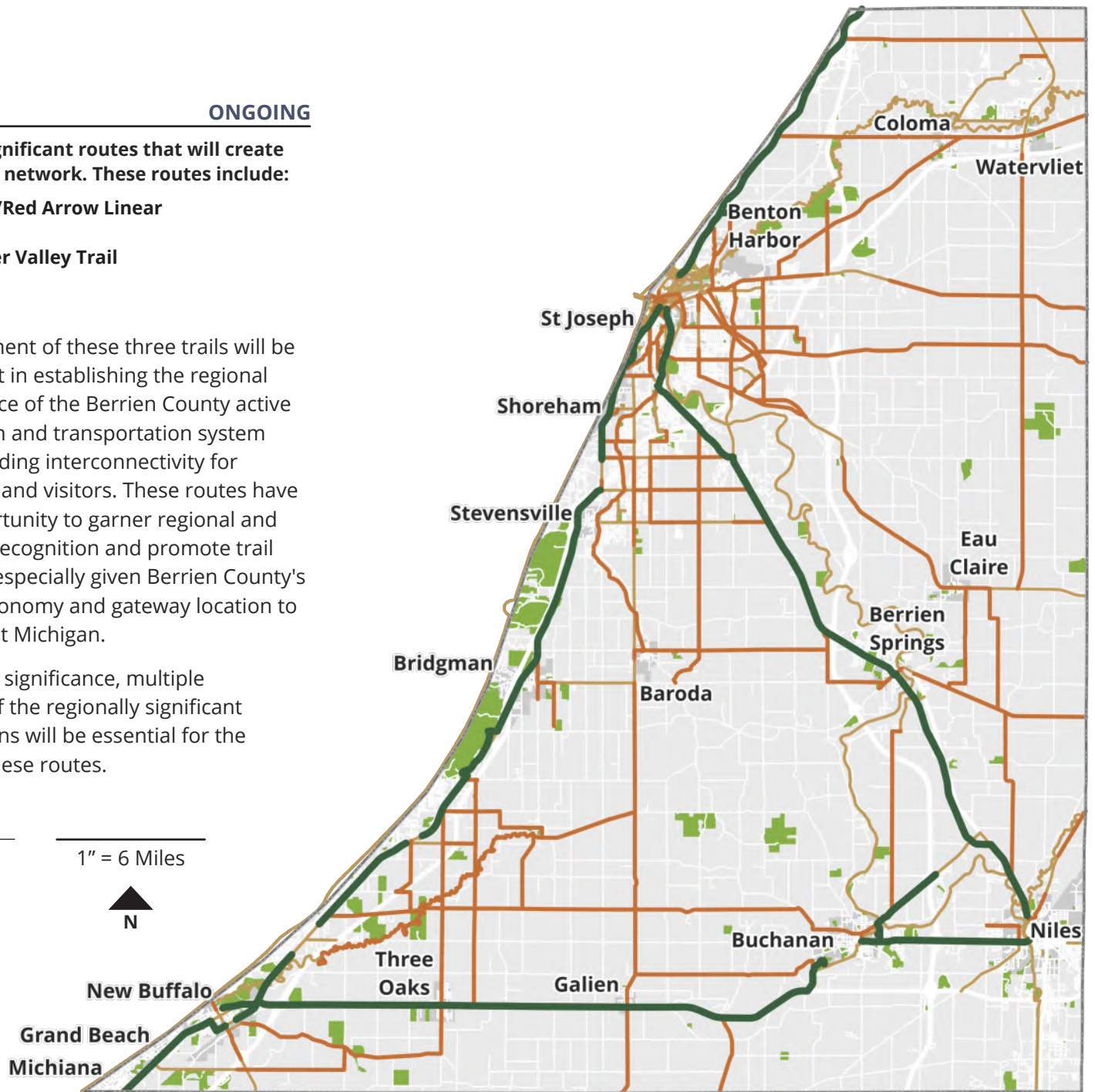
Development of these three trails will be significant in establishing the regional significance of the Berrien County active recreation and transportation system and providing interconnectivity for residents and visitors. These routes have the opportunity to garner regional and national recognition and promote trail tourism, especially given Berrien County's tourist economy and gateway location to Southwest Michigan.

Given the significance, multiple jurisdictions crossed, and great length of the regionally significant routes, coordination between jurisdictions will be essential for the smooth and cohesive development of these routes.

LEGEND

- National & Regional Connector
- Local Community Connector
- Existing Route
- Park
- Water
- City or Village

1" = 6 Miles



INFRASTRUCTURE RECOMMENDATIONS

RECOMMENDATION

ONGOING

I-2 Build upon the backbone of active recreation & transportation routes created in I-1 and develop the local community connectors within your jurisdiction.







CHAMPIONS

- Friends of Berrien County Trails
- Berrien County
- Local Municipalities
- Michigan Department of Transportation (MDOT)

To create a comprehensive active recreation and transportation system, each jurisdiction will need to spearhead the development of the proposed routes within their borders. These local community connectors are essential to connecting users and destinations to the overall network.

The maps on the following pages highlight the segments in each jurisdiction to help guide implementation of the proposed routes.

LEGEND

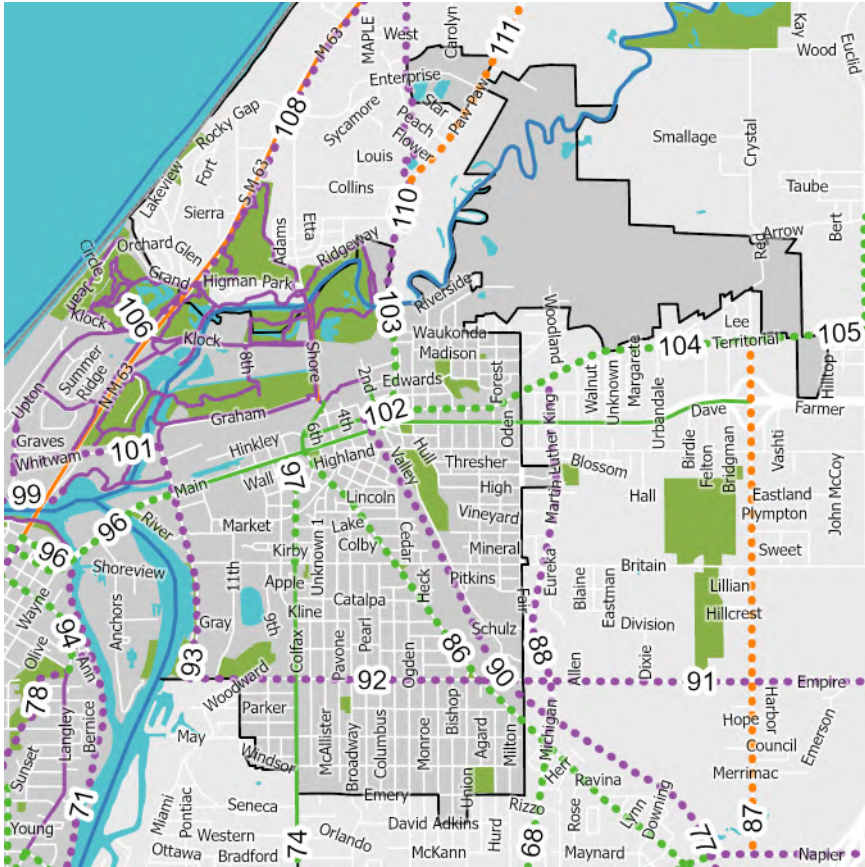
-  National & Regional Connector
-  Local Community Connector
-  Existing Route
-  Park
-  Water
-  City or Village

1" = 6 Miles



INFRASTRUCTURE RECOMMENDATIONS

CITY OF BENTON HARBOR



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
86	Pipestone Bike Lane A	Planned	Bike Lane	2.06	Very High	2.67
90	Ox Creek Trail A	In Progress	Shared Use Path	1.90	Very High	N/A
91	Empire Shared Use Path B	Desired	Shared Use Path	0.10	Very High	10.00
92	Empire Shared Use Path A	Planned	Shared Use Path	1.27	Very High	4.40
93	Riverview Trail	Planned	Shared Use Path	1.04	Very High	3.50
96	Twin Cities Bike Lanes	Planned	Bike Lane	0.08	Very High	5.00
97	Colfax Bike Lane A	Desired	Bike Lane	0.46	High	2.00
101	Whitwam Shared Use Path	Planned	Shared Use Path	0.09	High	5.50
102	Territorial Bike Lane A	Desired	Bike Lane	0.07	High	4.00
103	Paw Paw Bike Lane	Planned	Bike Lane	0.54	Very High	3.00
104	Territorial Bike Lane B	Planned	Bike Lane	0.77	Very High	6.00
105	Red Arrow North	Desired	Bike Lane	0.07	Very High	4.00
106	Trail Gap Crossing	Desired	Shared Use Path	0.05	High	N/A
108	Lakeview Trail A	In Progress	Shared Use Path	0.12	Very High	N/A
110	Benton Harbor Whirlpool	In Progress	Shared Use Path	0.24	Very High	N/A
111	Paw Paw Ave	Planned	Wide Shoulder	0.29	High	3.50

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- Park
- Water
- City or Village

1" = 1 Miles



INFRASTRUCTURE RECOMMENDATIONS

CITY OF BRIDGMAN



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
15	Red Arrow Linear Park D	In Progress	Shared Use Path	1.78	Very High	7.00
35	Lake Township Park	In Progress	Shared Use Path	0.08	Very High	N/A
37	Church Cycle Track	Planned	Cycle Track	1.36	Medium	4.50
38	Bridgman Bike Lanes	Planned	Bike Lane	0.91	Medium	3.50
44	Red Arrow Linear Park C	Planned	Shared Use Path	0.84	Very High	7.00

*The City of Bridgman zoning ordinance plans for a set of sidewalks and protected bike lanes for Red Arrow Highway through its jurisdiction. The proposed Red Arrow Linear Park is recommended in this Plan to be a shared use path given its regional significance and to be consistent with existing segments. This already planned design would be an acceptable alternative in the City of Bridgman because it still offers separation of vehicles and trail users.

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

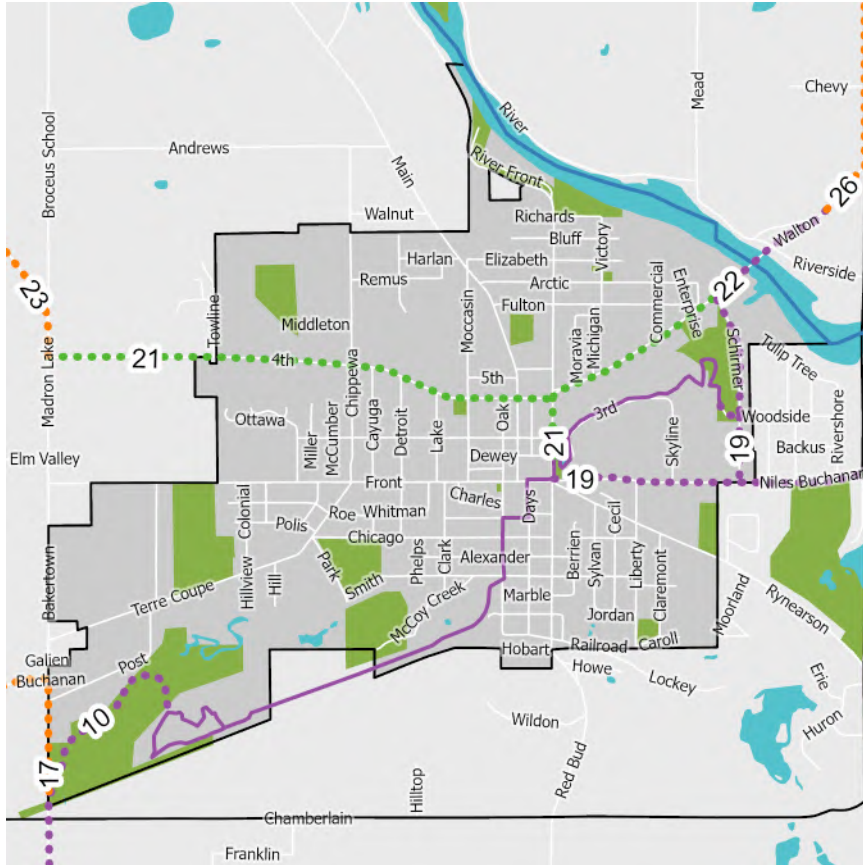
- — Park
- — Water
- — City or Village

1" = 1 Miles



INFRASTRUCTURE RECOMMENDATIONS

CITY OF BUCHANAN



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
10	Old Sauk Trail	Planned	Shared Use Path	0.90	Very High	N/A
17	Gallien to McCoys Creek Trail	Desired	Wide Shoulder	0.47	Medium	4.00
19	Niles - Buchanan Trail	Desired	Shared Use Path	1.08	Very High	5.75
21	Buchanan Bike Lanes	Desired	Bike Lane	2.40	Very High	3.00
22	McCoys Creek Trail Extension	In Progress	Shared Use Path	0.8	Very High	5.50

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

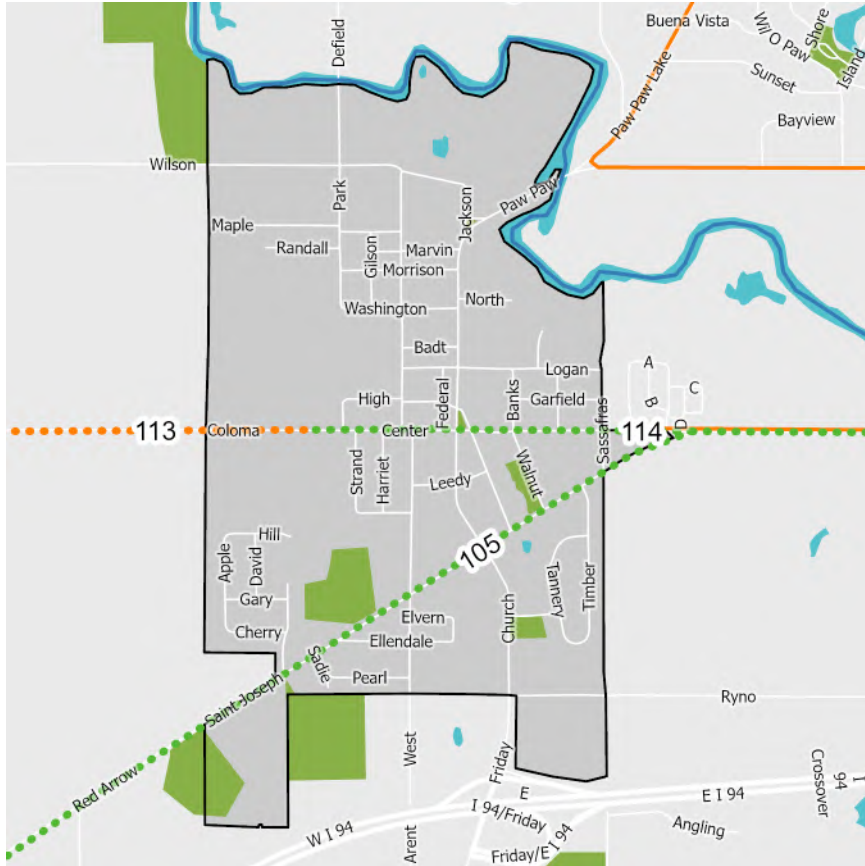
- — Park
- — Water
- — City or Village

1" = 1 Miles



INFRASTRUCTURE RECOMMENDATIONS

CITY OF COLOMA



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
105	Red Arrow North	Desired	Bike Lane	1.45	Very High	5.50
113	Coloma Wide Shoulder	Desired	Wide Shoulder	0.25	Medium	3.00
114	Coloma Bike Lane	Desired	Bike Lane	0.73	High	3.50

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

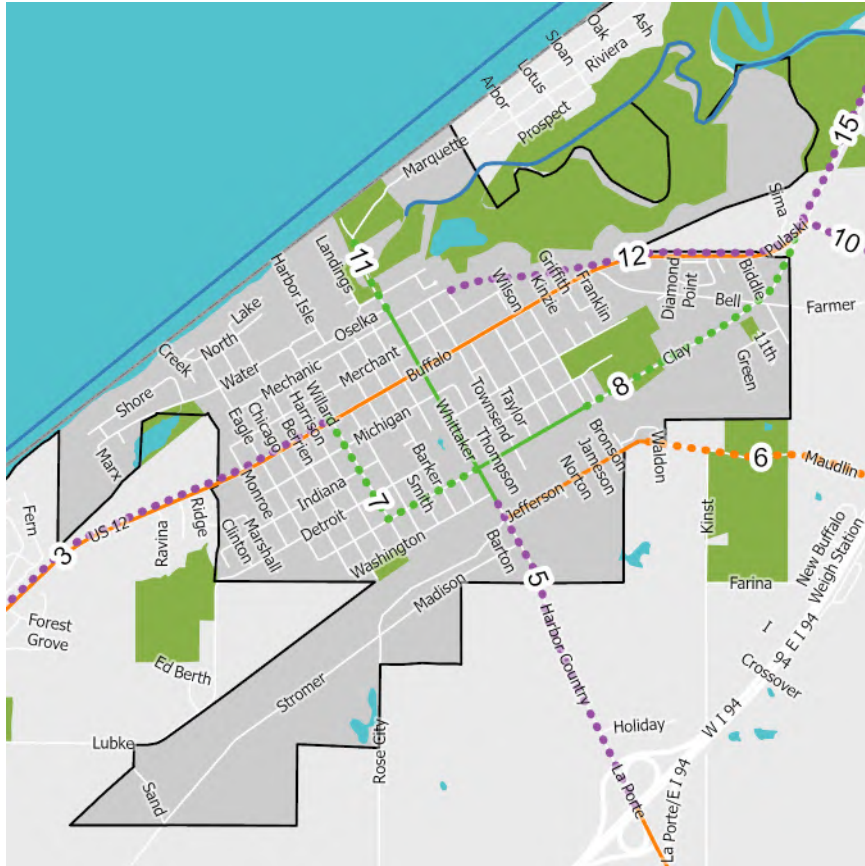
- — Park
- — Water
- — City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

CITY OF NEW BUFFALO



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
3	Marquette Greenway	In Progress	Shared Use Path	0.52	Very High	N/A
5	M239	Planned	Shared Use Path	0.38	High	7.00
6	New Buffalo to Three Oaks - South	Planned	Wide Shoulder	0.07	Medium	N/A
7	Willard-Clay Bike Lane	Planned	Bike Lane	0.67	Medium	N/A
8	Clay Bike Lane	Planned	Bike Lane	1.05	Medium	N/A
11	Whittaker Bike Lane	Planned	Bike Lane	0.25	High	N/A
12	Red Arrow Linear Park E	Planned	Shared Use Path	1.28	Very High	4.33

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

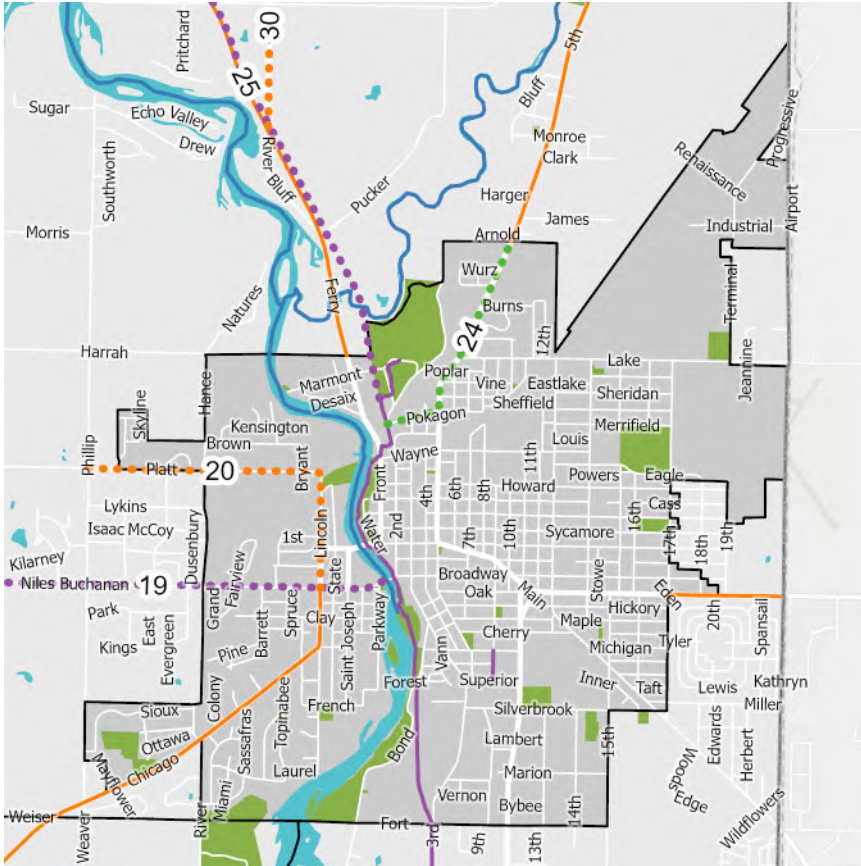
- Park
- Water
- City or Village

1" = 1 Miles



INFRASTRUCTURE RECOMMENDATIONS

CITY OF NILES



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
19	Niles - Buchanan Trail	Desired	Shared Use Path	1.11	Very High	7.00
20	Pratt / Lincoln Wide Shoulder	Desired	Wide Shoulder	1.83	Very High	N/A
24	M51 Bike Lane	Desired	Bike Lane	1.03	Very High	6.00
25	Indiana Michigan River Valley Trail	In Progress	Shared Use Path	0.25	Very High	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

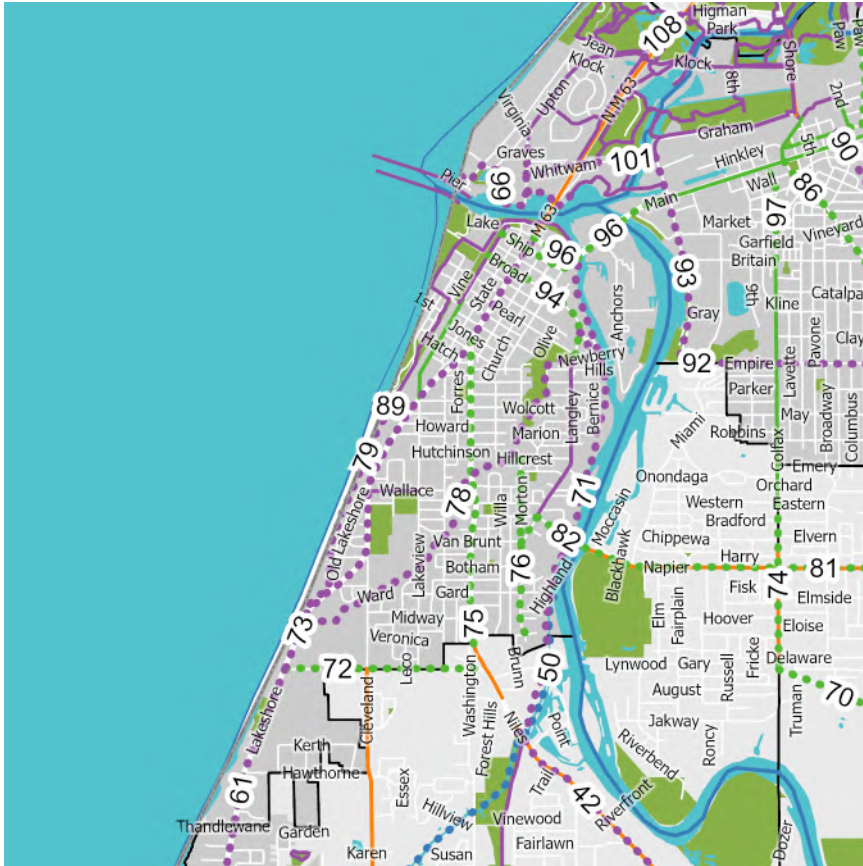
- Park
- Water
- City or Village

1" = 1 Miles



INFRASTRUCTURE RECOMMENDATIONS

CITY OF ST. JOSEPH



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
50	Hickory Creek Water Trail	Planned	Water Trail	0.35	High	N/A
61	Red Arrow Linear Park B	Planned	Shared Use Path	1.09	Very High	5.00
71	Riverfront Trail	Planned	Shared Use Path	1.83	Very High	N/A
72	Hilltop Bike Lane	Planned	Bike Lane	1.05	Very High	6.00
73	Red Arrow Linear Park A	Planned	Shared Use Path	2.51	Very High	4.00
75	M63 Bike Lane	Planned	Bike Lane	1.50	Very High	5.50
76	Morton Bike Lane	Planned	Bike Lane	0.86	Very High	N/A
78	St. Joseph E-W Trail	Planned	Shared Use Path	2.09	Very High	N/A
79	Lakeshore Road Trail	Planned	Shared Use Path	1.16	Very High	N/A
82	Napier Bike Lane B	Desired	Bike Lane	0.34	Very High	5.00
83	Langley Bike Lane	Planned	Bike Lane	0.16	Very High	3.00
89	Lake Court Connection	Desired	Shared Use Path	0.07	High	N/A
94	Broad Bike Lane	Planned	Bike Lane	0.72	Very High	6.50
95	Riverview Trail Connection	Desired	Shared Use Path	0.13	High	N/A
96	Twin Cities Bike Lanes	Planned	Bike Lane	1.30	Very High	4.50
99	North Bank Trail	Planned	Shared Use Path	0.95	Very High	N/A
100	Upton Shared Use Path	In Progress	Shared Use Path	0.26	Very High	5.50
101	Whitwam Shared Use Path	Planned	Shared Use Path	0.78	High	3.00
106	Trail Gap Crossing	Desired	Shared Use Path	0.05	High	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

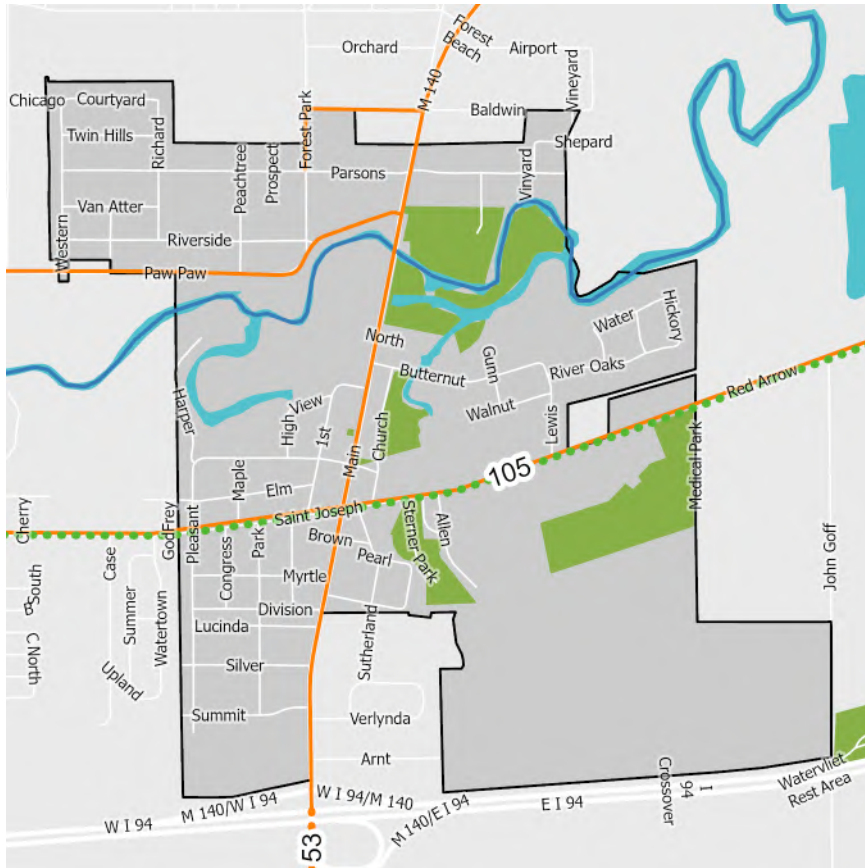
- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- Park
- Water
- City or Village

1" = 1 Miles



INFRASTRUCTURE RECOMMENDATIONS

CITY OF WATERVLIET



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
105	Red Arrow North	Desired	Bike Lane	1.37	Very High	3.67

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

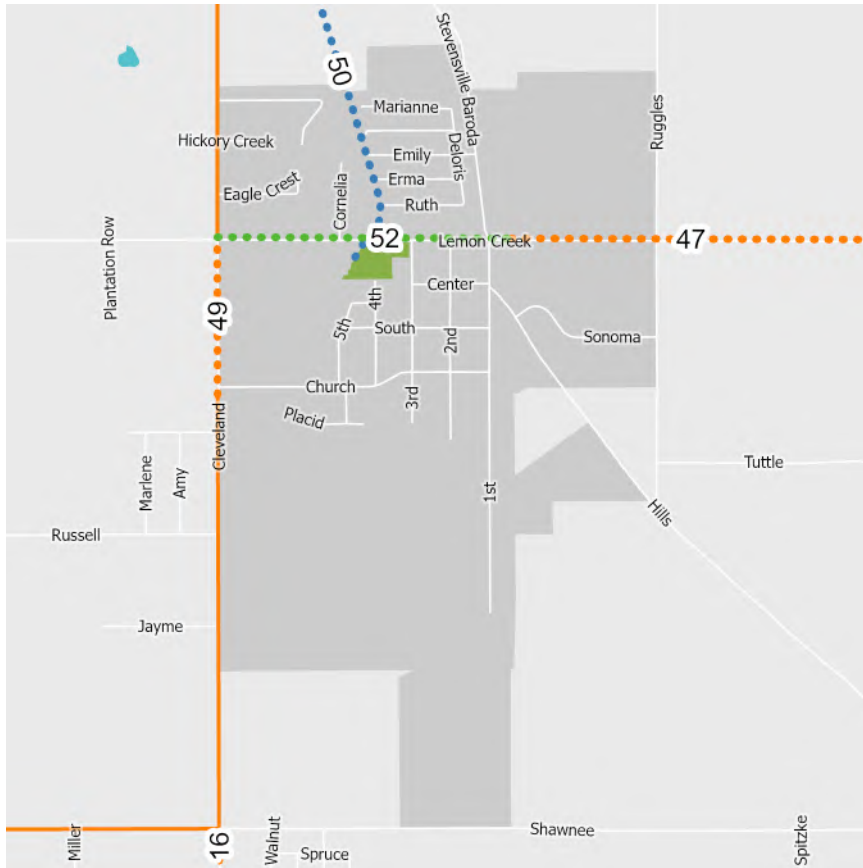
- — Park
- — Water
- — City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

VILLAGE OF BARODA



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
47	Lemon Creek Wide Shoulder	Planned	Wide Shoulder	0.33	Medium	N/A
49	Cleveland Wide Shoulder C	Planned	Wide Shoulder	0.36	High	5
50	Hickory Creek Water Trail	Planned	Water Trail	0.43	High	N/A
52	Lemon Creek Bike Lane	Planned	Bike Lane	0.5	Medium	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- — Park
- — Water
- — City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

VILLAGE OF BERRIEN SPRINGS



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
25	Indiana Michigan River Valley Trail	In Progress	Shared Use Path	0.05	Very High	N/A
40	Snow Road Trail	In Progress	Shared Use Path	0.26	Very High	4.00
42	Indiana Michigan River Valley Trail Extension	Desired	Shared Use Path	1.64	Very High	4.25
45	Shawnee Wide Shoulder	Desired	Wide Shoulder	0.74	High	4.50
46	Ferry Street Trail	Desired	Shared Use Path	0.36	High	4.00
48	Ferry Bike Lane	Desired	Bike Lane	0.30	High	5.00

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- — Park
- — Water
- — City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

VILLAGE OF EAU CLAIRE



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
41	Huckleberry Wide Shoulder	In Progress	Wide Shoulder	1.03	Very High	3.50
54	Eau Claire Bike Lane	Desired	Bike Lane	0.78	Medium	3.50

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

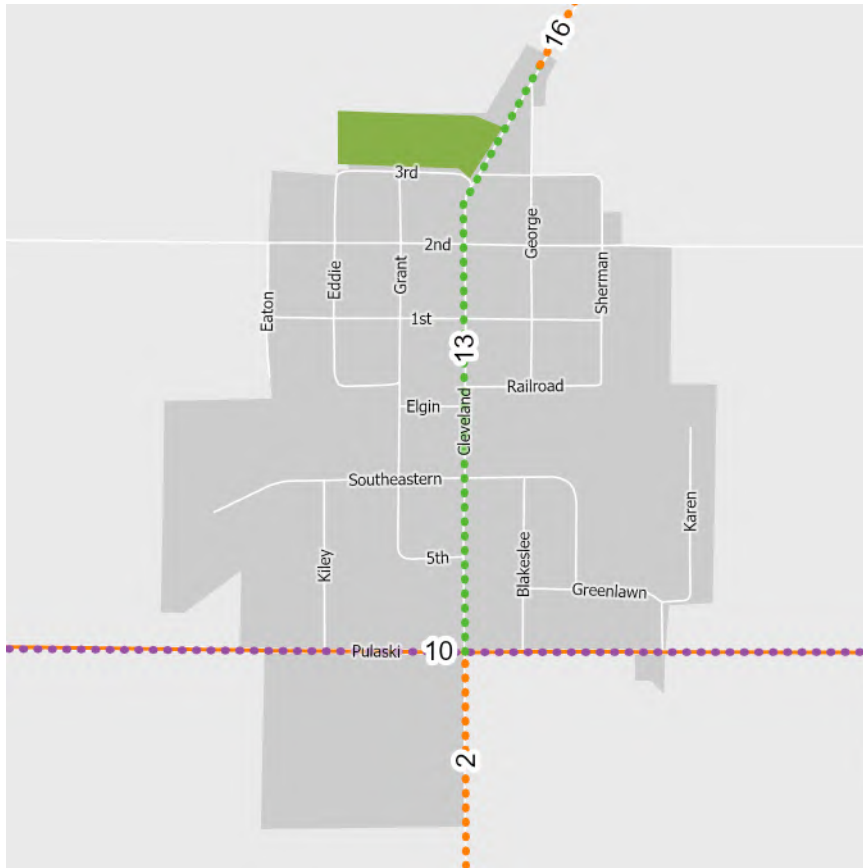
- — Park
- — Water
- — City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

VILLAGE OF GALIEN



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
2	Cleveland Wide Shoulder B	Planned	Wide Shoulder	0.29	Medium	3.00
10	Old Sauk Trail	Planned	Shared Use Path	0.71	Very High	3.00
13	Galien Bike Lane	Planned	Bike Lane	0.75	Medium	3.29

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- — Park
- — Water
- — City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

VILLAGE OF GRAND BEACH



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
3	Marquette Greenway	In Progress	Shared Use Path	2	Very High	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

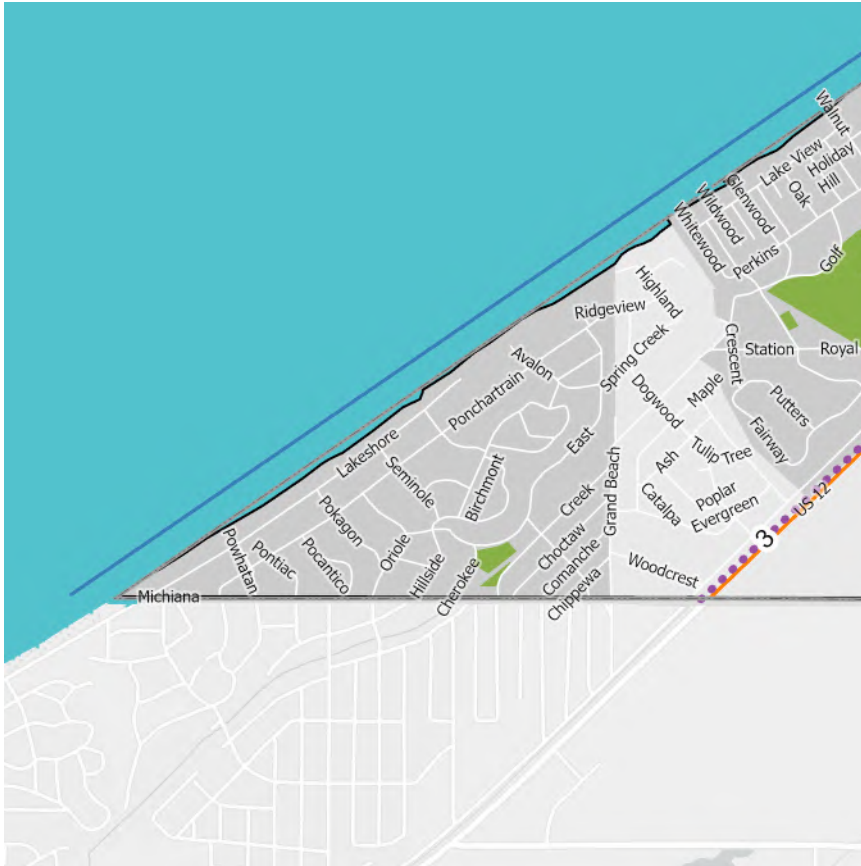
- — Park
- — Water
- — City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

VILLAGE OF MICHIANA



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
3	Marquette Greenway	In Progress	Shared Use Path	N/A	Very High	N/A

*While the Marquette Greenway doesn't directly pass through the Village of Michiana, there is a great opportunity for the Village to connect to this regionally significant trail system. This map helps illustrate its proximity and it is recommended that the Village strive to make a connection to this trail through sidewalks or development of a connecting trail.

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

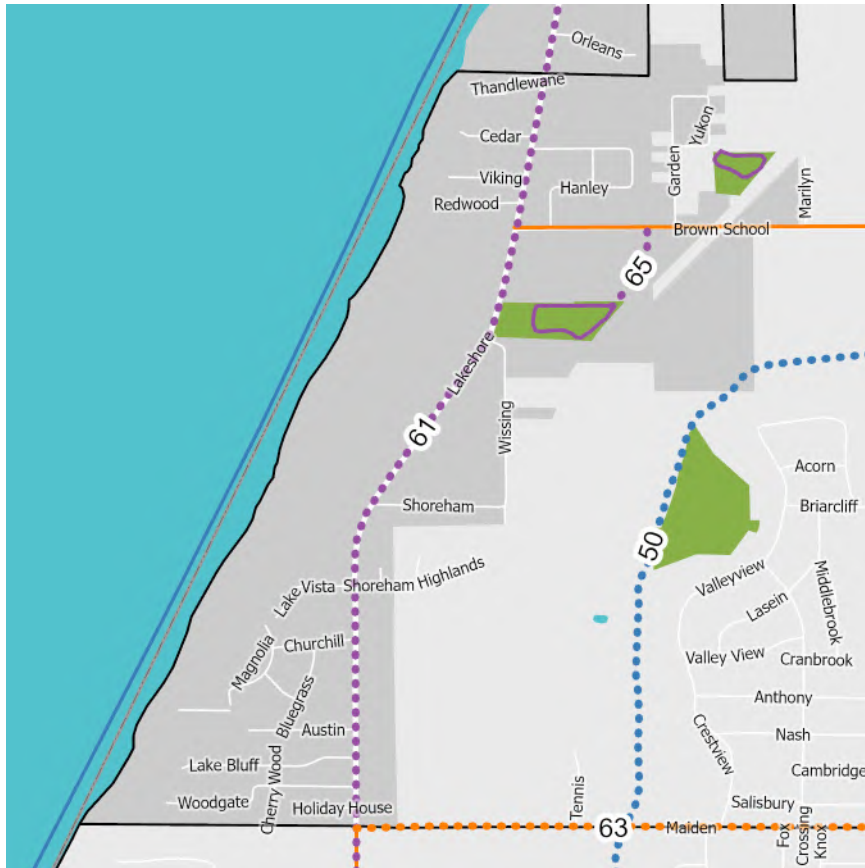
- Park
- Water
- City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

VILLAGE OF SHOREHAM



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
50	Hickory Creek Water Trail	Planned	Water Trail	0.07	High	N/A
61	Red Arrow Linear Park B	Planned	Shared Use Path	1.80	Very High	4.00
63	Lakeshore Alternative Connection	Desired	Wide Shoulder	0.09	High	3.00
65	Shoreham Village Park Connection	Desired	Shared Use Path	0.15	High	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- — Park
- — Water
- — City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

VILLAGE OF STEVENSVILLE



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
44	Red Arrow Linear Park C	Planned	Shared Use Path	1.76	Very High	3.50
50	Hickory Creek Water Trail	Planned	Water Trail	1.22	High	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- Park
- Water
- City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

VILLAGE OF THREE OAKS



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
6	New Buffalo to Three Oaks - South	Planned	Wide Shoulder	0.13	Medium	3.00
9	Three Oaks Bike Lane	Planned	Bike Lane	1.55	Medium	4.67
10	Old Sauk Trail	Planned	Shared Use Path	1.89	Very High	3.50

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

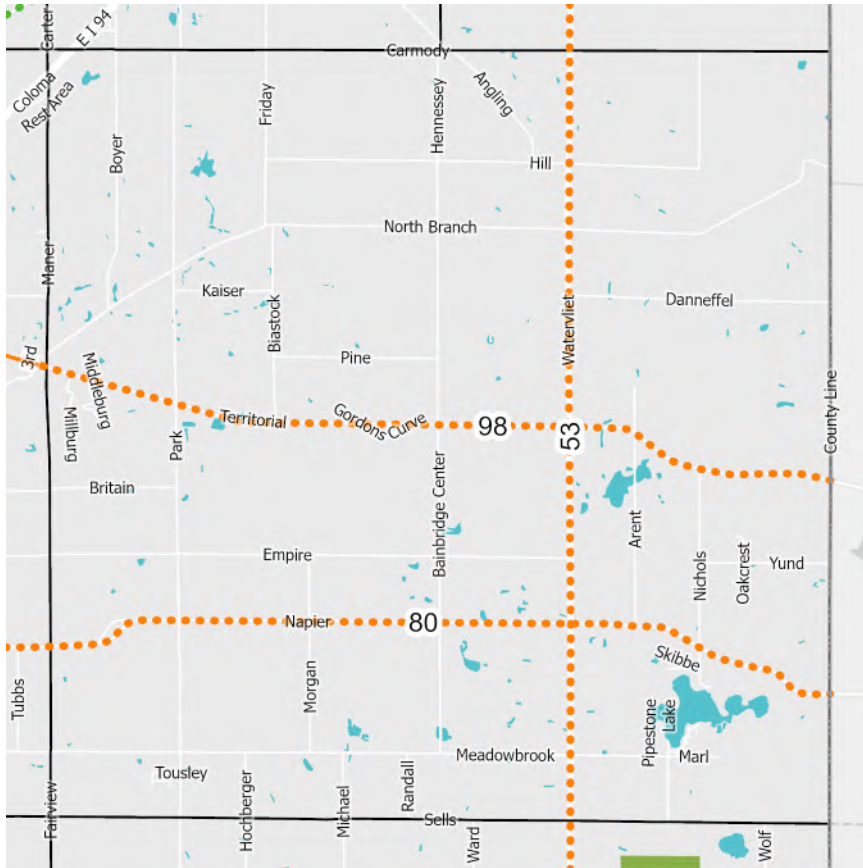
- Park
- Water
- City or Village

1" = 0.5 Miles



INFRASTRUCTURE RECOMMENDATIONS

BAINBRIDGE TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
53	M140 Wide Shoulder	Planned	Wide Shoulder	5.89	Medium	4.50
80	Napier Ave Wide Shoulder	Desired	Wide Shoulder	6.19	Medium	7.00
98	Territorial Road	Desired	Wide Shoulder	6.26	Medium	4.67

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

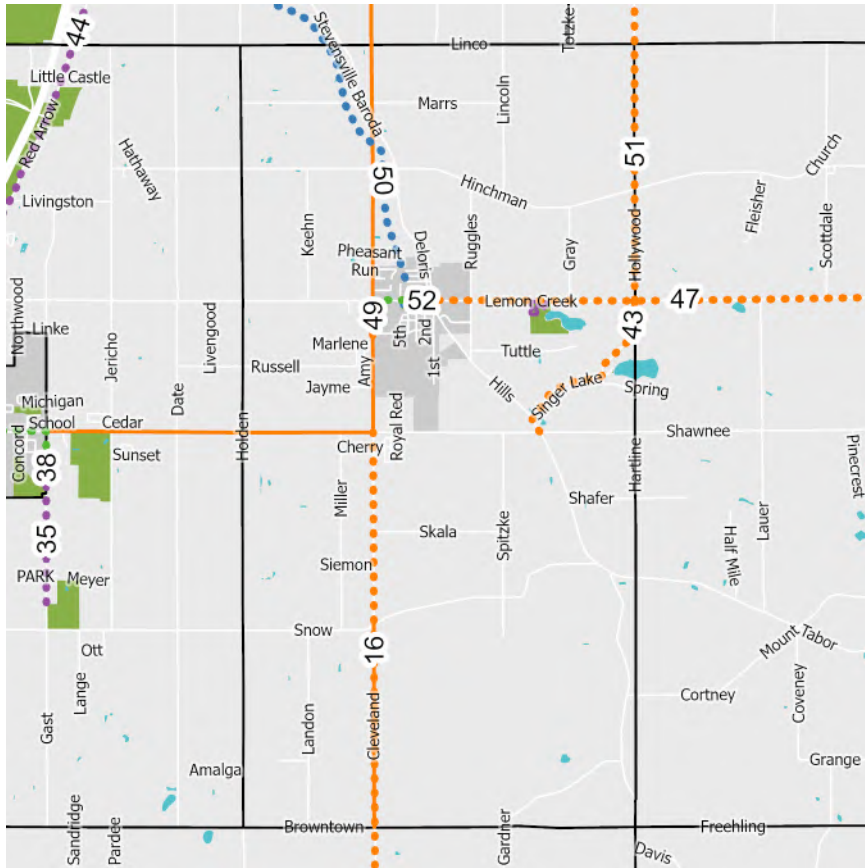
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

BARODA TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
16	Cleveland Wide Shoulder A	Planned	Wide Shoulder	3.01	High	4.00
43	Hollywood Wide Shoulder B	Desired	Wide Shoulder	1.45	Medium	N/A
47	Lemon Creek Wide Shoulder	Planned	Wide Shoulder	1.25	Medium	N/A
49	Cleveland Wide Shoulder C	Planned	Wide Shoulder	0.27	Very High	5.00
50	Hickory Creek Water Trail	Planned	Water Trail	1.84	High	N/A
51	Hollywood Wide Shoulder A	In Progress	Wide Shoulder	1.95	Very High	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

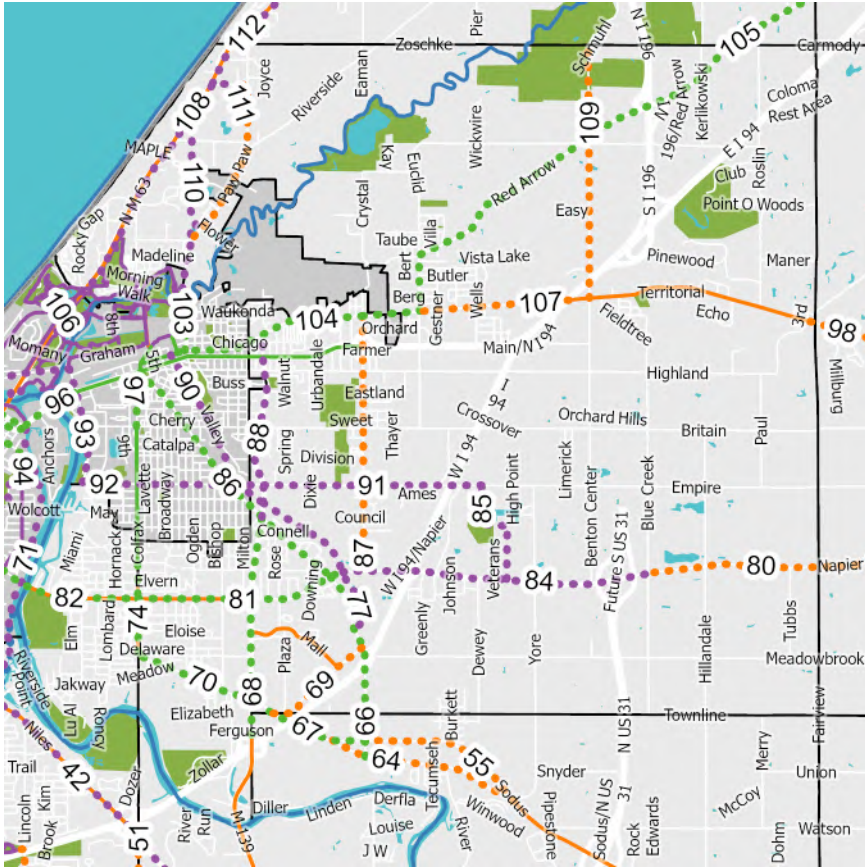
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

BENTON CHARTER TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
67	Sodus Bike Lane B	Desired	Bike Lane	0.23	Very High	7.00
68	M139 Bike Lane	Planned	Bike Lane	1.92	Very High	4.50
69	Cinema Way Wide Shoulder	Desired	Wide Shoulder	1.04	High	N/A
70	Sodus Bike Lane A	Planned	Bike Lane	1.10	Very High	4.50
74	Colfax Bike Lane B	Desired	Bike Lane	0.79	Very High	3.00
77	Ox Creek Trail B	Desired	Shared Use Path	1.59	Very High	N/A
90	Ox Creek Trail A	In Progress	Shared Use Path	0.19	Very High	N/A
80	Napier Ave Wide Shoulder	Desired	Wide Shoulder	1.46	Medium	9.00
81	Napier Bike Lane A	Planned	Bike Lane	1.86	Very High	6.50
84	Napier Ave Shared Use Path	Desired	Shared Use Path	2.76	High	5.40
85	Lake Michigan College	Desired	Shared Use Path	1.04	High	N/A
87	Crystal Wide Shoulder	Planned	Wide Shoulder	2.24	Very High	4.00
88	M139 Shared Use Path	Planned	Shared Use Path	1.62	Very High	3.50
98	Territorial Road	Desired	Wide Shoulder	0.08	Medium	3.00
104	Territorial Bike Lane B	Planned	Bike Lane	1.05	Very High	3.50
105	Red Arrow North	Desired	Bike Lane	4.34	Very High	4.00
107	Territorial Wide Shoulder	In Progress	Wide Shoulder	1.32	Very High	4.00
108	Lakeview Trail A	In Progress	Shared Use Path	2.37	Very High	N/A
109	Benton Charter Wide Shoulder	Planned	Wide Shoulder	2.22	Medium	2.00
110	Benton Harbor to Whirlpool	In Progress	Shared Use Path	1.40	Very High	N/A
111	Paw Paw Ave	Planned	Wide Shoulder	1.63	High	3.67
112	Lakeview Trail B	Desired	Shared Use Path	0.39	High	4.00

LEGEND

Proposed Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

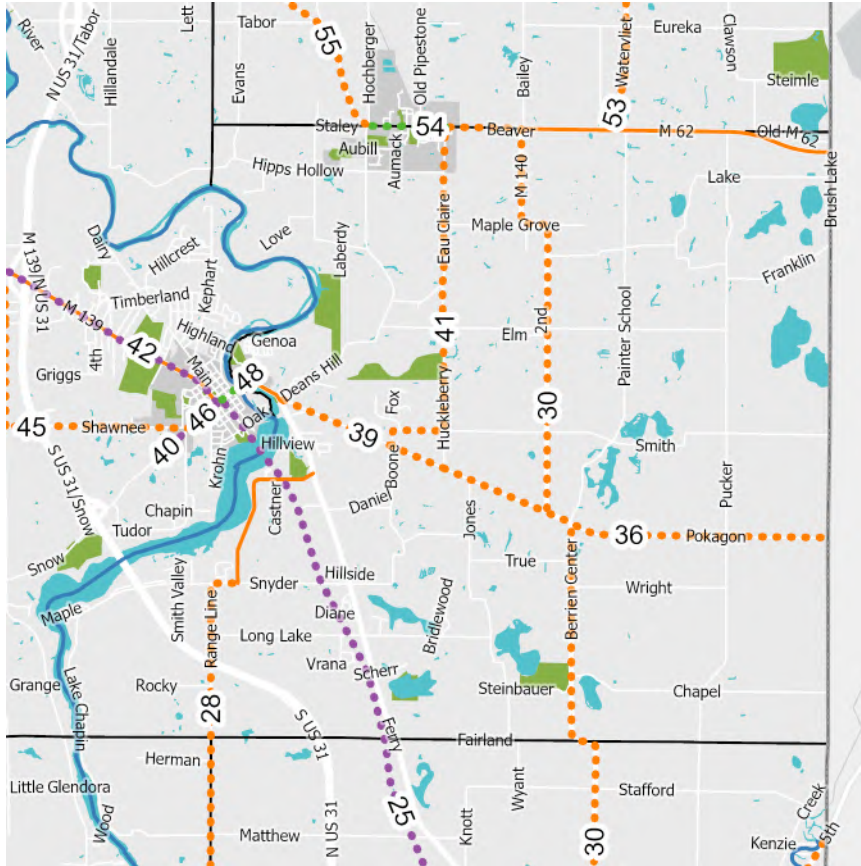
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

BERRIEN TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
25	Indiana Michigan River Valley Trail	In Progress	Shared Use Path	3.17	Very High	N/A
28	Rangeline Wide Shoulder	Desired	Wide Shoulder	1.76	Medium	4.00
30	M140 Wide Shoulder	Planned	Wide Shoulder	6.20	Medium	N/A
36	Pokagon Wide Shoulder	Desired	Wide Shoulder	3.87	Medium	5.67
39	Pokagon Wide Shoulder	In Progress	Wide Shoulder	1.73	Very High	3.50
41	Huckleberry Wide Shoulder	In Progress	Wide Shoulder	4.33	Very High	4.00
54	Eau Claire Bike Lane	Desired	Bike Lane	0.05	Medium	3.50

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

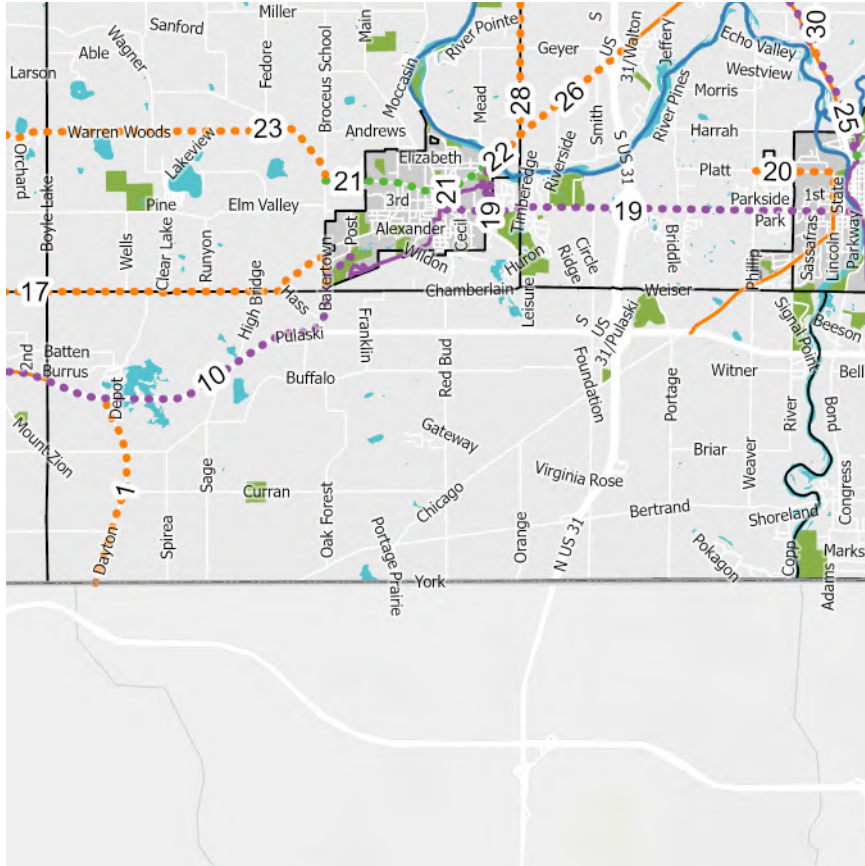
- — Park
- — Water
- — City or Village

1" = 3 Miles



INFRASTRUCTURE RECOMMENDATIONS

BERTRAND TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
1	MACOG Plan Connection	Desired	Wide Shoulder	2.45	Medium	N/A
10	Old Sauk Trail	Planned	Shared Use Path	7.38	Very High	6.50
17	Gallien to McCoy's Creek Trail	Desired	Wide Shoulder	3.21	Medium	3.50

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

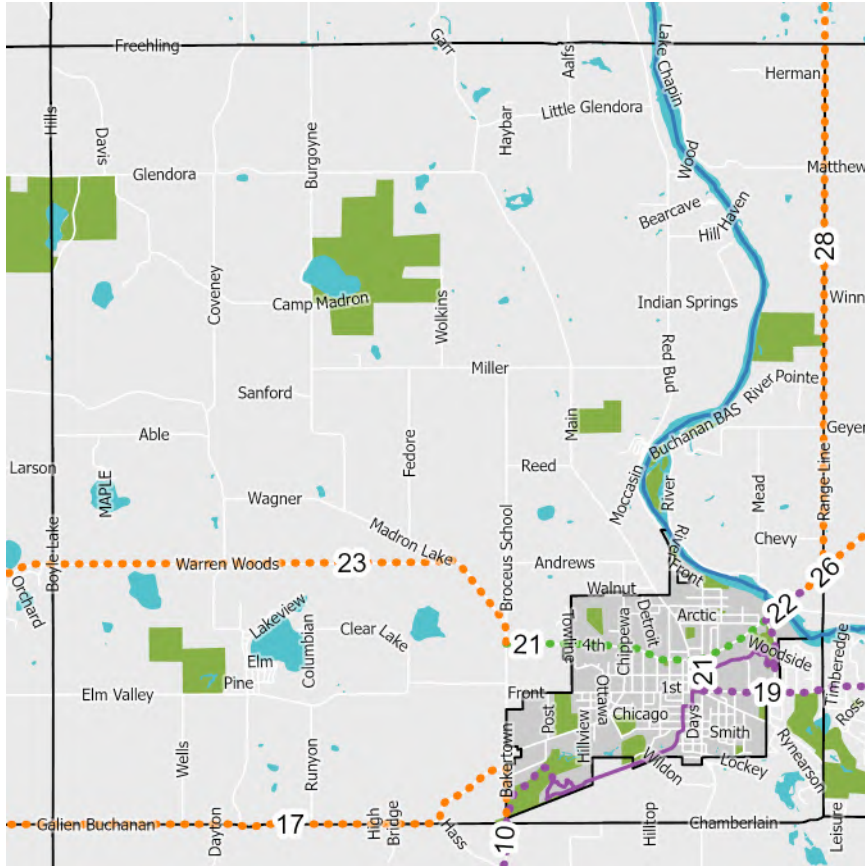
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

BUCHANAN TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
10	Old Sauk Trail	Planned	Shared Use Path	0.07	Very High	N/A
17	Gallien to McCoys Creek Trail	Desired	Wide Shoulder	4.14	Medium	3.50
19	Niles - Buchanan Trail	Desired	Shared Use Path	0.44	Very High	5.50
21	Buchanan Bike Lanes	Desired	Bike Lane	0.51	Very High	N/A
22	McCoys Creek Trail Extension	In Progress	Shared Use Path	0.28	Very High	5.50
23	Warren Woods Wide Shoulder	Planned	Wide Shoulder	3.89	High	6.33
26	Walton Wide Shoulder	In Progress	Wide Shoulder	0.17	Very High	5.00

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

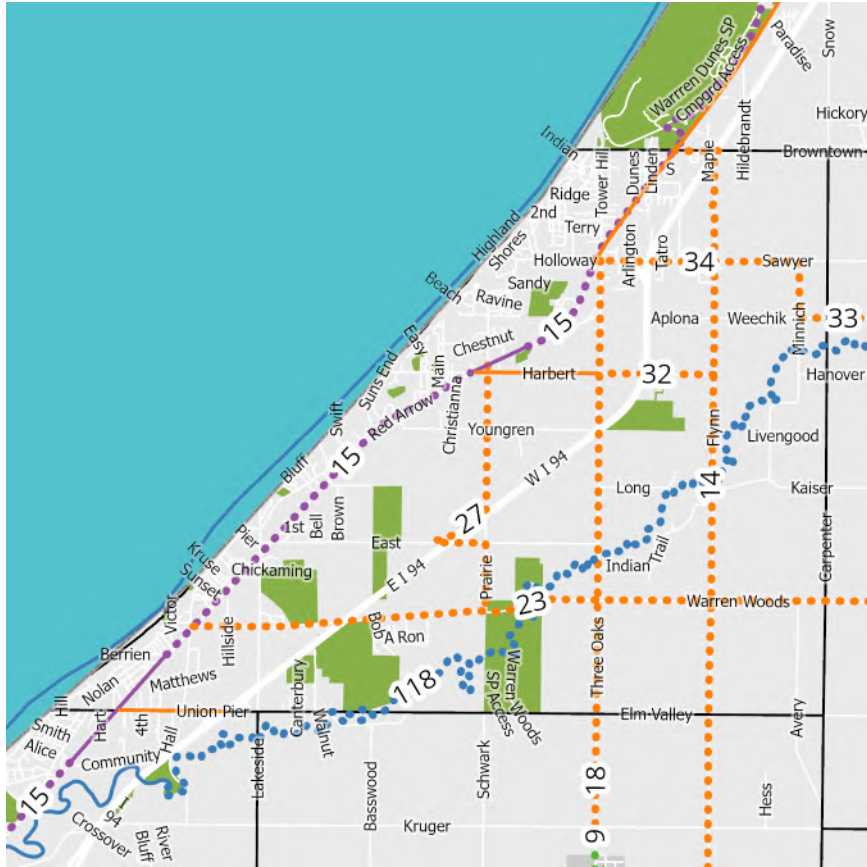
- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

CHIKAMING TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
14	Flynn Wide Shoulder	Planned	Wide Shoulder	5.02	Medium	N/A
15	Red Arrow Linear Park D	In Progress	Shared Use Path	5.91	Very High	3.91
18	Three Oaks Wide Shoulder	Planned	Wide Shoulder	4.00	Medium	4.00
23	Warren Woods Wide Shoulder	Planned	Wide Shoulder	5.62	Very High	4.57
27	Prarie Wide Shoulder	Planned	Wide Shoulder	2.89	Medium	N/A
32	Harbert Wide Shoulder	Planned	Wide Shoulder	1.01	Medium	N/A
33	New Troy Wide Shoulder A	Desired	Wide Shoulder	1.50	Medium	N/A
34	Sawyer Wide Shoulder	In Progress	Wide Shoulder	1.06	Very High	3.67
118	Galien River Water Trail	Desired	Water Trail	6.93	Medium	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

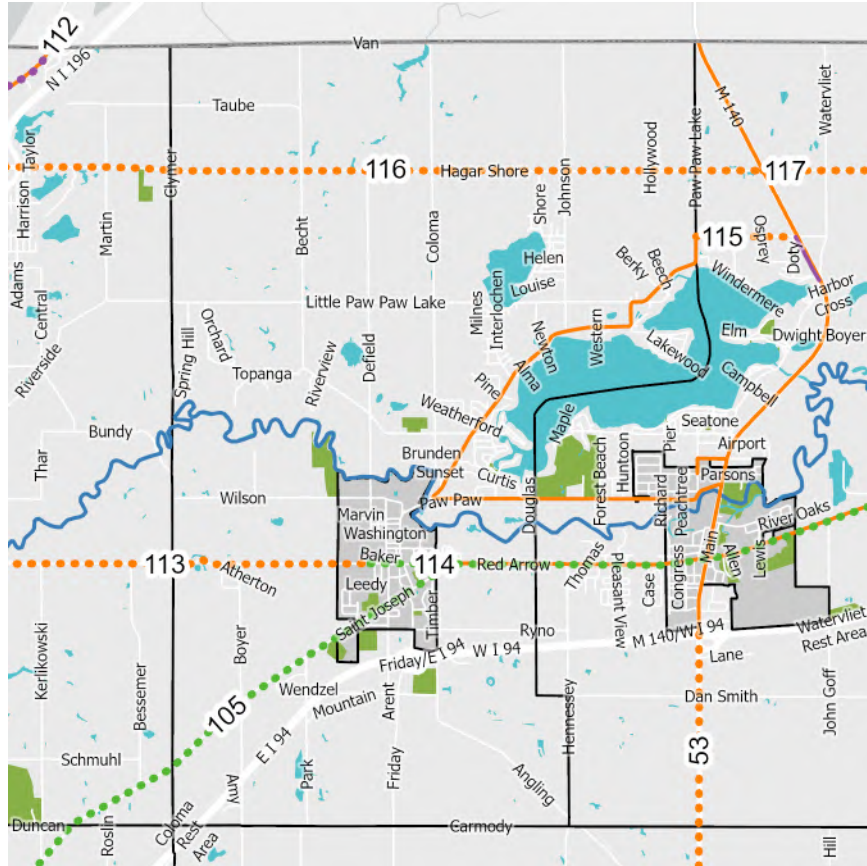
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

COLOMA CHARTER TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
105	Red Arrow North	Desired	Bike Lane	5.39	Very High	6.60
113	Coloma Wide Shoulder	Desired	Wide Shoulder	1.72	Medium	4.00
116	Hagar Shores Wide Shoulder A	In Progress	Wide Shoulder	2.96	Very High	2.67

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

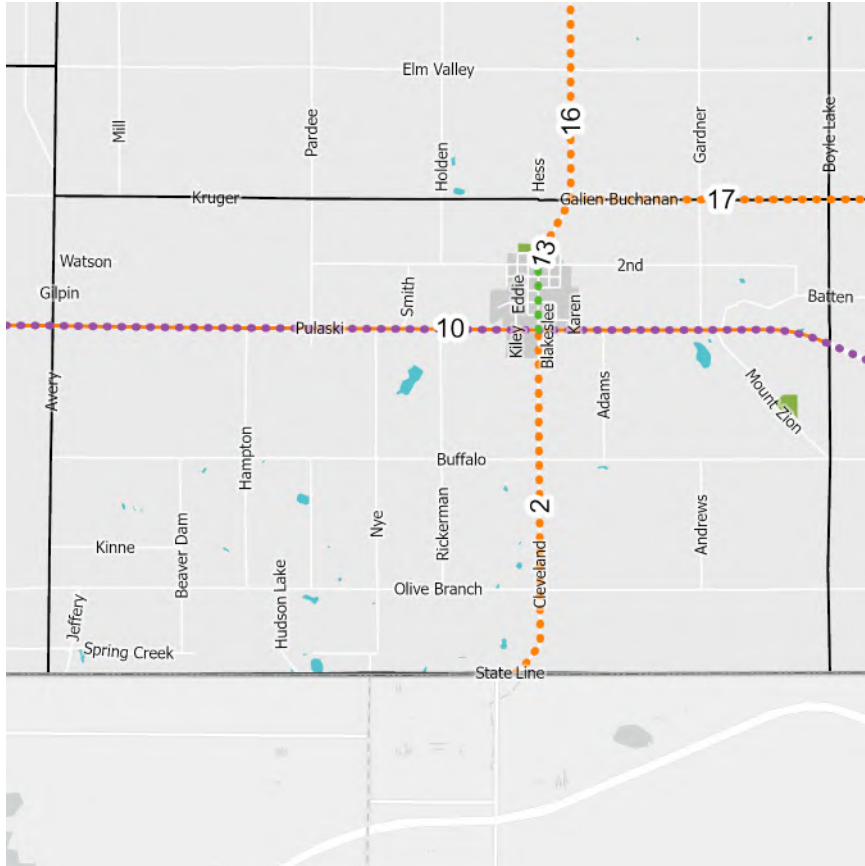
- Park
- Water
- City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

GALIEN TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
2	Cleveland Wide Shoulder B	Planned	Wide Shoulder	0.29	Medium	3.00
10	Old Sauk Trail	Planned	Shared Use Path	0.71	Very High	3.00
13	Galien Bike Lane	Planned	Bike Lane	0.75	Medium	3.29

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

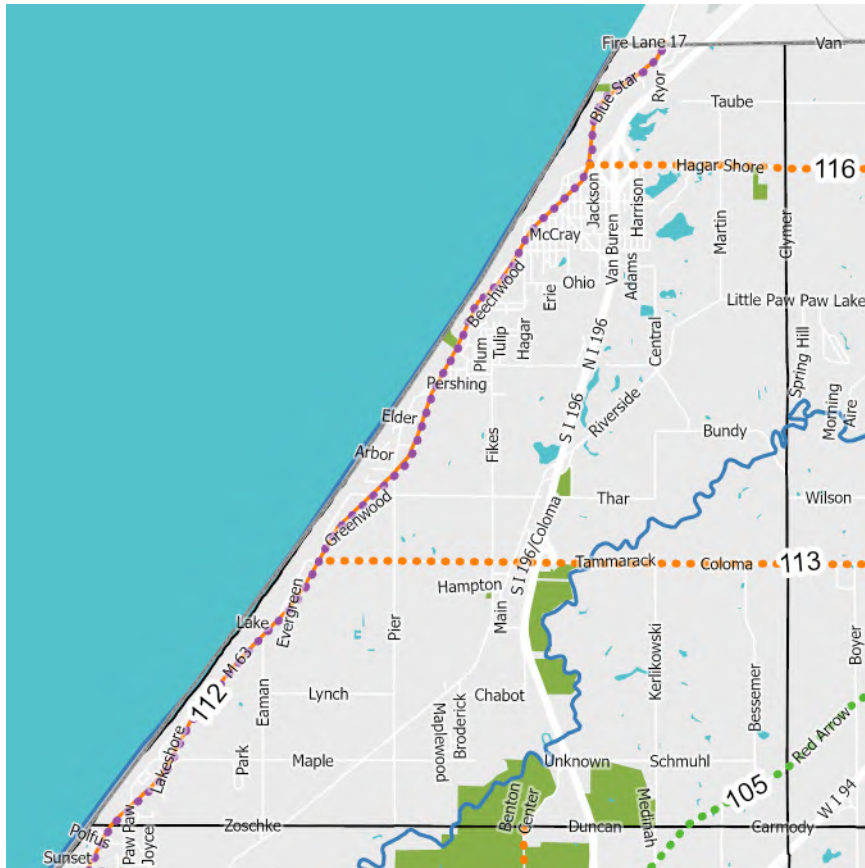
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

HAGAR TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
105	Red Arrow North	Desired	Bike Lane	1.19	Very High	7.00
112	Lakeview Trail B	Desired	Shared Use Path	7.47	Very High	6.50
113	Coloma Wide Shoulder	Desired	Wide Shoulder	3.55	Medium	6.00
116	Hagar Shores Wide Shoulder A	In Progress	Wide Shoulder	1.49	Very High	4.00

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

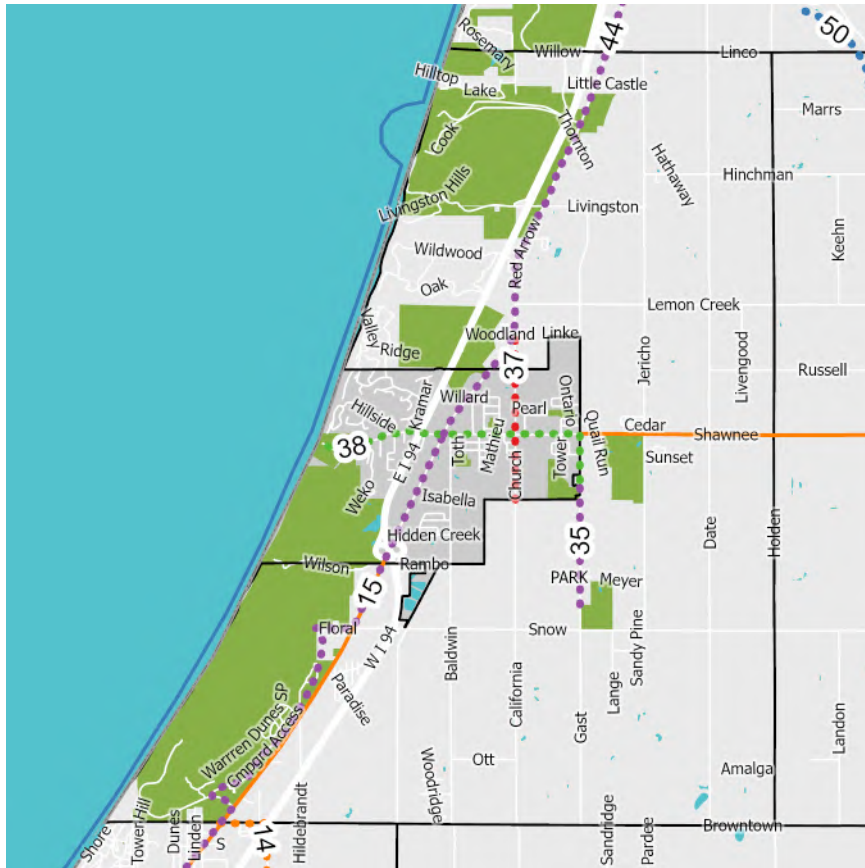
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

LAKE CHARTER TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
14	Flynn Wide Shoulder	Planned	Wide Shoulder	0.41	Medium	N/A
15	Red Arrow Linear Park D	In Progress	Shared Use Path	2.85	Very High	N/A
35	Lake Township Park	In Progress	Shared Use Path	0.93	Very High	N/A
37	Church Cycle Track	Planned	Cycle Track	0.29	Medium	4.33
38	Bridgman Bike Lanes	Planned	Bike Lane	0.08	Medium	3.50
44	Red Arrow Linear Park C	Planned	Shared Use Path	2.70	Very High	5.00

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

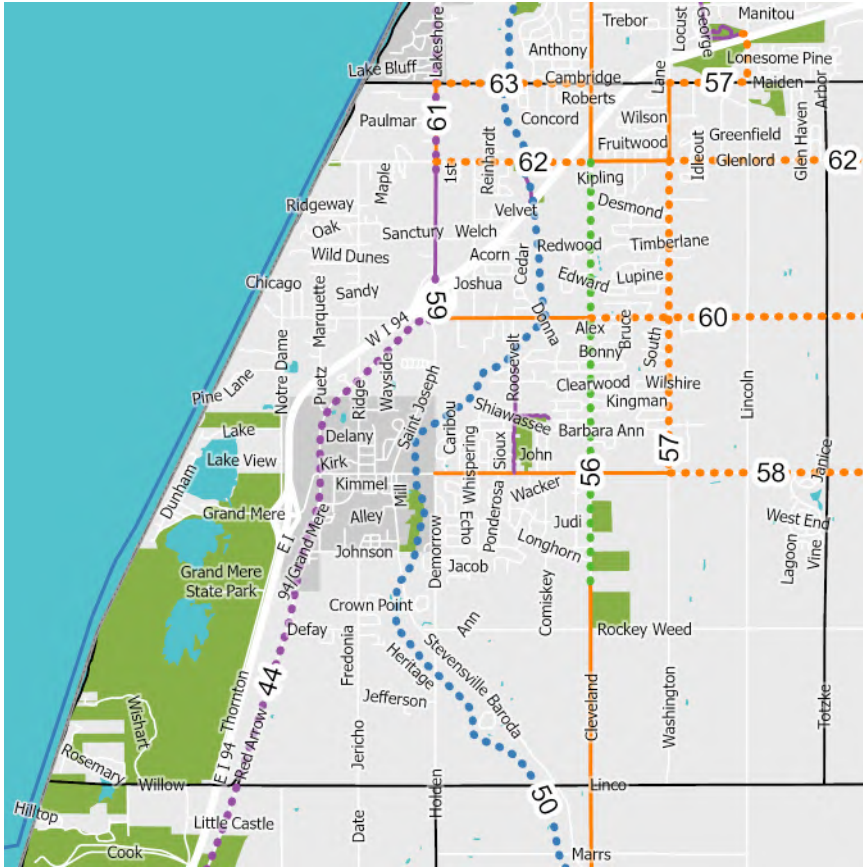
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

LINCOLN CHARTER TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
44	Red Arrow Linear Park C	Planned	Shared Use Path	4.94	Very High	3.50
50	Hickory Creek Water Trail	Planned	Water Trail	4.54	High	N/A
56	Cleveland Bike Lane A	Desired	Bike Lane	2.69	High	4.00
57	Washington Wide Shoulder	Desired	Wide Shoulder	2.84	Very High	N/A
58	John Beers Wide Shoulder	In Progress	Wide Shoulder	1.02	Very High	3.50
59	Red Arrow Connection	Desired	Shared Use Path	0.43	Very High	6.00
60	Marquette Woods	In Progress	Wide Shoulder	1.52	Very High	7.67
61	Red Arrow Linear Park B	Planned	Shared Use Path	0.56	Very High	3.00
62	Glenlord Rd	Desired	Wide Shoulder	3.30	Very High	5.00
63	Lakeshore Alternative Connection	Desired	Wide Shoulder	1.00	High	4.83

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

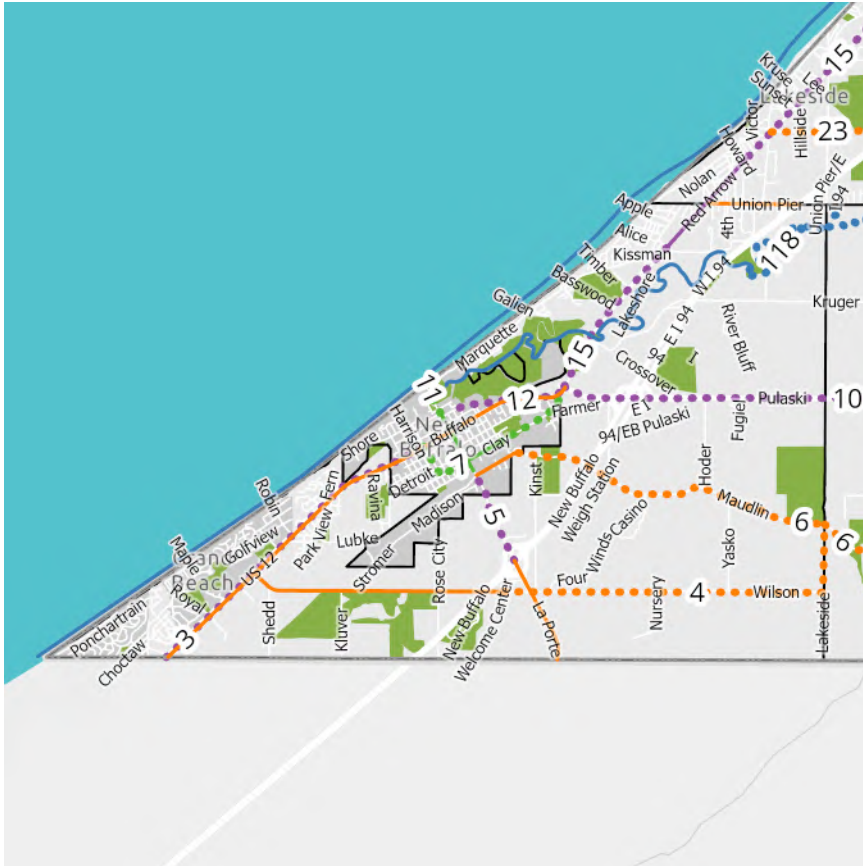
- Park
- Water
- City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

NEW BUFFALO TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
3	Marquette Greenway	In Progress	Shared Use Path	3.08	Very High	N/A
4	Grand Beach to Three Oaks	Planned	Wide Shoulder	4.02	Medium	N/A
5	M239	Planned	Shared Use Path	0.74	High	4.67
6	New Buffalo to Three Oaks - South	Planned	Wide Shoulder	3.39	Medium	N/A
8	Clay Bike Lane	Planned	Bike Lane	0.08	Medium	N/A
10	Old Sauk Trail	Planned	Shared Use Path	2.73	Very High	6.50
12	Red Arrow Linear Park E	Planned	Shared Use Path	0.48	Very High	4.50
15	Red Arrow Linear Park D	In Progress	Shared Use Path	1.80	Very High	3.25
118	Galien River Water Trail	Desired	Water Trail	2.33	Medium	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

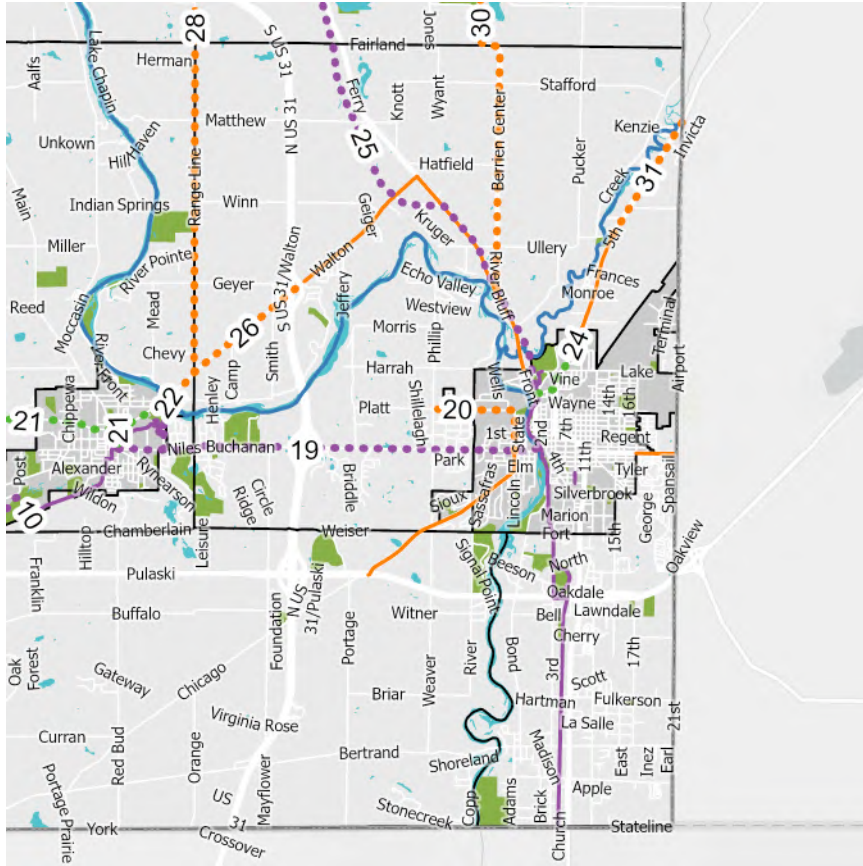
- — Park
- — Water
- — City or Village

1" = 3 Miles



INFRASTRUCTURE RECOMMENDATIONS

NILES CHARTER TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
19	Niles - Buchanan Trail	Desired	Shared Use Path	4.45	Very High	4.29
20	Pratt / Lincoln Wide Shoulder	Desired	Wide Shoulder	0.50	Very High	N/A
25	Indiana Michigan River Valley Trail	In Progress	Shared Use Path	5.00	Very High	N/A
26	Walton Wide Shoulder	In Progress	Wide Shoulder	1.76	Very High	5.50
28	Rangeline Wide Shoulder	Desired	Wide Shoulder	4.04	Medium	3.50
30	M140 Wide Shoulder	Planned	Wide Shoulder	3.12	Medium	6.00
31	M51 Wide Shoulder	Desired	Wide Shoulder	1.62	Medium	7.00

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

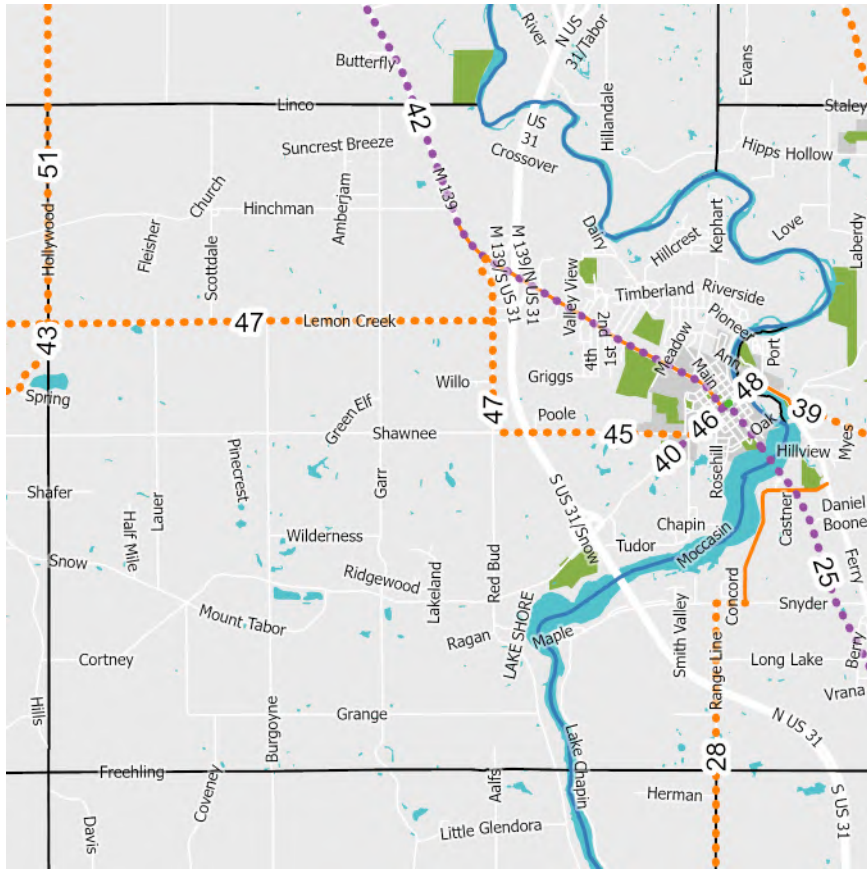
- Park
- Water
- City or Village

1" = 3 Miles



INFRASTRUCTURE RECOMMENDATIONS

ORONOKO CHARTER TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
42	Indiana Michigan River Valley Trail Extension	Desired	Shared Use Path	5.33	Very High	5.00
43	Hollywood Wide Shoulder B	Desired	Wide Shoulder	0.25	Medium	N/A
45	Shawnee Wide Shoulder	Desired	Wide Shoulder	1.58	High	3.00
47	Lemon Creek Wide Shoulder	Planned	Wide Shoulder	5.58	High	N/A
51	Hollywood Wide Shoulder A	In Progress	Wide Shoulder	1.95	Very High	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- Park
- Water
- City or Village

1" = 3 Miles



INFRASTRUCTURE RECOMMENDATIONS

PIPESTONE TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
41	Huckleberry Wide Shoulder	In Progress	Wide Shoulder	0.74	Very High	4.00
53	M140 Wide Shoulder	Planned	Wide Shoulder	6.02	Medium	4.00
54	Eau Claire Bike Lane	Desired	Bike Lane	0.78	Medium	6.00
55	Sodus Parkway	Desired	Wide Shoulder	2.32	Medium	7.50

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

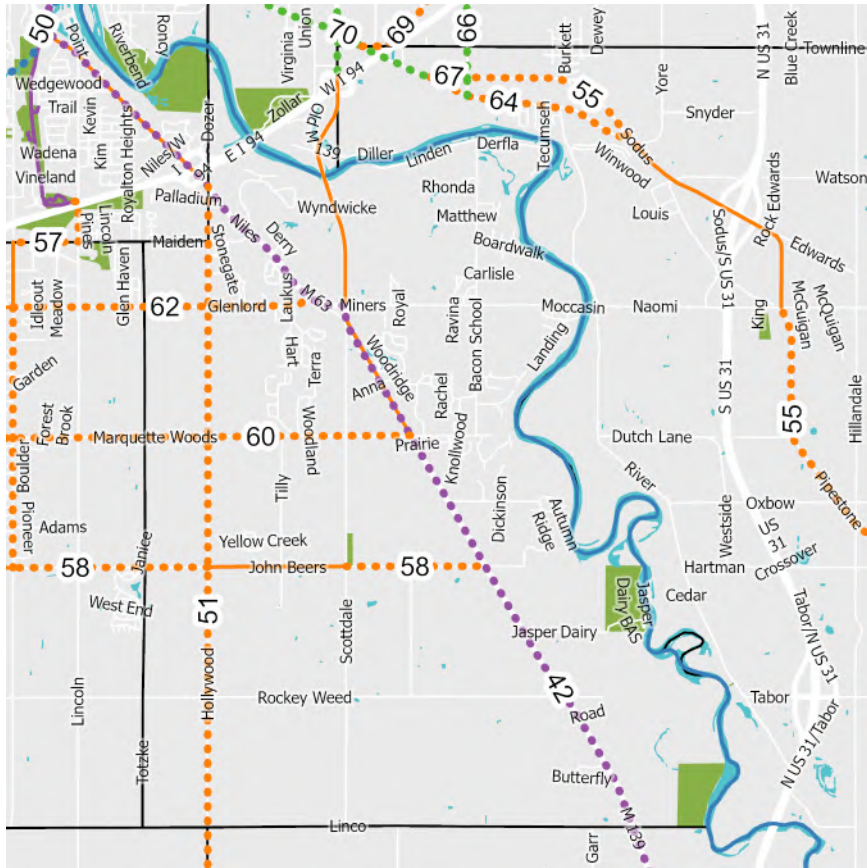
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

ROYALTON TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
42	Indiana Michigan River Valley Trail Extension	Desired	Shared Use Path	6.05	Very High	6.25
51	Hollywood Wide Shoulder A	In Progress	Wide Shoulder	4.91	Very High	3.50
58	John Beers Wide Should	In Progress	Wide Shoulder	1.54	Very High	6.00
60	Marquette Woods	In Progress	Wide Shoulder	2.05	Very High	N/A
62	Glenlord Rd	Desired	Wide Shoulder	1.29	Very High	4.00

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

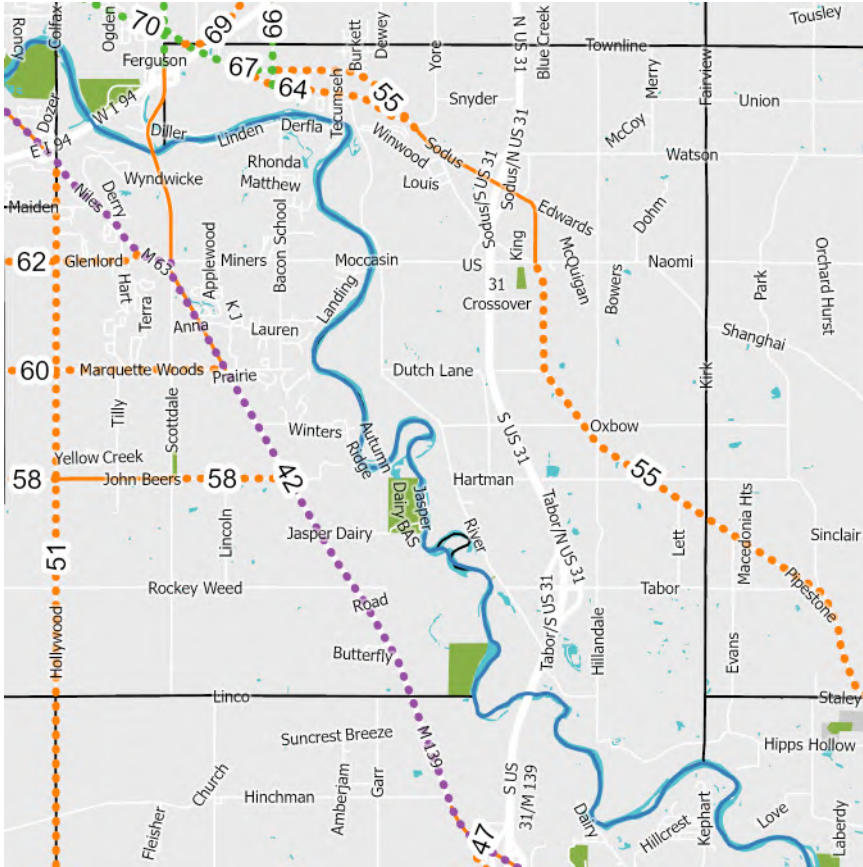
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

SODUS TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
55	Sodus Parkway	Desired	Wide Shoulder	4.57	Medium	4.80
64	Sodus Parkway Alternate	Desired	Wide Shoulder	1.62	Medium	9.00
66	Pipestone Bike Lane B	Desired	Bike Lane	0.38	Very High	3.00
67	Sodus Bike Lane B	Desired	Bike Lane	0.87	Very High	5.50
68	M139 Bike Lane	Planned	Bike Lane	0.19	Very High	5.00
69	Cinema Way Wide Shoulder	Desired	Wide Shoulder	0.37	High	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

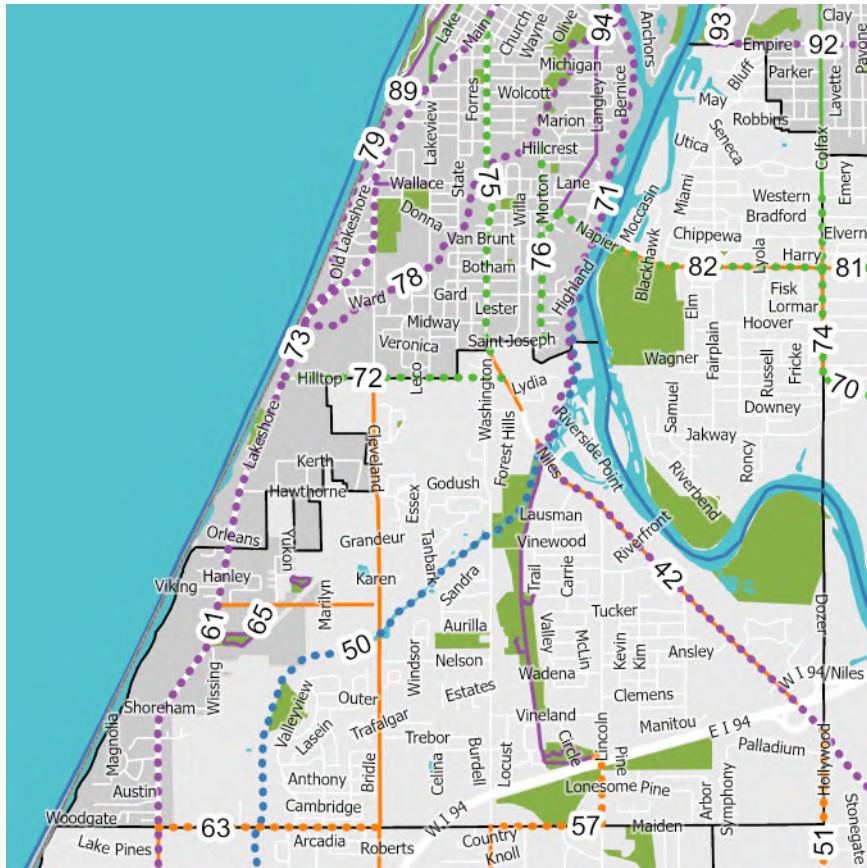
- Park
- Water
- City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

ST. JOSEPH CHARTER TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
42	Indiana Michigan River Valley Trail Extension	Desired	Shared Use Path	1.82	Very High	5.00
50	Hickory Creek Water Trail	Planned	Water Trail	2.28	High	N/A
51	Hollywood Wide Shoulder A	In Progress	Wide Shoulder	0.42	Very High	5.00
57	Washington Wide Shoulder	Desired	Wide Shoulder	0.84	Very High	4.00
63	Lakeshore Alternative Connection	Desired	Wide Shoulder	1.00	High	4.83
71	Riverfront Trail	Planned	Shared Use Path	0.48	Very High	N/A
72	Hilltop Bike Lane	Planned	Bike Lane	0.21	Very High	6.00
74	Colfax Bike Lane B	Desired	Bike Lane	0.79	Very High	3.00
82	Napier Bike Lane B	Desired	Bike Lane	1.21	Very High	7.00

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

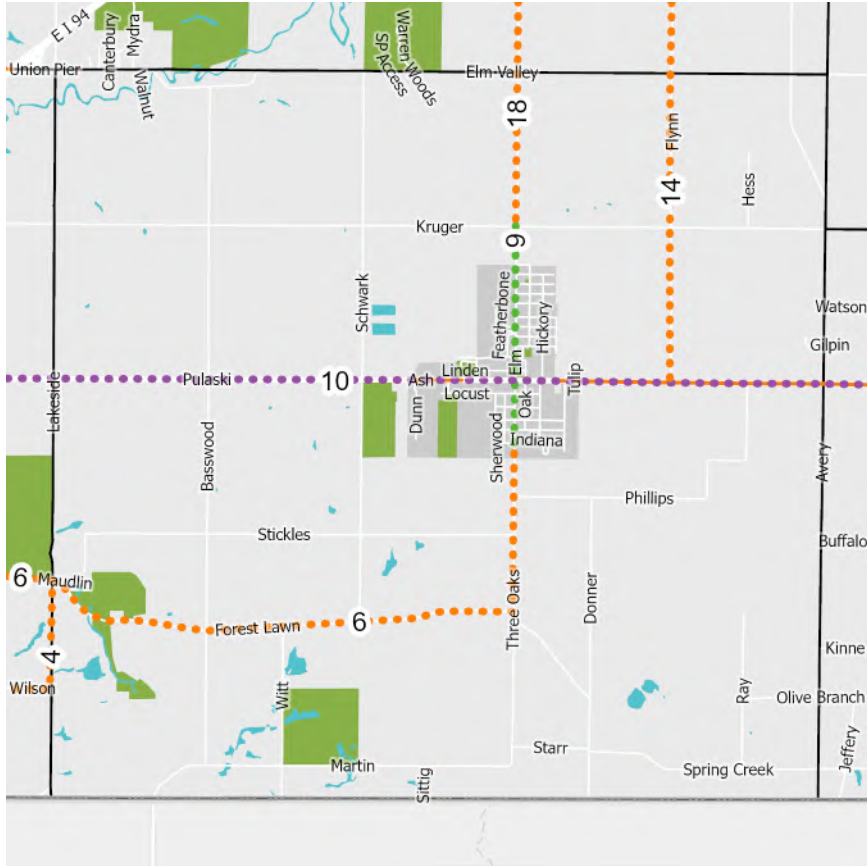
- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- Park
- Water
- City or Village

1" = 1 Miles



INFRASTRUCTURE RECOMMENDATIONS

THREE OAKS TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
4	Grand Beach to Three Oaks	Planned	Wide Shoulder	0.70	Medium	N/A
6	New Buffalo to Three Oaks - South	Planned	Wide Shoulder	4.09	Medium	N/A
9	Three Oaks Bike Lane	Planned	Bike Lane	0.25	Medium	5.50
10	Old Sauk Trail	Planned	Shared Use Path	3.95	Very High	4.33
14	Flynn Wide Shoulder	Planned	Wide Shoulder	2.00	Medium	N/A
18	Three Oaks Wide Shoulder	Planned	Wide Shoulder	1.00	Medium	4.00
118	Galien River Water Trail	Desired	Water Trail	2.36	Medium	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

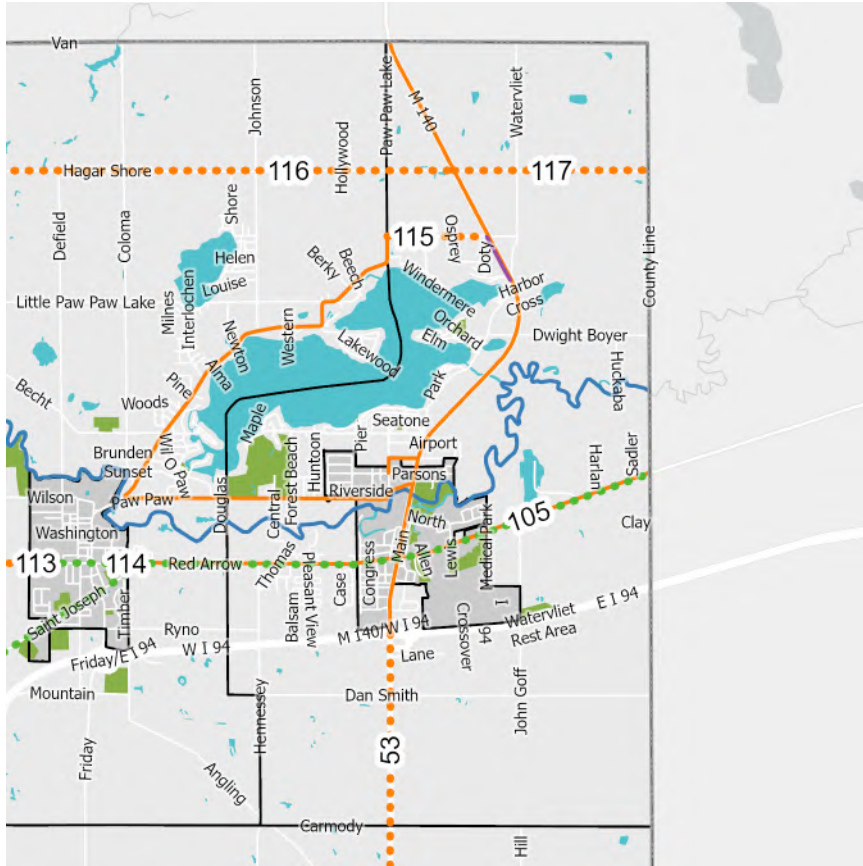
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

WATERVLIET CHARTER TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
53	M140 Wide Shoulder	Planned	Wide Shoulder	1.98	Medium	5.00
105	Red Arrow North	Desired	Bike Lane	3.13	Very High	4.50
115	Blatchford Wide Shoulder	Desired	Wide Shoulder	0.76	Medium	N/A
117	Hagar Shores Wide Shoulder B	Desired	Wide Shoulder	2.69	Medium	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

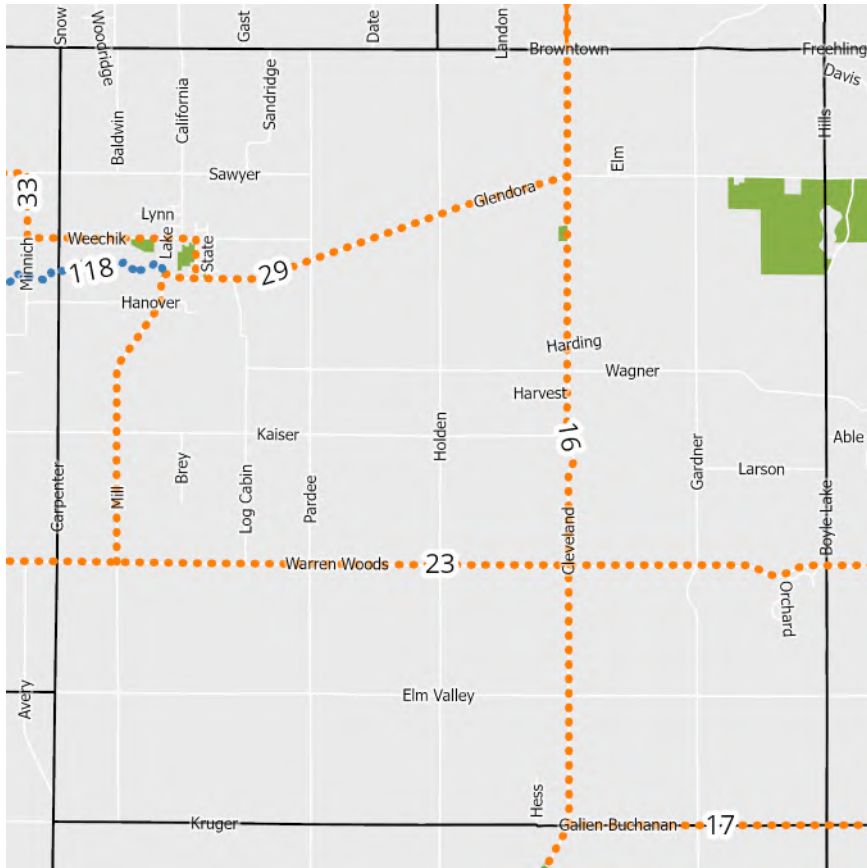
- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

WEESAW TOWNSHIP



Segment #	Name	Status	Type	Miles in Jurisdiction	Priority	Average PASER in Jurisdiction
16	Cleveland Wide Shoulder A	Planned	Wide Shoulder	6.03	Medium	5.67
17	Gallien to McCoys Creek Trail	Desired	Wide Shoulder	2.01	Medium	8.00
23	Warren Woods Wide Shoulder	Planned	Wide Shoulder	5.99	High	5.40
29	New Troy Wide Shoulder B	Desired	Wide Shoulder	5.58	Medium	N/A
33	New Troy Wide Shoulder A	Desired	Wide Shoulder	1.37	Medium	N/A
118	Galien River Water Trail	Desired	Water Trail	1.58	Medium	N/A

LEGEND

Proposed Routes

- ● ● Bike Lane
- ● ● Shared Use Path
- ● ● Water Trail
- ● ● Wide Shoulder
- ● ● Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- — Park
- — Water
- — City or Village

1" = 2 Miles



INFRASTRUCTURE RECOMMENDATIONS

BERRIEN COUNTY

LEGEND

Proposed Routes

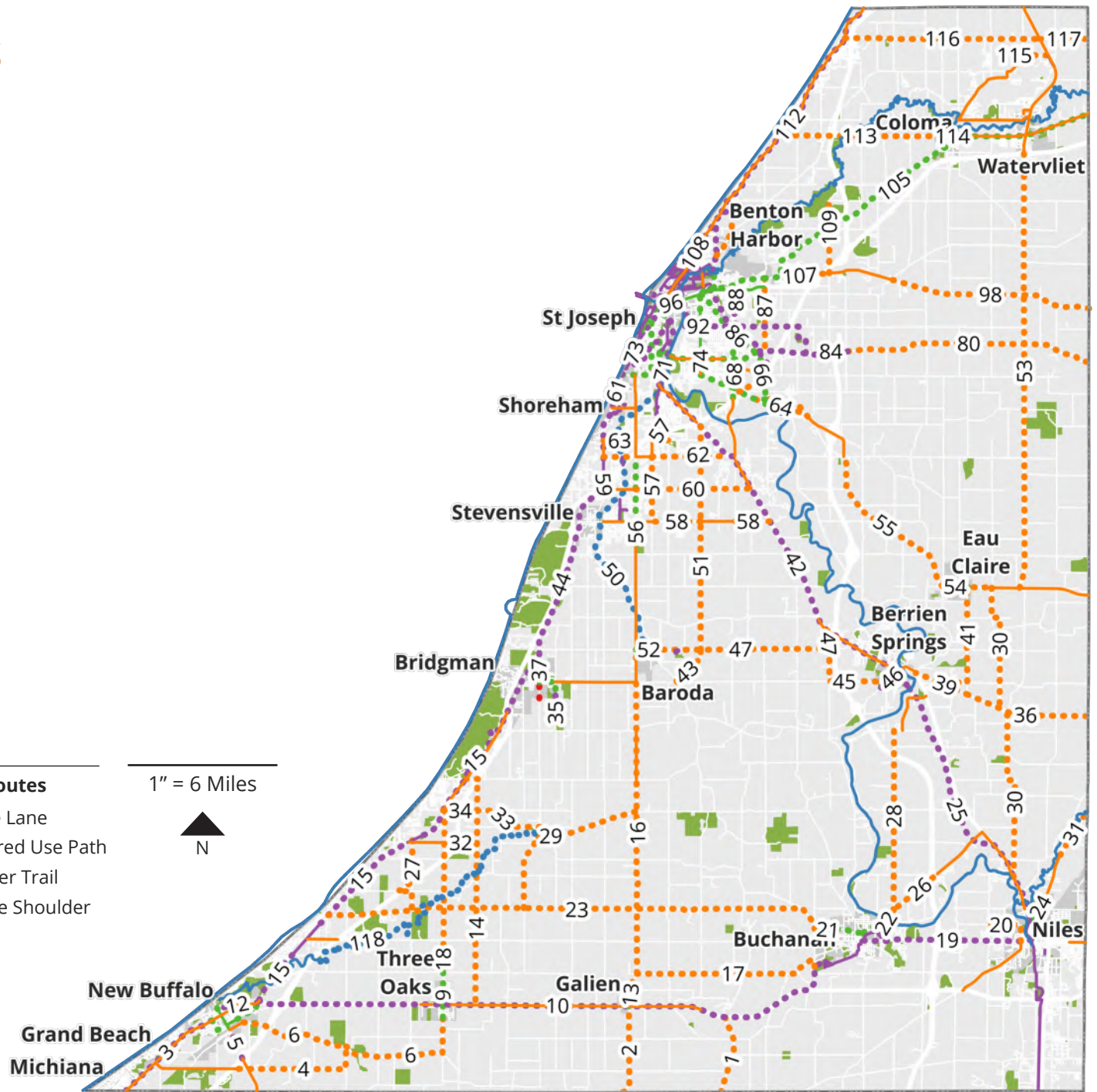
- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder
- Cycle Track

Existing Routes

- Bike Lane
- Shared Use Path
- Water Trail
- Wide Shoulder

- — Park
- — Water
- — City or Village

1" = 6 Miles



INFRASTRUCTURE RECOMMENDATIONS

BERRIEN COUNTY

Segment #	Name	Status	Type	Miles	Priority	Average PASER
1	MACOG Plan Connection	Desired	Wide Shoulder	2.45	Medium	N/A
2	Cleveland Wide Shoulder B	Planned	Wide Shoulder	2.72	Medium	3.50
3	Marquette Greenway	In Progress	Shared Use Path	3.48	Very High	N/A
4	Grand Beach to Three Oaks	Planned	Wide Shoulder	4.02	Medium	4.00
5	M239	Planned	Shared Use Path	1.03	High	3.50
6	New Buffalo to Three Oaks - South	Planned	Wide Shoulder	7.56	Medium	4.50
8	Clay Bike Lane	Planned	Bike Lane	0.87	Medium	N/A
9	Three Oaks Bike Lane	Planned	Bike Lane	1.41	Medium	4.00
10	Old Sauk Trail	Planned	Shared Use Path	18.65	Very High	5.20
12	Red Arrow Linear Park E	Planned	Shared Use Path	1.14	Very High	5.00
14	Flynn Wide Shoulder	Planned	Wide Shoulder	7.40	Medium	N/A
15	Red Arrow Linear Park D	In Progress	Shared Use Path	11.65	Very High	4.29
16	Cleveland Wide Shoulder A	Planned	Wide Shoulder	9.33	High	6.50
17	Gallien to McCoy's Creek Trail	Desired	Wide Shoulder	6.03	Medium	5.00
18	Three Oaks Wide Shoulder	Planned	Wide Shoulder	4.99	Medium	4.00
19	Niles - Buchanan Trail	Desired	Shared Use Path	5.40	Very High	4.29
20	Pratt / Lincoln Wide Shoulder	Desired	Wide Shoulder	1.49	Very High	N/A
21	Buchanan Bike Lanes	Desired	Bike Lane	2.30	Very High	N/A
22	McCoy's Creek Trail Extension	In Progress	Shared Use Path	0.87	Very High	5.50
23	Warren Woods Wide Shoulder	Planned	Wide Shoulder	15.50	Very High	5.07
25	Indiana Michigan River Valley Trail	In Progress	Shared Use Path	8.40	Very High	N/A
26	Walton Wide Shoulder	In Progress	Wide Shoulder	1.93	Very High	5.17
27	Prarie Wide Shoulder	Planned	Wide Shoulder	2.89	Medium	N/A
28	Rangeline Wide Shoulder	Desired	Wide Shoulder	5.80	Medium	4.50
29	New Troy Wide Shoulder B	Desired	Wide Shoulder	5.58	Medium	N/A
30	M140 Wide Shoulder	Planned	Wide Shoulder	9.23	Medium	6.00
31	M51 Wide Shoulder	Desired	Wide Shoulder	1.62	Medium	7.00
32	Harbert Wide Shoulder	Planned	Wide Shoulder	1.01	Medium	N/A
33	New Troy Wide Shoulder A	Desired	Wide Shoulder	2.87	Medium	N/A
34	Sawyer Wide Shoulder	In Progress	Wide Shoulder	1.06	Very High	3.50
35	Lake Township Park	In Progress	Shared Use Path	0.93	Very High	N/A
36	Pokagon Wide Shoulder	Desired	Wide Shoulder	3.87	Medium	5.67
37	Church Cycle Track	Planned	Cycle Track	1.30	Medium	4.00
38	Bridgman Bike Lanes	Planned	Bike Lane	0.55	Medium	N/A
39	Pokagon Wide Shoulder	In Progress	Wide Shoulder	1.73	Very High	4.00
41	Huckleberry Wide Shoulder	In Progress	Wide Shoulder	4.33	Very High	N/A
42	Indiana Michigan River Valley Trail Extension	Desired	Shared Use Path	12.47	Very High	5.45
43	Hollywood Wide Shoulder B	Desired	Wide Shoulder	1.45	Medium	N/A
44	Red Arrow Linear Park C	Planned	Shared Use Path	6.63	Very High	4.00
45	Shawnee Wide Shoulder	Desired	Wide Shoulder	1.78	High	4.33
47	Lemon Creek Wide Shoulder	Planned	Wide Shoulder	7.08	High	N/A
49	Cleveland Wide Shoulder C	Planned	Wide Shoulder	0.27	Very High	5.00
50	Hickory Creek Water Trail	Planned	Water Trail	10.69	High	N/A
51	Hollywood Wide Shoulder A	In Progress	Wide Shoulder	6.87	Very High	4.67
52	Lemon Creek Bike Lane	Planned	Bike Lane	0.50	Medium	N/A
53	M140 Wide Shoulder	Planned	Wide Shoulder	13.38	Medium	5.00

Segment #	Name	Status	Type	Miles	Priority	Average PASER
55	Sodus Parkway	Desired	Wide Shoulder	6.90	Medium	5.00
56	Cleveland Bike Lane A	Desired	Bike Lane	2.69	High	4.00
57	Washington Wide Shoulder	Desired	Wide Shoulder	2.84	Very High	N/A
58	John Beers Wide Should	In Progress	Wide Shoulder	2.56	Very High	5.25
59	Red Arrow Connection	Desired	Shared Use Path	0.43	Very High	6.00
60	Marquette Woods	In Progress	Wide Shoulder	3.57	Very High	7.67
61	Red Arrow Linear Park B	Planned	Shared Use Path	2.70	Very High	5.00
62	Glenlord Rd	Desired	Wide Shoulder	3.30	Very High	4.00
63	Lakeshore Alternative Connection	Desired	Wide Shoulder	1.00	High	4.80
64	Sodus Parkway Alternate	Desired	Wide Shoulder	1.62	Medium	9.00
66	Pipestone Bike Lane B	Desired	Bike Lane	1.66	Very High	6.33
67	Sodus Bike Lane B	Desired	Bike Lane	1.10	Very High	5.33
68	M139 Bike Lane	Planned	Bike Lane	1.92	Very High	4.50
69	Cinema Way Wide Shoulder	Desired	Wide Shoulder	1.04	High	N/A
70	Sodus Bike Lane A	Planned	Bike Lane	1.10	Very High	4.50
71	Riverfront Trail	Planned	Shared Use Path	2.48	Very High	N/A
72	Hilltop Bike Lane	Planned	Bike Lane	0.99	Very High	6.50
74	Coffax Bike Lane B	Desired	Bike Lane	0.79	Very High	3.50
75	M63 Bike Lane	Planned	Bike Lane	1.50	Very High	4.00
77	Ox Creek Trail B	Desired	Shared Use Path	1.59	Very High	N/A
80	Napier Ave Wide Shoulder	Desired	Wide Shoulder	7.65	Medium	6.50
81	Napier Bike Lane A	Planned	Bike Lane	1.86	Very High	6.50
82	Napier Bike Lane B	Desired	Bike Lane	1.25	Very High	7.00
84	Napier Ave Shared Use Path	Desired	Shared Use Path	2.76	High	5.43
85	Lake Michigan College	Desired	Shared Use Path	1.04	High	N/A
86	Pipestone Bike Lane A	Planned	Bike Lane	2.47	Very High	3.00
87	Crystal Wide Shoulder	Planned	Wide Shoulder	2.24	Very High	5.00
88	M139 Shared Use Path	Planned	Shared Use Path	1.62	Very High	3.67
90	Ox Creek Trail A	In Progress	Shared Use Path	1.55	Very High	N/A
91	Empire Shared Use Path B	Desired	Shared Use Path	2.23	Very High	6.00
98	Territorial Road	Desired	Wide Shoulder	6.26	Medium	4.25
103	Paw Paw Bike Lane	Planned	Bike Lane	0.54	Very High	9.00
104	Territorial Bike Lane B	Planned	Bike Lane	1.62	Very High	3.50
105	Red Arrow North	Desired	Bike Lane	11.84	Very High	5.50
107	Territorial Wide Shoulder	In Progress	Wide Shoulder	1.32	Very High	4.00
108	Lakeview Trail A	In Progress	Shared Use Path	2.46	Very High	N/A
109	Benton Charter Wide Shoulder	Planned	Wide Shoulder	2.22	Medium	4.00
110	Benton Harbor to Whirlpool	In Progress	Shared Use Path	1.41	Very High	N/A
111	Paw Paw Ave	Planned	Wide Shoulder	1.63	High	3.67
112	Lakeview Trail B	Desired	Shared Use Path	7.80	Very High	6.00
113	Coloma Wide Shoulder	Desired	Wide Shoulder	5.01	Medium	5.00
114	Coloma Bike Lane	Desired	Bike Lane	0.73	High	4.00
115	Blatchford Wide Shoulder	Desired	Wide Shoulder	0.76	Medium	N/A
116	Hagar Shores Wide Shoulder A	In Progress	Wide Shoulder	5.99	Very High	4.00
117	Hagar Shores Wide Shoulder B	Desired	Wide Shoulder	1.48	Medium	N/A
118	Gallen River Water Trail	Desired	Water Trail	13.20	Medium	N/A

INFRASTRUCTURE RECOMMENDATIONS

RECOMMENDATION

ONGOING

I-3 Strive to complete the “last mile” connections from destinations, homes, and trip generators to the current and proposed active recreation & transportation network.

CHAMPIONS

- Berrien County
- Local Municipalities
- Michigan Department of Transportation (MDOT)

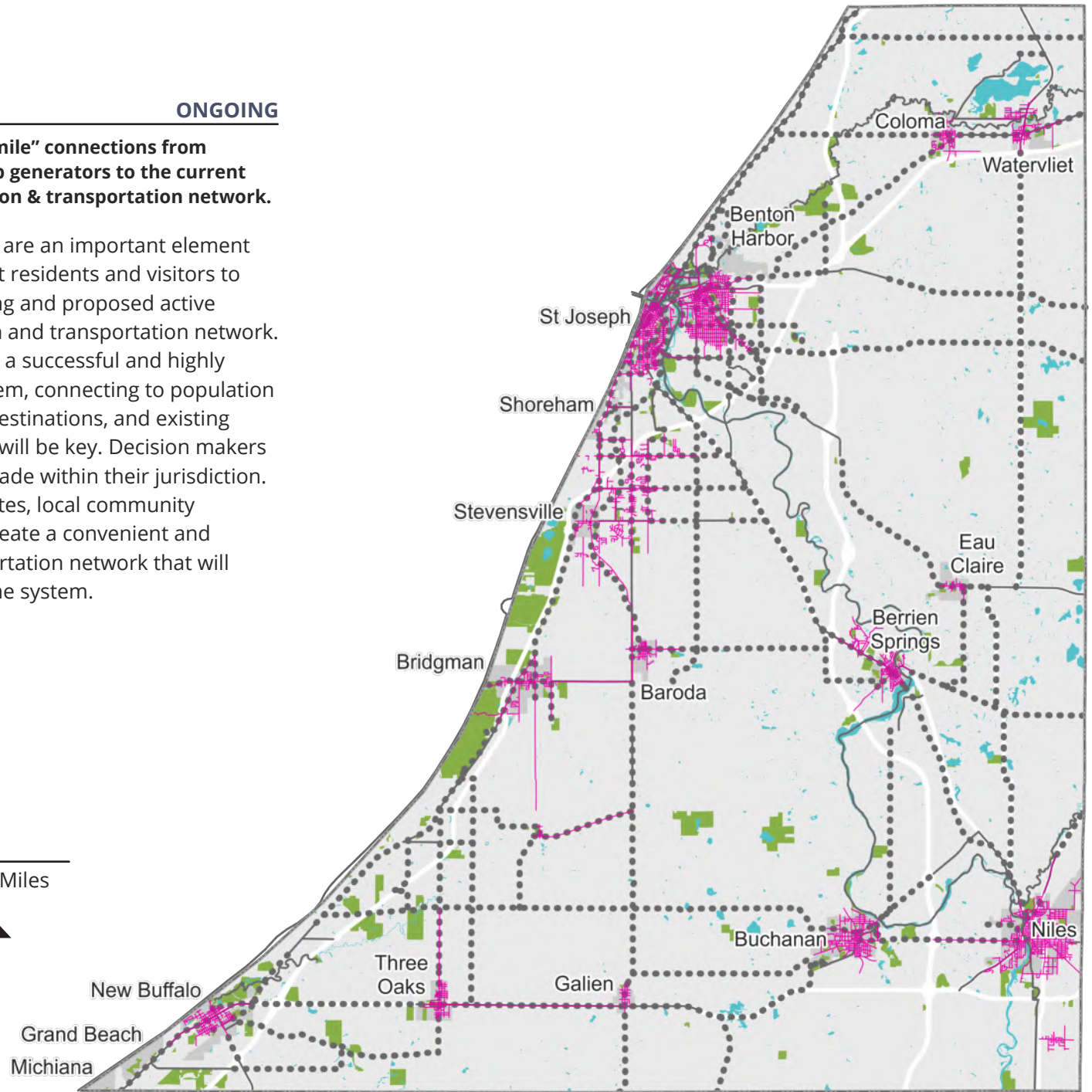
Sidewalks are an important element to connect residents and visitors to the existing and proposed active recreation and transportation network. To ensure a successful and highly used system, connecting to population centers, destinations, and existing networks will be key. Decision makers

need to ensure those connections are made within their jurisdiction. Connecting the regionally significant routes, local community connectors, and sidewalk network will create a convenient and connected active recreation and transportation network that will empower residents and visitors to use the system.

LEGEND

- • • Proposed Network
- Existing Network
- Sidewalks
- Park
- Water
- City or Village

1" = 6 Miles



INFRASTRUCTURE RECOMMENDATIONS

WATER TRAILS RECOMMENDATION SHORT TERM

I-4 Develop a water trail along Hickory Creek and extend the Galien River water trail to New Troy.

Hickory Creek water trail would run from Baroda Village Park to the St. Joseph River. The Galien River water trail should extend from its current terminus at Glassman Park to Mill Road Park in New Troy. Access sites should be placed along the route about every 5 miles.

WATER TRAILS RECOMMENDATION MEDIUM TERM

I-5 Improve and install new high-quality access sites for Berrien County's water trails that include ADA boat and kayak launches, adequate parking, and restrooms.

Conditions along water trails and their access sites were a consistent concern brought up during the community survey and community open houses. Modern amenities at these sites will help increase the user base and user satisfaction. ADA boat and kayak launches were especially popular with participants and highly valued by all users, not just by those with physical needs. Implementors should identify key access sites to improve and work to install these amenities. New access sites may be needed at the locations highlighted on the map. Access sites would ideally be located every 5 miles.

LEGEND

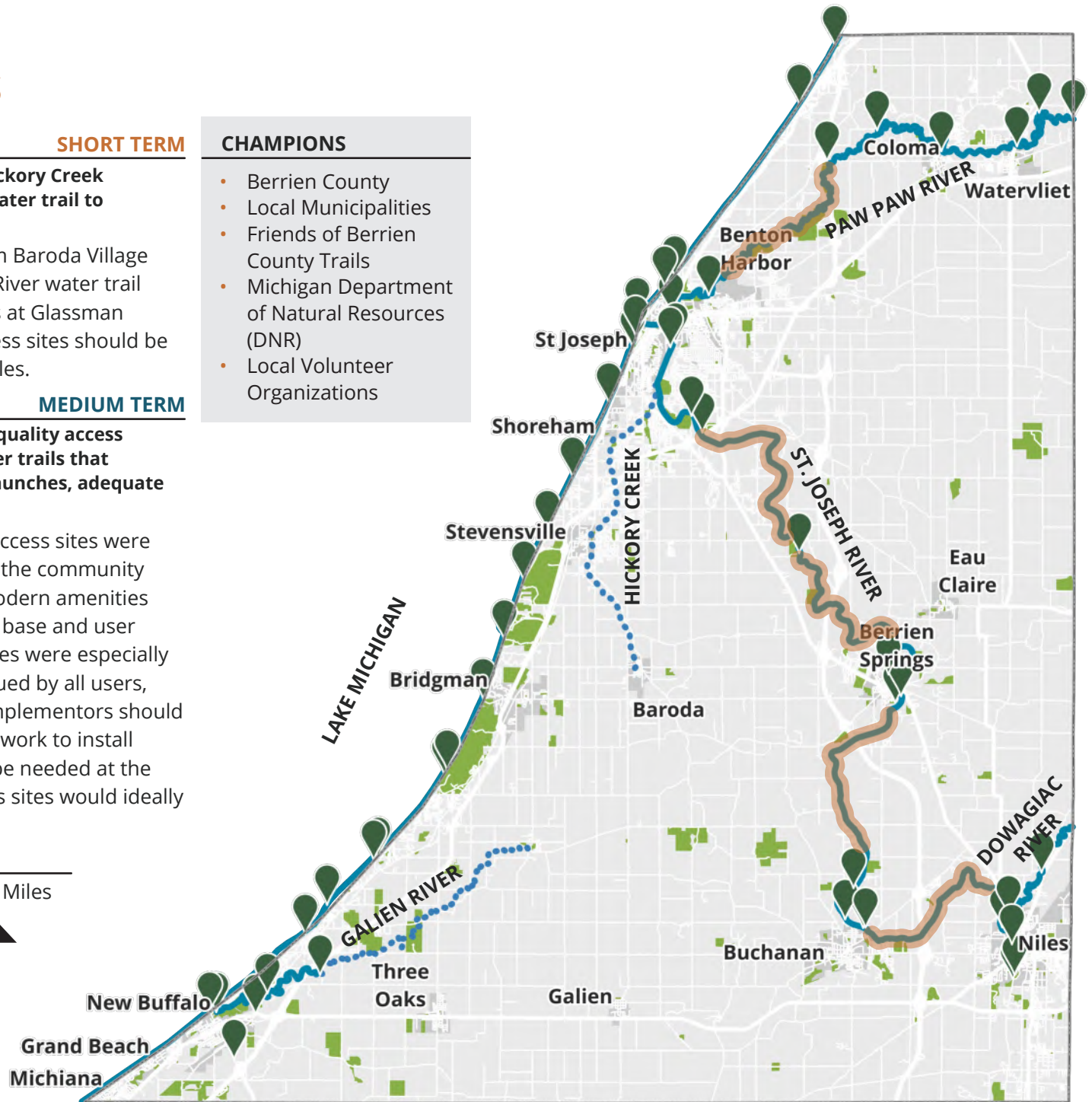
- Proposed Water Trail
- Existing Water Trail
- 📍 Access Site
- Access Site Gap Areas
- Park
- Water
- City or Village

1" = 6 Miles



CHAMPIONS

- Berrien County
- Local Municipalities
- Friends of Berrien County Trails
- Michigan Department of Natural Resources (DNR)
- Local Volunteer Organizations



INFRASTRUCTURE RECOMMENDATIONS

PARK BASED TRAILS RECOMMENDATION

LONG TERM

I-6

Connect existing and new parks, recreation areas, and other outdoor activities and amenities to the active recreation and transportation network.

CHAMPIONS

- Berrien County Parks
- Local Municipalities
- Friends of Berrien County Trails
- Michigan DNR
- Local Volunteer Organizations

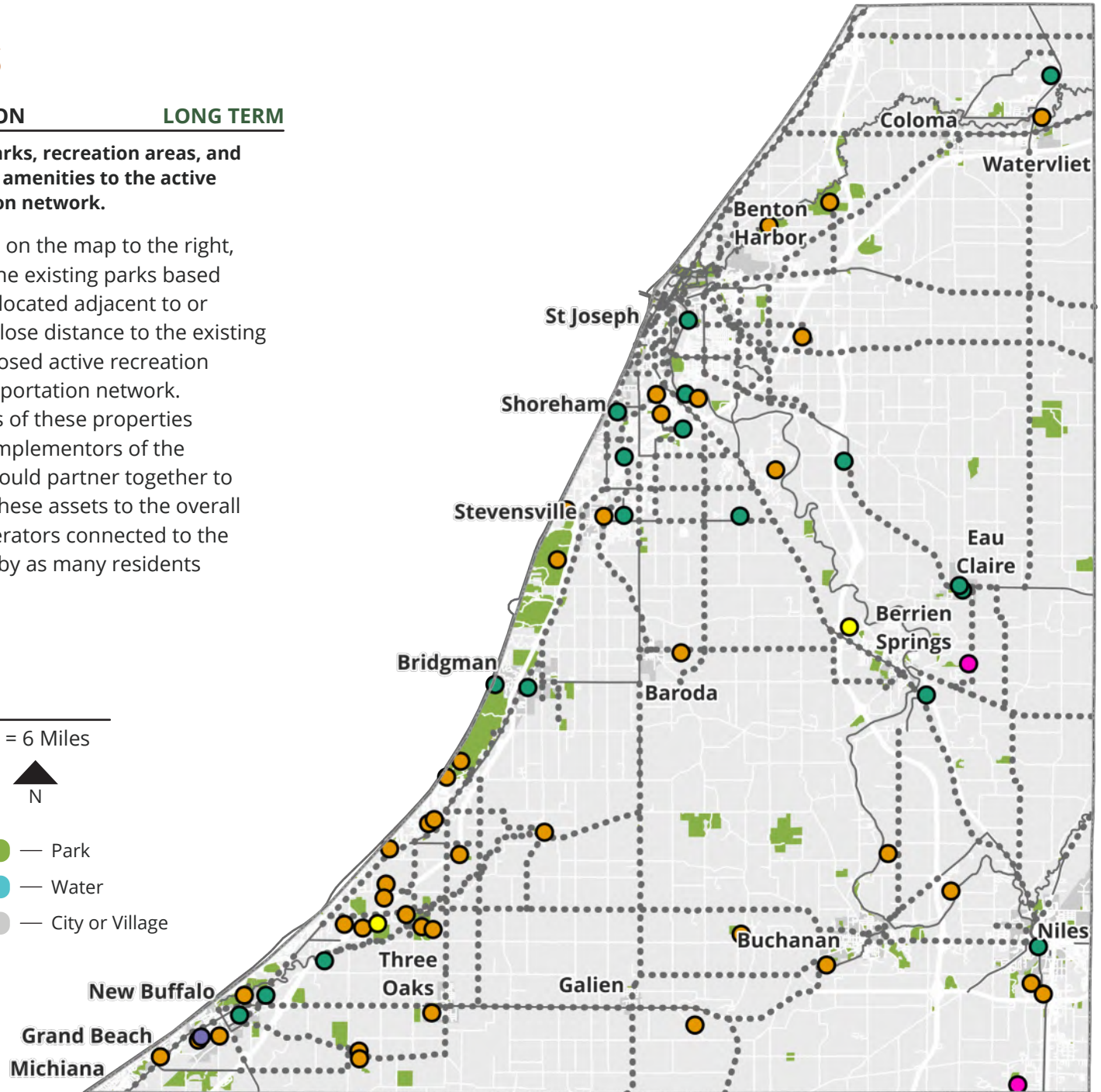
As shown on the map to the right, most of the existing parks based trails are located adjacent to or within a close distance to the existing and proposed active recreation and transportation network. Managers of these properties and the implementors of the routes should partner together to connect these assets to the overall

system. More destinations and trip generators connected to the network will ensure its success and use by as many residents and visitors as possible.

LEGEND

- • • Proposed Network
- Existing Network
- Walking Path
- Hiking
- Hiking, Cross Country Ski
- Hiking, Cross Country Ski, Mountain Bike
- Hiking, Mountain Bike

- 1" = 6 Miles
- ▲ N
- Park
- Water
- City or Village



INFRASTRUCTURE RECOMMENDATIONS

PARK BASED TRAILS RECOMMENDATION

ONGOING

I-7

Encourage the development of new parks based trails by local institutional and business partners, promote successful systems such as the mountain bike trails at Whirlpool and Andrews University, and connect any new parks based trails to the overall system.

CHAMPIONS

- Berrien County
- Local Municipalities
- Institutional Partners
- Business Partners

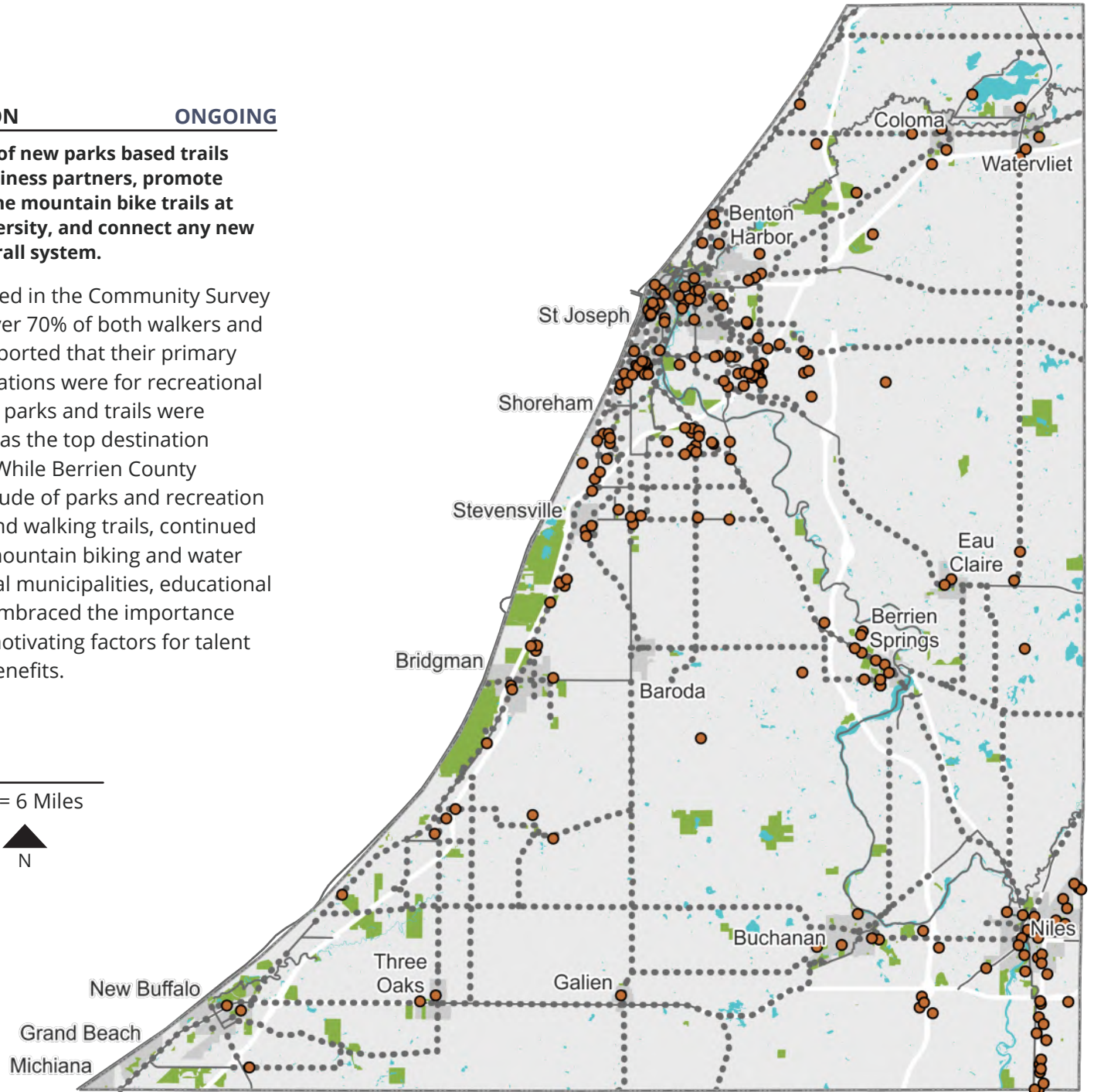
As identified in the Community Survey results, over 70% of both walkers and cyclists reported that their primary trip motivations were for recreational purposes, parks and trails were identified as the top destination for both. While Berrien County

residents already have access to a multitude of parks and recreation facilities, many of which include hiking and walking trails, continued development of hiking/walking, biking, mountain biking and water trails should be encouraged. Beyond local municipalities, educational institutions and major employers have embraced the importance of recreation and trail development as motivating factors for talent attraction and economic development benefits.

LEGEND

- • • Proposed Network
- Existing Network
- Businesses & Institutions w/ 50+ Employees
- Park
- Water
- City or Village

1" = 6 Miles



INFRASTRUCTURE RECOMMENDATIONS

EQUESTRIAN TRAILS RECOMMENDATION SHORT TERM

I-8 Explore the development of equestrian trails in the new county park site located north of Watervliet and/or in the DNR/Andrews University property south of Berrien Springs.

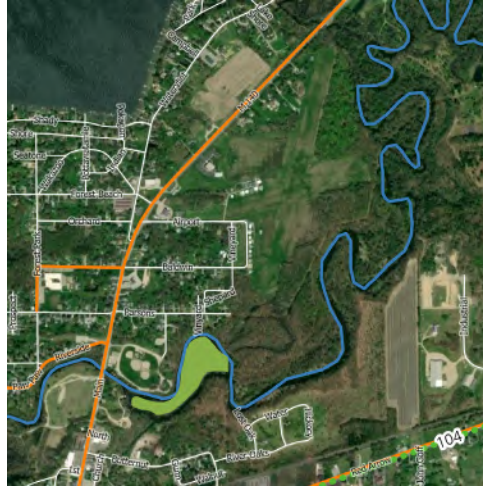
CHAMPIONS

- Berrien County Parks
- Michigan DNR
- Friends of Berrien County Equestrian Trails

Berrien County Parks is exploring the development of a new facility around the Watervliet Municipal Airport and Paw Paw River. This site could be a great opportunity to develop the first equestrian facility in Berrien County. The

site is large enough to accommodate the length of trails that are ideal for equestrian users.

Another property with the potential for equestrian trails would be the Michigan DNR/Andrews University property south of Berrien Springs. Michigan DNR is in the process of acquiring this property from Andrews University. This site is large enough to provide the ideal length of trails. Allowing horses on state property has not been consistent and has been up to the discretion of the park managers. Close coordination will be needed with the Michigan DNR to allow for equestrian users on this property.



Berrien County Parks - Watervliet Site



Michigan DNR/Andrews University - Berrien Springs Site

EQUESTRIAN TRAILS RECOMMENDATION ONGOING

I-9 Consider allowing equestrian use at existing and proposed large parks and along shared use paths if conditions permit.

CHAMPIONS

- Berrien County Parks
- Friends of Berrien County Equestrian Trails
- Local Municipalities
- Friends of Berrien County Trails

To help expand the creation of equestrian facilities in Berrien County, exploring ways to integrate equestrian users into the overall network will be key. Implementors should explore the possibility of how to integrate equestrian users beyond the two facilities identified. Existing and

proposed shared use paths would be ideal locations for new equestrian trails, especially those not along roadways such as the proposed segment of the Indiana-Michigan River Valley Trail from Niles to Berrien Springs.

CONSTRUCTION & MAINTENANCE RECOMMENDATIONS

RECOMMENDATION ONGOING

CM-1 Encourage local municipalities to incorporate funding for construction and maintenance of the existing and recommended active recreation and transportation network as part of local capital improvement planning.

CHAMPIONS

- Berrien County
- Local Municipalities
- Institutional Partners
- Business Partners

Construction and maintenance of transportation facilities are often a significant portion of a local community's budget. The costs of non-vehicular infrastructure can sometimes be a barrier to building new facilities as the benefits of

the investments may take a number of years to be realized. As communities across the country are seeing the long-term benefits of active transportation system investments, integrating the planning and budgeting of active transportation facilities with overall transportation projects provides for efficiencies that can reduce initial construction costs and help communities with long-term maintenance budgeting.

RECOMMENDATION MEDIUM TERM

CM-2 Rollout a comprehensive network of conveniently located bicycle racks and lockers.

CHAMPIONS

- Berrien County
- Local Municipalities
- Institutional Partners
- Business Partners
- Southwest Michigan Planning Commission (SWMPC)

Having a predictable and safe place to store your bicycle will encourage and promote usage of the active recreation and transportation system. Businesses, institutions, parks, and other destinations and trip generators should consider being a part of the program. Covered parking and bike lockers would be very successful in

protecting from the weather, especially during the harsh winter.

RECOMMENDATION SHORT TERM

CM-3 Develop and implement a centralized condition assessment process for consistency and unification of assessment and maintenance efforts.

CHAMPIONS

- Friends of Berrien County Trails
- Berrien County
- Local Municipalities
- SMWPC

Ongoing condition assessment is a key step to asset management planning. Utilizing modern GIS mapping and mobile data collection, Berrien County, local municipalities, volunteers, and even the public can get involved to assess infrastructure while sending the data to one centralized location.

RECOMMENDATION MEDIUM TERM

CM-4 Organize consistent volunteer efforts to assess the condition of infrastructure and perform clean-up/maintenance events as part of the overall condition assessment and maintenance process.

CHAMPIONS

- Friends of Berrien County Trails
- Local Volunteer Organizations
- Institutional Partners
- Business Partners
- Berrien County
- Local Municipalities

As municipal leaders struggle to identify resources available for maintenance and upkeep of trails and active transportation systems, volunteers can be an important tool for helping communities without increasing funding budgets. Throughout the planning process, a number of community residents and stakeholders expressed interest in how they could become

more involved. Working with local municipalities to organize and implement events to support trail maintenance and upkeep also helps to demonstrate the community's value for the trail systems and encourages further trail development.

CONSTRUCTION & MAINTENANCE RECOMMENDATIONS

RECOMMENDATION SHORT TERM

CM-5 Leverage modern technology in mapping and capital management to aid in unifying condition assessment and maintenance efforts by all participation organizations and individuals. This should be championed by one organization in partnership with all interested parties to ensure centralization and consistency.

CHAMPIONS

- Friends of Berrien County Trails
- SWMPC
- Berrien County
- Local Municipalities
- Abonmarche

Data collection is an important step in any planning and capital management process. Accurate and comprehensive data can help guide future decision-making, capital asset management, and condition assessments. One organization should champion the maintenance, storage, and

collection of this data, with all implementors contributing to this effort. Centralizing the data will ensure that the data is accurate and can be shared with all interested parties.

RECOMMENDATION SHORT TERM

CM-6 Explore integrating trail locations and real-time conditions in popular apps such as Trailforks.

CHAMPIONS

- Friends of Berrien County Trails
- SWMPC
- Trailforks

Trailforks is a trail management system using user-provided data to map, post pictures, and report trail conditions for other users. Friends of Berrien County Trails can use the GIS and other assessment data to upload onto

the app to make trails easy to find in Berrien County. Using this app, or a similar one, would help increase the user base by making it easier to find trails in Berrien County.

RECOMMENDATION ONGOING

CM-7 When constructing new routes, work with the hired consultants to provide estimated maintenance costs to decision makers and other interested parties to aid maintenance and capital planning.

CHAMPIONS

- Berrien County
- Local Municipalities
- Project Consultants

Along with the initial project costs, work with consultants to provide estimated maintenance cost to help with future budgeting, planning, and monitoring of trends. Having some realistic expectation of potential

future costs will help plan for maintenance and ensure that infrastructure isn't neglected.

RECOMMENDATION SHORT TERM

CM-8 Establish a process to share project plans, construction costs, and maintenance cost estimates with the Friends of Berrien County Trails to aid in future planning and the monitoring of trends.

CHAMPIONS

- Friends of Berrien County Trails
- SWMPC
- Berrien County
- Local Municipalities

Berrien County and local municipalities should work with Friends of Berrien County Trails to establish a process to share project data that can be analyzed for best practices, market trends, and estimated costs. Data should be stored and monitored by a

central organization. This data will provide real, local insight in trail projects to aid planning and implementation of the recommended routes in this Plan.

CONSTRUCTION & MAINTENANCE RECOMMENDATIONS

RECOMMENDATION

SHORT TERM

CM-9 Establish a sustainable funding source for maintenance such as a county-wide endowment for maintenance that can be accessed by the local municipalities.

CHAMPIONS

- Friends of Berrien County Trails
- Potential Stakeholders
- Local Volunteer Organizations
- Berrien County Foundations

Like all forms of community infrastructure, trails and active transportation network improvements require ongoing funding to support necessary maintenance activities. While communities can often leverage local funds with state and federal resources to construct the infrastructure,

there are limited grant opportunities available dedicated strictly to maintenance activities. However, like parks and roads, trails and active transportation improvements can provide significant community benefits. Just as communities budget for maintenance and replacement costs for parks and roads, trail and active transportation improvements should be considered with the same philosophy. Integration of planning and budgeting within parks and transportation budgets can create efficiencies that help reduce costs over time.

NEW BUFFALO MAINTENANCE RESOLUTION

Resolution # 20220328
New Buffalo Township,
County of Berrien, State of Michigan

Upon motion made by HEIT, seconded by RAHM, the following Resolution was adopted:

WHEREAS; New Buffalo Township, in collaboration with Marcy Hamilton of the Southwest Michigan Planning Commission, has raised in excess of \$3,100,000 for the Marquette Greenway; and

WHEREAS; the Township is working to create more recreational opportunities, including trails in the Township; and

WHEREAS; the Township worked with the Berrien County Road Commission to implement a portion of the Red Arrow Highway Linear Park; and

WHEREAS; regional non-motorized land infrastructure, including but not limited to walkways, bikeways, and parks has been proven to have positive impacts on economic development; and

"NOW THEREFORE BE IT HEREBY RESOLVED, that New Buffalo Township, at a meeting held on March 28th, 2022, adopts the following resolution that states that the Marquette Greenway and the New Buffalo Township portion of the Red Arrow Linear Park are considered parks and recreation and therefore will become part of the New Buffalo Township Park Department for funding and maintenance.

AYES: HEIT, JAZZETTO, RAHM & ZABICKI

NAYS: ROGERS

ABSENT: NONE

RESOLUTION ADOPTED

I, Judith Zabicki, Clerk of New Buffalo Township, Michigan, do hereby certify that the above is a true and correct copy of the Resolution relative to the Agreement with the Michigan Department of Natural Resources, which Resolution was adopted by the New Buffalo Township Board at a meeting held on March 28th, 2022.



Signature

New Buffalo Township Clerk
Title

March 28th, 2022
Date

CONSTRUCTION & MAINTENANCE RECOMMENDATIONS

BERRIEN COUNTY MAINTENANCE RESOLUTION

A2210389
October 27, 2022

TO THE HONORABLE BOARD OF COMMISSIONERS OF BERRIEN COUNTY, MICHIGAN: Your County Administration Committee respectfully recommends the adoption of the following:

RESOLUTION

WHEREAS, the Berrien County Board of Commissioners dissolved the Berrien County Road Commission in September 2017 and departmentalized those functions in the establishment of the Berrien County Road Department; and

WHEREAS, staff have since been working through the policies and procedures that previously fell under that body as well as other procedures in need of policies; and

WHEREAS, the Berrien County Board of Commissioners is involved in the approval process via the Road Department when an entity seeks to apply to the County requesting involvement in non-motorized transportation facility development; and

WHEREAS, currently there is no policy which outlines that procedure; and

WHEREAS, the Administration Committee has participated in several review sessions related to the development of Policy ADM-5210 "Non-Motorized Transportation Facilities Development" which provides the purpose and procedure.

NOW, THEREFORE, BE IT HEREBY RESOLVED that the Berrien County Board of Commissioners approves Policy ADM-5210 "Non-Motorized Transportation Facilities Development" effective with the passage of this resolution.

Respectfully Submitted,
BERRIEN COUNTY ADMINISTRATION COMMITTEE

Jim Curran, Chairman

Julie Wuerfel

David Vollrath, Vice Chairman

James R. Martin

NUMBER: ADM-5210

TITLE: NON-MOTORIZED TRANSPORTATION FACILITIES DEVELOPMENT (Page 1 of 2)

DATE ADOPTED: October 27, 2022

DATE REVISED:

Policy:

The Berrien County Board of Commissioners have invested in planning for the County's future to include and increase the number of trails, water trails, and greenways as demonstrated by the approval of the Berrien County Parks and Recreation Plan 2020-2024 that included the Berrien County Linear Trail (connecting all 7 current parks with safe pedestrian and bicycle trails). Beyond that, there is an ever increasing desire and demand for multi-purpose, non-motorized transportation facilities throughout Berrien County and in addition, it is regulated through Act 51 to spend 10% of the Berrien County Road Department (BCRD) budget on trails over a 10-year period. Berrien County recognizes the value of non-motorized transportation facilities, while simultaneously acknowledging the necessity of working within applicable funding requirements and fiscal limitations altogether with competing needs of other public use consideration such as utilities, engineering issues such as proper drainage, safety, right-of-way dimensions, and pedestrian, jogger, stroller, and bicycle use.

Establishing trails throughout Berrien County most often involves work in the public road right-of-way and is generally considered a responsibility of the local unit of government in which it will be located. Work in the public road right-of-way is governed through Berrien County Road Right-of-Way Ordinance No. 19 and Policy ADM-5214. If, through the Road Department, Berrien County is being asked to participate in the development of non-motorized transportation facilities via funding, flow through funding, applying for permits, assistance in construction, etc., then it is the policy of the Berrien County Board of Commissioners (BOC) that it be governed by this procedure to provide consistent direction and oversight, coupled with the Right-Of-Way Policy ADM-5214.

Definitions:

Non-motorized transportation facility types:

- Non-Motorized Paths – Considered to be a facility that is separated from the motorist-traveled portion of the roadway. It is also considered to be different than a sidewalk, in that sidewalks have specific statutory status, especially as it pertains to construction and liability matters. Such non-motorized paths will not be signed, or designated as "exclusive" bike paths because they are intended for multiple non-motorized uses, and all users should be encouraged to use the facility rather than the roadway. Existing sidewalks shall be enlarged to provide for the non-motorized path.
- Paved Shoulders – Are along existing roads where it is deemed advisable for safety, liability or maintenance reasons, most likely when traffic volumes of non-motorized transportation uses are exceptionally high or where adequate right-of-way is available.
- Signed Routes (on existing roads) – The signing of an existing roadway without paved shoulders or separated paths as a "Bike Route", as needed for the purpose of providing continuity of routes within the County or regionally.
- Sidewalks – Constructed by a local unit of government on county roads that conform to the general guidelines.

Procedure:

- An entity interested in requesting the County's participation in a project beyond the standard right-of-way permit, must complete and submit the following during the planning and design phases of projects:
 - Project Application
 - Resolution from the local entity, including identifying funding sources.
 - Right-of-Way Permit Application

NUMBER: ADM-5210

TITLE: NON-MOTORIZED TRANSPORTATION FACILITIES DEVELOPMENT (Page 2 of 2)

DATE ADOPTED: October 27, 2022

DATE REVISED:

- The documents and any additional information that is requested of the entity will be reviewed by the BCRD and submitted to the BOC for authorization to participate in the project as requested by the entity. BCRD may also consider the following factors as identified in the application process:
 - Current Pavement Surface Evaluation and Rating (PASER) of local and primary roads and bridges
 - Land Use and development
 - Road classification
 - Current and future capacity needs of roadway
 - Safety and mobility
 - Cost of incorporating and maintenance of the facility
 - Existing facilities and connectivity
 - Right-of-way limitations
 - Drainage
 - Utilities
 - Environmental constraints
 - BCRD will consider American Association of State Highway and Transportation Officials (AASHTO) guidelines and other resources for planning, design and construction of non-motorized transportation facilities.
- If the BOC authorizes the BCRD's participation in the project via resolution, the BCRD may proceed with the requested involvement.
- If it is requested of the BCRD to apply for related state or federal funding, upon the award of such state or federal funding, the BCRD will accept the funds via the resolution process approved by the BOC.
- A project agreement must be executed between Berrien County and the entity for the BCRD to proceed with the completion of the project. The project agreement will identify the entity responsible for all local costs such as grant match requirements, funding of the maintenance plan, and acceptance of all liability.

PLANNING & EVALUATION RECOMMENDATIONS

RECOMMENDATION

SHORT TERM

PE-1 Adopt a resolution committing to implement the Berrien County Trails Master Plan.

CHAMPIONS

- Friends of Berrien County Trails
- Berrien County
- Local Municipalities
- SWMPC

Implementing this proposed system will take a unified effort to accomplish but it will benefit all county residents and visitors. Adopting this Plan will ensure that decision makers are on the same page and the network is connected

and comprehensive. During the Municipal Assessment, the planning team made every effort to include already planned routes, meaning this Plan reflects the trail planning efforts already made within the county. Friends of Berrien County Trails will work with jurisdictions to adopt this Plan in the months following its completion.

RECOMMENDATION

SHORT TERM

PE-2 Integrate the recommendations of the Berrien County Trails Master Plan into other local plan updates (comprehensive plans, parks plans, etc.).

CHAMPIONS

- Friends of Berrien County Trails
- Berrien County
- Local Municipalities

Building up PE-1, jurisdictions could go a step further and integrate the routes and recommendations in this Plan into their own planning efforts. The recommendations in this Plan are tailored to the unique

needs of Berrien County, and municipalities are welcome to incorporate them. Accomplishing this step will also ensure unity and consistency across all trail planning efforts in the future.

RECOMMENDATION

SHORT TERM

PE-3 When implementing the routes and recommendations in this Plan, use the Implementation Toolbox to ensure there is equitable community engagement.

CHAMPIONS

- Be Healthy Berrien
- Corewell Health South
- Berrien County
- Local Municipalities

Use the Implementation Toolbox in the next section to identify needed strategies and resources to ensure the municipality's actions and decisions are crafted to achieve equitable outcomes. Local community participation

and leadership in decision-making should reflect a diversity of voices, including targeted strategies to engage historically marginalized communities. Jurisdictions should work to ensure that all implemented routes and recommendations are accessible and welcoming to all people.



New Buffalo Community Open House

PLANNING & EVALUATION RECOMMENDATIONS

RECOMMENDATION

MEDIUM TERM

PE-4 Beyond the condition and maintenance data gathering mentioned earlier, gather data to aid in planning and evaluation such as trail counts and community input. This should be championed by one organization in partnership with all interested parties to ensure centralization and consistency.

CHAMPIONS

- Friends of Berrien County Trails
- Local Volunteer Organizations
- Institutional Partners
- Business Partners
- Berrien County
- Local Municipalities
- SWMPC

Data is essential to help drive future discussions, especially on the scale of this Plan. Luckily, current technology such as GIS, mobile data collection, and trail count equipment. A single organization should champion the storing and maintenance of data, with all organizations, the county, and municipalities participating in the collection of data. This data will also be key to evaluating the performance

of this Plan. Trail counting equipment can also be paired with the branding established in ME-1 to create unique signs, such as the one to the right, that also increase awareness of trail use.



Trail Count Sign, Capital Crescent Trail, MD

RECOMMENDATION

ONGOING

PE-5 Maintain this data with consistent updates and make planning data publicly available.

CHAMPIONS

- Friends of Berrien County Trails
- Local Volunteer Organizations
- Institutional Partners
- Business Partners
- Berrien County
- Local Municipalities
- SWMPC

Building upon the previous recommendation, all involved parties should strive to ensure that the central organization has the most up-to-date information. Maintaining the data and ensuring consistency will ensure the long-term value of the data. The data collected in all of the recommendations of this Plan should be shared with the public and can also be used to generate route maps for residents and visitors. Transparency with the public will help establish a sense of ownership in the trail system and ensure its success.

POLICY RECOMMENDATIONS

RECOMMENDATION

SHORT TERM

P-1 **Modify public policy/ordinances to support active recreation and transportation (require sidewalks with new development, sidewalk maintenance requirements, require trail/sidewalk connections, require minimum bicycle parking, etc.).**

CHAMPIONS

- Berrien County
- Local Municipalities
- Planning Commissions

Small changes to the zoning ordinance and public works policies can significantly improve those "last mile" connections needed to make the existing and proposed network successful. This recommendation will

help achieve the other recommendations in this Plan, specifically I-3 and CM-2.

Public works or street departments can require the installation or rehabilitation of sidewalks as a condition of plan approval for new developments. It's also common practice to require abutting owners to pay to maintain these sidewalks.

Some changes in the zoning ordinance can also complement the objectives of this Plan. One requirement could be that new development must provide a direct connection to abutting trails and sidewalks to make sites easy to access for pedestrians and cyclists. Minimum bicycle parking requirements are an easy way to ensure convenient and safe parking is available for active recreation and transportation users. Planning commissions can adopt simple ordinances, such as those found in the case study to the right, to ensure that all residents and visitors can get to their destinations using whatever mode of transportation they chose.

These solutions are no initial cost to government bodies, rather it transfers that cost to the developer. Berrien County and municipalities are encouraged to be creative and find solutions that best fit their jurisdictions.

CASE STUDY:

CITY OF SOUTH BEND & ST. JOSEPH COUNTY

In recent years, both the City of South Bend and St. Joseph County adopted an amendment to the parking requirements found in their zoning ordinance that set specifications and minimum requirements for bicycle parking. Standards include minimum requirements, minimum area, location in relation to the main entrance, etc. Minimum required bicycle parking rarely exceeds the space needed for one vehicle space. The goal is to jumpstart a network of convenient and safe parking for active recreation and transportation users. More information can be found in their respective zoning ordinances.

City of South Bend: <https://southbendin.gov/zoning>

St. Joseph County: <https://sjcindiana.com/306/IPG-Division-of-Planning-Zoning>

RECOMMENDATION

ONGOING

P-2 **Encourage Berrien County and the local municipalities to adopt a complete streets policy that promotes consistency across the county.**

CHAMPIONS

- Berrien County
- Local Municipalities
- Planning Commissions
- SWMPC

Adopting complete streets policies ensures that the transportation system provides mobility and accessibility for all users. This policy is intended to help guide future road projects in facilitating a safe means of transportation by all user types and will be an essential component

in completing those "last mile" connections to destinations and trip generators. Berrien County and local municipalities are encouraged to adopt a policy that meets the needs of their community.

EDUCATION & SAFETY RECOMMENDATIONS

RECOMMENDATION

SHORT TERM

ES-1 Encourage experiential walks, hikes, paddles, or rides of existing and proposed infrastructure by involved parties, government officials, law enforcement agents, decision makers, and consultants.

CHAMPIONS

- Friends of Berrien County Trails
- Berrien County
- Local Municipalities
- Law Enforcement
- Project Consultants

Experiential rides can be a great way for decision makers and enforcement officials who don't normally use these forms of recreation and transportation to experience what it's actually like to walk or bike along a certain road. Experiential rides have become popular across the country and can provide great insight to the

implementers of this Plan and those that enforce the laws regarding pedestrians and cyclists.

RECOMMENDATION

SHORT TERM

ES-2 Partner with local law enforcement agencies to ensure there is education and training in place on pedestrian and cyclists and encourage the commitment to protect pedestrian and cyclists.

CHAMPIONS

- Friends of Berrien County Trails
- Local Law Enforcement

The ability to safely and comfortably use the active recreation and transportation system is key to its success. Law enforcement plays an important role in protecting pedestrians and cyclists. Ensuring law enforcement is educated and has the

resources needed to protect all travelers, regardless of mode, will ensure safe use of the existing and proposed system.

RECOMMENDATION

MEDIUM TERM

ES-3 Develop an educational program to hold events, engage over social media, or other similar methods to share information that promotes cyclist and pedestrian safety specifically targeted at all audiences, including drivers, cyclists, pedestrians.

CHAMPIONS

- Friends of Berrien County Trails
- Marketing Partner

Education is essential for drivers, pedestrians, and cyclists alike to use the infrastructure in Berrien County safely. Tailored educational programming should be targeted to each specific user type to ensure that everyone knows how to safely interact with each other.

RECOMMENDATION

SHORT TERM

ES-4 Increase education of how cyclists and pedestrians should interact with equestrian trail users as part of the educational program and increased signage at trail heads.

CHAMPIONS

- Friends of Berrien County Trails
- Friends of Berrien County Equestrian Trails
- Marketing Partner

Most trail pedestrians and cyclists don't know how to safely interact with equestrian users. Developing an educational program with the Friends of Berrien County Equestrian Trails to promote best practices and increase signage where these interactions

can take place will be an important step for safe use by all user types.



Equestrian Safety Sign

MARKETING & ENGAGEMENT RECOMMENDATIONS

RECOMMENDATION

SHORT TERM

ME-1 Establish county-wide branding/wayfinding program that promotes the existing and recommended active recreation and transportation system as a cohesive system.

CHAMPIONS

- Friends of Berrien County Trails
- Marketing Partner
- Berrien County
- Tourist Councils

Branding is a powerful way to unify a trail system especially on a regional and national scale. Establishing this brand should be completed early on in the process so signs, promotional materials, etc. can be created and installed as the routes are implemented. The brand should represent Berrien County and

its assets while engaging the public to create that sense of ownership. Because the Indiana-Michigan River Valley Trail is included as a part of the MACOG Crossways Trails, we recommend that any branding exercise include MACOG to explore collaboration opportunities.

CASE STUDY:

CROSSWAY TRAILS

Crossway Trails is the result of a publically driven branding exercise lead by the Michiana Area Council of Governments (MACOG), the metropolitan planning organization (MPO) for St. Joseph, Elkhart, Marshall, and Kosciusko counties. Crossway Trails was created with the intention of being the regional brand, including Southwestern Michigan, with the Indiana-Michigan River Valley Trail being the first trail under this brand in Michigan. The level of community involvement helped curate a sense of ownership of the trail system and is a great example of how branding can unify an existing and proposed network.

<https://crosswaytrails.com/>

RECOMMENDATION

SHORT TERM

ME-2 Establish the Friends of Berrien County Trails as the central organization for data gathering, coordination of local volunteer organizations, event promotion, and implementation of this Plan.

CHAMPIONS

- Friends of Berrien County Trails

A central organization taking the lead in the implementation of this Plan and all future data gathering, event promotion, and coordinating volunteers will continue to emphasize

the unified effort needed to complete the recommendations.

RECOMMENDATION

ONGOING

ME-3 Use trail tourism events to promote the existing and proposed network and diversify and expand the length of the tourist season (i.e. off-season events, new tourists).

CHAMPIONS

- Friends of Berrien County Trails
- Chambers of Commerce
- Local Volunteer Organizations
- Institutional Partners
- Business Partners

Trail tourism can be a great way to diversify the tourist economy by bringing in new types of visitors and potential off-season events. Equestrian recreation contributes \$539 million to the state economy, and the Apple Cider Century bicycle ride generates \$1.6 million in visitor spending alone. Once the routes are implemented, events can be a way to continue to capitalize upon these

infrastructure investments, establish a sense of community, and bring in new types of visitors year-round.

ASPIRATION RECOMMENDATIONS

RECOMMENDATION

MEDIUM TERM

A-1 Encourage Berrien County and the local municipalities to aspire to achieve Pure Michigan Trails and Trail Towns of Pure Michigan designations.

CHAMPIONS

- Friends of Berrien County Trails
- Berrien County
- Local Municipalities

Starting in 2014, the Michigan DNR created the Pure Michigan® Trail, Water Trail, and Trail Town designations. The program recognizes and promotes trails and trail destinations that represent the best overall experiences in the State

of Michigan. The program leverages the reputation of the States Pure Michigan brand in the promotion of trails and communities as high-quality destinations. Pure Michigan designees must demonstrate that they offer high-quality experiences, provide clear information for users, enjoy broad community support, and have a sustainable business, maintenance and marketing plan. Encouraging designation of the county's regionally significant trails, water trails and communities as official Pure Michigan experiences will help to enhance and promote the county as a premiere destination for both residents and visitors. More information can be found at michigan.gov/dnr/places/state-trails/pure-mi-trails.

RECOMMENDATION

MEDIUM TERM

A-2 Encourage Berrien County, local municipalities, and businesses to aspire to achieve Bike Friendly Community status to enhance their image and reputation both regionally and nationally.

CHAMPIONS

- Friends of Berrien County Trails
- Berrien County
- Local Municipalities

The League of American Bicyclists has developed a tiered rating system to assess and recognizes community's and businesses' commitment to policies, programs and infrastructure that support safe and efficient bicycling activities. The Bicycle Friendly America

program provides a scorecard assessment tool to help benchmark and measure progress toward established standards in the key criteria areas. The program has national recognition for its rankings and designations. Currently, there are 13 communities in Michigan who have obtained at least a bronze-level designation, none in Berrien County. There is one business that has achieved bronze level in Berrien County, River St. Joe. Municipalities and businesses can use the application process to identify areas of strength and weakness, which can be useful in future planning activities. Similar to the Pure Michigan Trail Town, achieving designation will enhance bicycling reputation in the County, and can be useful in obtaining grant funds. More information can be found at bikeleague.org/community.

RECOMMENDATION

MEDIUM TERM

A-3 Encourage Berrien County, local municipalities, and businesses to aspire to achieve Walk Friendly Community status to enhance their image and reputation both regionally and nationally.

CHAMPIONS

- Friends of Berrien County Trails
- Berrien County
- Local Municipalities

Like the Bicycle Friendly Community designation, Walk Friendly Communities is a national recognition program developed to encourage towns and cities across the U.S. to establish or recommit to a high priority for supporting safer walking environments. Operated by the UNC Highway Safety Research Center, the WFC program recognizes communities that are working to improve a wide range of conditions related to walking, including safety, mobility, access, and comfort. Currently, only 2 communities in Michigan have obtained Walk Friendly community designations. More information can be found at walkfriendly.org.



6

IMPLEMENTATION TOOLBOX

Berrien
County
Trails
Master Plan

IMPLEMENTING THIS PLAN IN YOUR COMMUNITY

Through the development of the Trails Master Plan, the Friends of Berrien County Trails has engaged community residents and stakeholders to set a bold vision for a future active recreation and transportation system that will result in improved personal wellbeing, community health, reduced traffic congestion, better resident and talent attraction/retention, and enhanced quality of life. Moving into the implementation of the Plan recommendations, the Friends recognizes that our municipal partners within Berrien County will be primarily responsible for planning, building and maintaining the facilities that make up the system. This section of the Plan is intended to provide additional guidance and strategies in the following areas:

- Local Planning & Evaluation;
- Best Practices for Design, Construction, & Maintenance; and
- Funding for Planning & Construction.

We understand that organizations are in many different stages of project development and implementation. This toolbox is designed to support all municipalities and their different needs. Each section can be used as needed, depending on where a municipality is in their project.

USING MAPS & DATA IN THIS PLAN

The Southwest Michigan Planning Commission will maintain all of the maps and the corresponding data on their GIS website. Municipalities and the county are encouraged to incorporate both the included maps and any supporting data as a part of any local planning efforts. This data can be found at the website below:

<https://southwest-michigan-planning-commission-swmpc.hub.arcgis.com/>



LOCAL PLANNING & EVALUATION

The goal of this section of the toolkit is to provide guidance and examples of how to incorporate the principles of equitable access into planning and implementation when undertaking new trail or transportation improvement projects at the local, municipal level. Accessibility and equity were key themes in the development of this Plan due to the increased recognition that just and fair access to recreational opportunities is essential for health and social well-being, and can help communities protect and better recover from environmental, social, and economic challenges.

Building accessible public spaces requires not only design solutions, but also inclusive outreach with community members, local institutions, and city agencies. When outreach and engagement are successful, a relationship is cultivated between the community and the space itself. A sense of stewardship is instilled in the people who frequent the trail or park, which instills a sense of community ownership, organically creating avenues to access.

Identifying the people and assets within a community that provide valuable insights and historical perspectives into how an area functions is a key part of developing a project. These stakeholders provide an understanding of issues that need to be addressed. Benefits of adopting this approach include:

- Improved decision-making better representing all communities and less likely to suffer from unintentional blind spots and biases
- Increased community trust in local government by offering more options for community members to share their thoughts and better understand local government initiatives
- A more equitable allocation of public resources to all communities
- Increased trust between community members by offering more opportunities to interact with one another

PROJECT GOAL SETTING

Before starting the planning process, lay out the goals of the project. Then, assess your organization's capacity and understand what is needed to work with all segments of the community and other stakeholders in the development and approval of the project. After public engagement, revisit the project goals. Community residents and stakeholders may not have the same goals for the project as agencies initially set out to achieve. To build trust, you must acknowledge those most basic needs and align your project goals with those of the community even if it means altering your project plans. After you have listened to and considered the community's needs, see if your goals align with what you heard and observed, and ensure that it continues to prioritize equity.

Once the goals have been finalized, establish a project Equity Result Statement. A clear result statement can help to mobilize partners and resources. Work with stakeholders to clearly articulate your equity result. A powerful result statement includes:

- The problem you are trying to address
- Who will benefit from your work
- The specific and detailed actions you will take over a specific period of time

The project Equity Result Statement will be your organization's call to action. Use this as the basis for action planning, the standard to which you will measure success, and the commitment which will hold the organization accountable.

LOCAL PLANNING & EVALUATION

PUBLIC ENGAGEMENT

An inclusive and meaningful engagement process ensures that public spaces are created by the people they are intended to serve.

Engaging the community throughout all phases of a project (i.e., data collection, analysis, implementation planning, and execution), and maintaining clear and transparent communication as the project is implemented will help produce more equitable results. To do so, make certain the process allows for groups that face disproportionate levels of adverse outcomes and those from underrepresented communities to participate in decision-making. Best practices for public engagement include:

- Work directly with the public throughout the process to ensure transparency and consistent communication of the project.
- Engage trusted advocates and informal leaders to collect information from communities that are typically underrepresented in public processes.
- Provide multiple ways for the public to engage to ensure participation from a wide range of ages, races, ethnicities, and income levels. Be sure to address barriers that may restrict participation such as language, perception of being welcome, and lack of public transportation, or childcare.
- Deploy a defined communications and messaging strategy (i.e., plan how the information will be shared with the public).

At the end of community engagement efforts, answer the following:

1. Have community members who are affected, concerned with, or have experience related to this project been involved?
2. What burdens or benefits have been identified through the engagement process?
3. Based on the results, what factors that produce or perpetuate racial inequity impact this project?
4. Who benefits from or will be burdened by the project? What are the strategies for advancing racial equity or mitigating unintended consequences?

Lastly, determine if responses were gathered from geographically and demographically representative populations of the project area. Consider the following indicators when evaluating the effectiveness of the engagement process:

- The range of zip codes of participants
- The age range of participants
- The race and ethnicity range of participants
- Income levels of participants
- Any other factors that should be monitored to ensure equitable planning and engagement

If at the end of the engagement process, responses are not reflective of the geographic and demographic diversity of the community, additional engagement may be warranted. For example, during the survey process of the Berrien County Trails Master Plan, the results of the demographic questions in the community survey were compared to the demographics of Berrien County.

LOCAL PLANNING & EVALUATION

ANALYSIS & PRIORITIZATION

Building from a strong Equity Result Statement and community priorities derived through inclusive engagement activities, the process of identifying and analyzing potential routes and project needs should incorporate the same lens of equity and accessibility. An equity-based process should include a methodology to analyze trail and transportation networks using factors that prioritize low access and marginalized communities and identify where the new or improved trail will have largest impacts on accessibility and connectivity. The following are some indicators to consider when analyzing community access to trails:

- Where, within a geographic area (e.g., township, city), is the largest percentage of individuals who live further than ½ mile to a trail access point?
- Which geographies have the fewest miles of nature trails per person?
- Which geographies have the fewest miles of trails for transportation per person (e.g., sidewalks, wide shoulders etc.)?

Section 4 of the Trails Master Plan includes the methodology followed in the process of analyzing and prioritizing the proposed route recommendations. The process included specific Needs-based and Health-based analyses to help ensure that equity and accessibility were considered in the planning process. Be Healthy Berrien and Corewell Health South were significant community resources to the planning process in helping to identify and select the key demographic indicators included in these analyses. The Trails Master Plan route project prioritization process was weighted to include the Needs and Health analysis factors within the scoring system as well.

It is also important to continuously consider community context when creating project plans to help ensure there is not a conflict between the type of trail planned and what community priorities are.

For example, community members might prioritize trails for quiet and peaceful walks, in which case a trail that permits motorized transport would not be in alignment with community desires.

Ultimately, it is up to each community to determine the final mix of factors that will guide the prioritization of specific project planning at the local level. The Trails Master Plan can be used as a blueprint for smaller communities or in cases where significant planning processes aren't required. Additionally, the example priority matrix provided on the next page includes an extensive list of the types of factors that can be included as a part of the prioritization process. As each local project can have unique goals and objectives, these factors can be customized based on the community's identified priorities.

ADDITIONAL RESOURCES

Community Engagement Resource Guide: Creating Equitable Access to High-Performing Parks

<https://www.nrpa.org/contentassets/19b3cbe05a634d5e8d3b712dbc8aa9d0/community-engagement-guide-nrpa.pdf>

Racial Equity Toolbox: An Opportunity to Operationalize Equity

https://www.racialequityalliance.org/wp-content/uploads/2015/10/GARE-Racial_Equity_Toolbox.pdf

Safe Routes to Parks Resource Guide

<https://www.nrpa.org/our-work/partnerships/initiatives/safe-routes-to-parks/>

Healthy Development Checklist

https://cheac.org/wp-content/uploads/2017/10/RUHS-HDC_FINAL09142017.pdf

Community Trail Development Guide

https://www.virginiadot.org/VDOT/Programs/BikePed/asset_upload_file816_149512.pdf

Community Trail Development Guide

https://www.virginiadot.org/VDOT/Programs/BikePed/asset_upload_file816_149512.pdf

Community Engagement - LCBMP Public Involvement & Communication Plan Page

5-13 <https://lanecountybmp.com/wp-content/uploads/2020/10/LC-Bicycle-Master-Plan-Public-Involvement-Plan.pdf>

LOCAL PLANNING & EVALUATION

EXAMPLE PRIORITY MATRIX

Criteria	Definition	Rank	Measurement	Points	Maximum Influence
Type of Project	Does the project offer connections to existing bike/ped facilities?	High	Project closes gap between existing facilities	10	40
		Medium	Project does not close a gap between existing facilities	5	
Promotes Safety	To what extent does the project provide an immediate safety improvement at a location with a history of crashes involving cyclists or pedestrians?	N/A	>10 crashes	8	35
			7-10 crashes	6	
			4-6 crashes	4	
			1-3 crashes	2	
			0 crashes	0	
Road Type	Does the project cross more challenging roads?	High	Major Road (>18,000 AADT)	8	15
		Medium	Collector (3,000 – 18,000 AADT)	4	
		Low	Neighborhood Street (<3,000 AADT)	2	
Access to Schools	To what extent does this project improve bike/ped access to schools?	High	Project is within 1/4 mile of school	10	20
		Medium	Project is within 1/2 mile of school	5	
		Low	Project is not near school	0	
Access to Public Parks	Does this project offer connections to parks?	High	Project is within 1/2 mile of existing park	10	20
		Medium	Project is within 1/2 mile of proposed park	5	
		Low	Project is not near park	0	
Access to Greenbelts*	To what extent does this project improve bike/ped access to greenbelts?	High	Project is within 1/8 mile of regional greenbelt	10	15
		Medium	Project intersects existing or proposed greenbelt	5	
		Low	Project is not near greenbelt	0	
Support for Project	Does the project have the direct support of the public? Measurement values reflect a composite index for both the Wikimapping and SurveyMonkey results	High	>10	8	20
		Medium High	7-10	6	
		Medium	4-6	4	
		Medium Low	1-3	2	
		Low	0	0	
Compatible Land Use	To what extent does this project improve access to compatible land uses?	High	>66% of corridor within 1/4 mile of residential or commercial zone	10	20
		Medium	33-66% of corridor within 1/4 mile of residential or commercial zone	6	
		Low	<33% of corridor within 1/4 mile of residential or commercial zone	2	
Presence of Transit	Does the project improve bicycle or pedestrian access to the transit network?	High	Project is within 1/16 mi of a transit stop	5	20
		Low	Project is not near transit stop	0	
Employment	To what extent does this project improve access to employment opportunities?	High	>66% of corridor segment within 1/4 mile of high employment area	9	15
		Medium	33-66% of corridor segment within 1/4 mile of medium employment area	6	
		Low	6-33% of corridor segment within 1/4 mile of low employment area	3	
Population Density	Does this project reach the most people possible?	High	Project within 1/4 mile of top 25% most densely populated census blocks	9	15
		Medium	Project within 1/4 mile of top 50% most densely populated census blocks	6	
		Low	Project within 1/4 mile of top 75% most densely populated census blocks	3	
Equity	Does the project improve bicycle and pedestrian access for the County's vulnerable populations?	N/A	>50% of corridor is in tract where >5% of households own zero automobiles	5	20
			>50% of corridor is in tract where the population in poverty is above county average	5	
			>50% of corridor is in tract where the population of non-white ethnicity is above county average	5	
			>50% of corridor is in tract where population under 18 and over 65 years old is greater than county average	5	

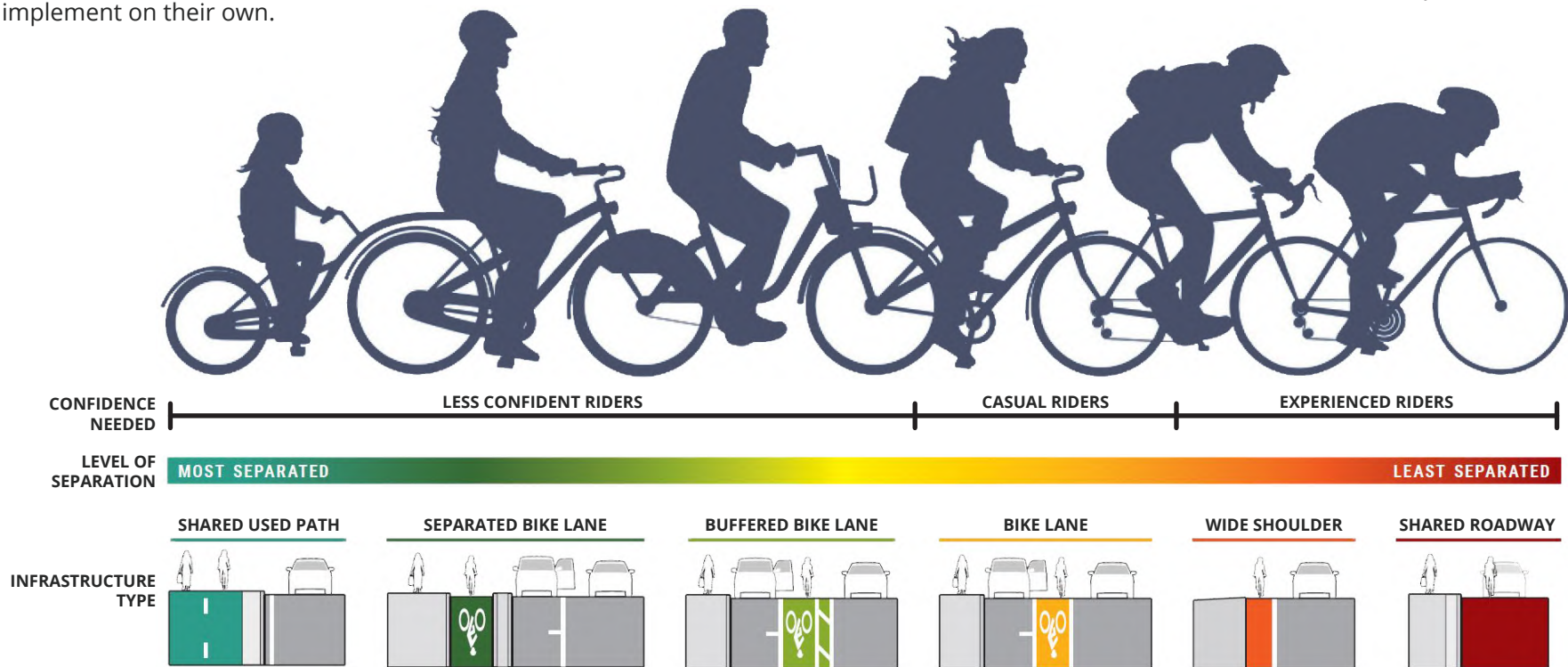
Source: Charleston People 2 Parks Bike and Walk Plan

BEST PRACTICES FOR DESIGN, CONSTRUCTION, & MAINTENANCE

The recommended routes in this Plan were informed by national guidance on bicycle infrastructure planning, the analysis maps, and general physical conditions and character of the area, while also recognizing and responding to the unique bicycling needs in Berrien County. There are several important factors to consider during bicycle facility selection, but the final decision depends in large part on the types of bicyclists that are expected on a particular route. Berrien County and the local municipalities are encouraged to implement the infrastructure types recommended in this Plan, but flexibility is encouraged when more comprehensive route analysis is done at the local level. When this is necessary, national standards and best practices, such as those listed in this section, should be followed. This also applies to any new connections and routes that jurisdictions may choose to implement on their own.

Understanding which types of bicyclists feel comfortable using a given facility is key to building a safe, convenient, and well-used network. Bicyclists are most commonly classified according to their comfort level, bicycling skill and experience, age, and trip purpose. These characteristics can be used to develop generalized profiles of various bicycle users and trips, also known as “design users,” which inform bicycle facility design. Comfort, skill, and age may affect bicyclist behavior and preference for different types of bicycle facilities. Respondents to the community survey were asked to self-identify their design user profile as either less confident, casual, or experienced.

Source: Green County Trails Master Plan

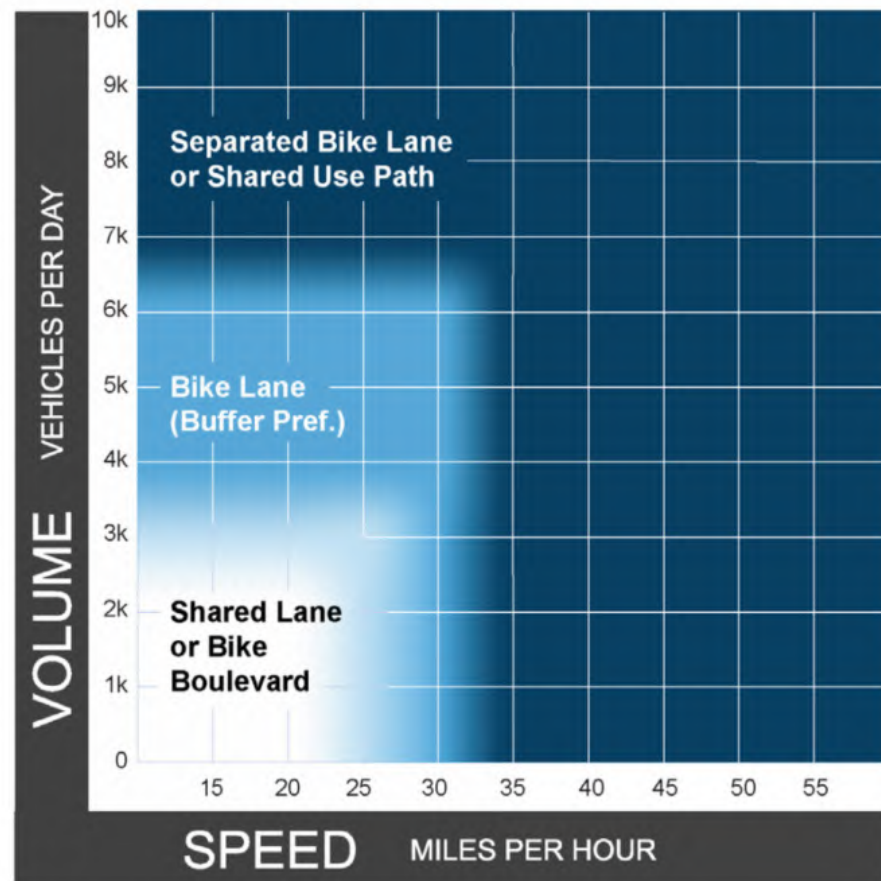


BEST PRACTICES FOR DESIGN, CONSTRUCTION, & MAINTENANCE

SELECTING APPROPRIATE INFRASTRUCTURE TYPES

Bicycle networks should be continuous, connect seamlessly across jurisdictional boundaries, and provide convenient access to destinations. Potential destinations for pedestrians and cyclists could include anywhere a person would want to drive for utilitarian purposes, such as commuting or running errands. As such, planning connected low-stress networks should identify solutions for lowering stress along higher traffic corridors so that bicycling and walking can be viable transportation options for the majority of the population, rather than planning to simply avoid motor vehicle traffic.

There are many factors that go into the selection of the appropriate infrastructure for a given project, but this chart gives some general recommendations for choosing the correct type based on traffic volumes and vehicle speed. Some segments recommended in this Plan may not follow these general guidelines, but the appropriate infrastructure was chosen given the many factors that we assessed in the planning process. As these routes are implemented, the exact routes and infrastructure type will be recommended by the hired consultants.



Source: FHWA 2019

BEST PRACTICES FOR DESIGN, CONSTRUCTION, & MAINTENANCE

INFRASTRUCTURE DESIGN GUIDELINES

The Trails Master Plan was developed to provide an over-arching analysis of existing facilities and gaps. The scale of the planning project presented challenges at times to balance broad inter-community connectivity goals at the county level with more detailed community-level connectivity goals. The Master Plan relied heavily on existing municipal planning documents in the development of route recommendations at the local community level and is intended to support and guide future planning project development activities.

Infrastructure types should reflect and complement the development context of its use and setting (rural, suburban, and urban), recognizing that one set of design solutions isn't appropriate for all conditions. When approaching the design of the specific route segments outlined in the Trails Master Plan, the county and local municipalities are encouraged to explore and incorporate federal and state design guide resources such as those included in this section. Estimated construction costs per mile can be found in the Appendix.

ADDITIONAL RESOURCES

AASHTO Pedestrian Design Guidelines

<https://store.transportation.org/Item/PublicationDetail/4651?NoCategory>

AASHTO Bicycle Design Guidelines

<https://store.transportation.org/Item/CollectionDetail?ID=116>

NACTO Design Guidelines

<https://nacto.org/publications/>

FHWA – Achieving Multimodal Networks

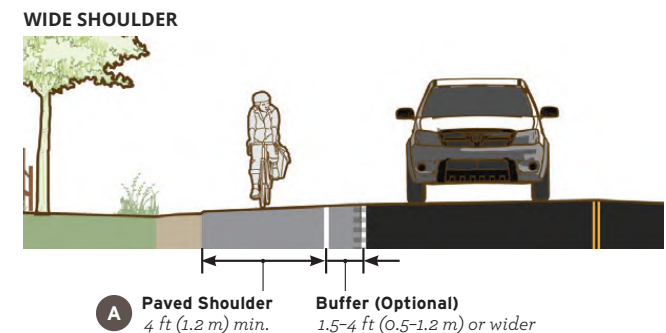
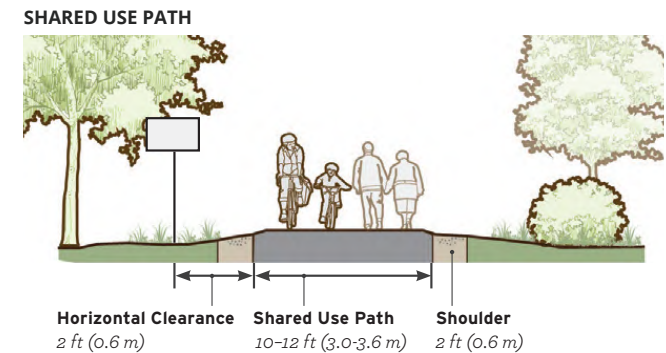
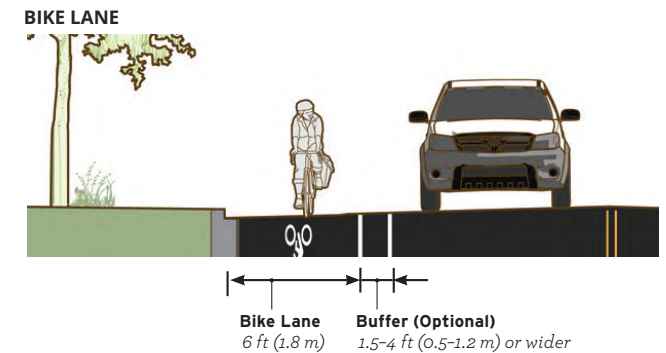
https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_networks/fhwahep16055.pdf

FHWA – Small Town and Rural Multimodal Networks

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/

MDOT – Multi-Modal Development and Delivery

https://www.michigan.gov/-/media/Project/Websites/MDOT/Programs/Planning/CSS/M2D2_Guidebook.pdf?rev=379e19e40fd54983a0a4a2dd98474fb2



(Source: FHWA - Small Town and Rural Multimodal Networks https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/)

BEST PRACTICES FOR DESIGN, CONSTRUCTION, & MAINTENANCE

Like all forms of community infrastructure, the active recreation and transportation networks require ongoing funding to support necessary maintenance activities. While communities can often leverage local funds with state and federal resources to construct the infrastructure, there are limited grant opportunities available dedicated strictly to maintenance activities. However, like parks and roads, trails and active transportation improvements can provide significant community benefits. Just as communities budget for maintenance and replacement costs for parks and roads, trail and active transportation improvements should be considered with the same philosophy. Integration of planning and budgeting within parks and transportation budgets can create efficiencies that help reduce costs over time. Along with Recommendations CM-1, CM-3, CM-4, CM-5, CM-7, CM-8, CM-9, below are additional maintenance case studies to explore when developing a plan of action for maintenance at the local level.

RECOMMENDATION ONGOING

CM-1 Encourage local municipalities to incorporate funding for construction and maintenance of the existing and recommended active recreation and transportation network as part of local capital improvement planning.

RECOMMENDATION SHORT TERM

CM-3 Develop and implement a centralized condition assessment process for consistency and unification of assessment and maintenance efforts.

RECOMMENDATION MEDIUM TERM

CM-4 Organize consistent volunteer efforts to assess the condition of infrastructure and perform clean-up/maintenance events as part of the overall condition assessment and maintenance process.

RECOMMENDATION SHORT TERM

CM-5 Leverage modern technology in mapping and capital management to aid in unifying condition assessment and maintenance efforts by all participation organizations and individuals. This should be championed by one organization in partnership with all interested parties to ensure centralization and consistency.

RECOMMENDATION ONGOING

CM-7 When constructing new routes, work with the hired consultants to provide estimated maintenance costs to decision makers and other interested parties to aid maintenance and capital planning.

RECOMMENDATION SHORT TERM

CM-8 Establish a process to share project plans, construction costs, and maintenance cost estimates with the Friends of Berrien County Trails to aid in future planning and the monitoring of trends.

RECOMMENDATION SHORT TERM

CM-9 Establish a sustainable funding source for maintenance such as a county-wide endowment for maintenance that can be accessed by the local municipalities.

BEST PRACTICES FOR DESIGN, CONSTRUCTION, & MAINTENANCE

CASE STUDY NONPROFIT:

T.A.R.T. TRAILS

Organized and motivated volunteers can provide assistance to ensure sustainable and comprehensive maintenance for community trail systems. The Traverse Area Recreation and Transportation Trails, Inc. is a 501(c)(3) nonprofit that formed in 1998, when four individual trail groups in the Traverse City area united to create a stronger force for recreation and alternative transportation in Northwest Michigan. Much of the maintenance on the trails managed by TART is completed by the volunteers who give their time and talent to ensure the trails are safe and accessible for year-round use.

Trail Maintenance Activities Include:

- Inspect/Assessment of the trails for safety & functionality, clear site areas at intersections
- Repair & replace damaged signs, benches, pavement, bridges, boardwalks, culverts and markings
- Trim and cut branches & mow vegetation along trail
- Clear debris such as downed trees, branches, litter, and excessive sand & gravel
- Cut roots under the trail with a scheduled vibratory plow/trenching machine
- Remove snow along the trails

TART Trails, Inc.

Safety, Operation and Maintenance Responsibilities										
Trail	Surface repair	Boardwalk & bridge repair	Mowing	Sweeping	Tree and bush trimming (1)	Downed tree removal	Wayfinding signage	Traffic control signage	Snow removal	Ski grooming
Leelanau 15 miles	TART	TART	TART	TART	TART	TART	TART	TART	SB Village (depot to 4 th)	TART
TART (5 miles in City)	*City/GTCRC	City	City (TART N of M-72)	City Once in spring	City (TART N of M-72)	City	TART to research	City	City	N/A
TART (5 miles in County)	GTCRC	GTCFM (minor repairs)	GTCFM	TART/GTCRC	GTCFM & TART	GTCF M & TART	TART to research	GTCRC	N/A	N/A
Three Mile Trl	?	?	?	TART/GTCRC	TART	?	?	?	?	N/A
BLT (1 mile in City)	City, as needed basis	N/A	City	TART	TART	City	TART to research	City/TART	N/A	TART to research
BLT (1 mile in County)	?	GTCFM (minor repairs)	N/A	TART	TART	GTCF M & TART	TART to research	N/A	N/A	TART to research
Vasa 25 miles	TART	TART	TART	N/A	TART	TART	TART (2)	TART (2)	Never! (4)	TART (3)
Mall Trail	?	N/A	City- up to Fitzhugh	City- up to Fitzhugh	N/A	N/A	?	?	City- Up to Meijer	N/A

*For the portion of the TART Trail parallel to the railroad tracks, the GTCRC handles the pavement.

1. Trimming to maintain clear vision at intersections, and maintain vertical and horizontal clearance.
2. MDNR provides signs for Vasa Pathway, installed and maintained by TART.
3. TART gums the Vasa Pathway through a contract with the MDNR.
4. GTCFM plows trailhead parking lot.

Acronyms: GTCRC-Grand Traverse County Road Commission, GTCFM-Grand Traverse County Facilities Management Updated 2/21/2008

(Source: <https://traversetrails.org/>)

BEST PRACTICES FOR DESIGN, CONSTRUCTION, & MAINTENANCE

CASE STUDY NONPROFIT:

INDIANAPOLIS CULTURAL TRAIL

The Indianapolis Cultural Trail Inc. is a nonprofit organization that was established to construct and maintain the Indianapolis Cultural Trail that runs throughout downtown Indianapolis. The total distance of the existing trail is 8 miles, which includes 9 pieces of public art and bike share stations scattered along the route. The trail was constructed at a total of \$63 million, using \$27.5 million in private funding and \$35.5 million in federal transportation dollars. No local tax money was used for the trail construction. Even though the Cultural Trail is located in the public right-of-way, maintenance and construction is managed by the organization.

Beginning in October 2021, the organization is currently in the process of a 2-mile, \$28.5 million expansion of the trail which will be completed in 2-3 years. \$5 million was provided by the City of Indianapolis and the remaining \$23.5 million being private funding.

It should be noted that these prices are unusually high and not typical for trail projects. This is due to the custom paving, lighting, art installations, and stormwater management system installed along the trail. But these numbers show the power of fundraising these organizations have and their flexibility to provide financial and maintenance solutions beyond tapping into the tax base.

Indianapolis Cultural Trail



BEST PRACTICES FOR DESIGN, CONSTRUCTION, & MAINTENANCE

CASE STUDY FOUNDATION:

THE PARKS FOUNDATION OF KALAMAZOO COUNTY

In 1980, Kalamazoo leaders gathered to develop a plan for enriching our quality of life in the next millennium. From this planning effort, The Kalamazoo Forum was created to tackle large-scale community issues, such as restoring the viability of the Kalamazoo River. Citizens, with assistance from the Forum, envisioned a non-motorized trail that would connect these communities and bring residents closer to the river. The Friends of the Kalamazoo River Valley Trailway was created to focus resources on completing a master plan for the trail. Today, the Friends of the Kalamazoo River Valley Trail are partners with the Kalamazoo County Parks Foundation and, together, the two groups are realizing a vision that has inspired citizens for decades.

Formed in 1988, the Parks Foundation of Kalamazoo County is to assist the County of Kalamazoo by raising funds to be used for development, improvement, maintenance, and promotion of the Kalamazoo River Valley Trail. Five other county parks are operated and maintained by the Kalamazoo County Parks. The Kalamazoo County Road Commission and the City of Kalamazoo manage the engineering and construction for all phases of the Kalamazoo River Valley Trail.

The Foundation has established a \$16.6 million capital campaign to fund the construction of the Trail. The campaign includes a goal of establishing a Trail Endowment Fund of \$2 million for ongoing maintenance funding, which has a current balance of \$1.3 million.

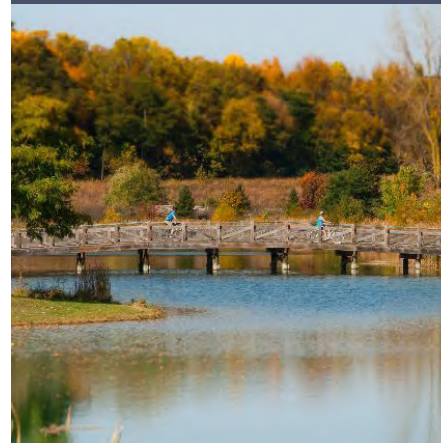
CASE STUDY TRAIL AUTHORITY:

MID-WEST MICHIGAN TRAIL AUTHORITY

The Mid-West Michigan Trail Authority manages and maintains the 42-mile, state-owned Fred Meijer Clinton-Ionia-Shiawassee trail. The National Parks Service, through Rivers, Trails and Conservation Assistance has helped to build partnerships among the three counties and develop strategies for a sustainable trail. The Authority includes both Ionia and Shiawassee County governments as the primary constituents and leases the trail from the state. The Authority was created under authorization of the Urban Cooperation Act (Act 7) and Part 721 of the Natural Resources and Environmental Protection Act (Act 451). The Authority has the full responsibilities related to the ongoing operation and maintenance of the Trail. One major step toward sustainability came with a \$3 million endowment by The Meijer Foundation that will provide ongoing funding for routine management and maintenance of the Clinton-Ionia-Shiawassee Trail.

The trail is part of the Midwest Regional Rail-Trail Network, joining on the eastern end with the Fred Meijer Grand River Valley Trail (Ionia to Lowell), the Fred Meijer Flat River Valley Trail (Lowell to Greenville), and the Fred Meijer Heartland Trail (Greenville to Edmore to Alma)

for a total of 125 miles. It is a non-motorized, non-equestrian, mid-Michigan trail in Clinton, Ionia and Shiawassee counties, connecting the communities of Owosso, Ovid, St. Johns, Fowler, Pewamo, Muir/ Lyons and Ionia utilizing a former railroad corridor.



Yankee Springs Recreation Area

BEST PRACTICES FOR DESIGN, CONSTRUCTION, & MAINTENANCE

ESTIMATED MAINTENANCE COSTS

The growth in active recreation and transportation infrastructure owned by the State Cities, Counties, and Park systems over the last 20+ years has exploded. Most, if not all, efforts over these years have been focused on construction of new trails. There have been little organized efforts in infrastructure preservation and/or preventive maintenance.

Maintenance of asphalt, concrete, and crushed gravel trails differs due to the different properties of the materials. Periodic maintenance of a crushed gravel trail is greater since it is more susceptible to adverse weather conditions such as rainstorms and run-off. Heavy amounts of water running on the trail can cause ruts to form and soften the trail as a whole. Although asphalt and concrete trails are generally not affected by rain and water erosion, freeze/thaw cycles can cause buckling, creating potholes and cracks which can be dangerous and costly to repair. Regardless of trail surface type, there are many other factors that can affect cost of maintenance. The main factor is the difference in agencies that maintain and operate trails. Each agency will have different labor costs, access to machinery and equipment, and volunteer bases to offer assistance.

For planning and asset management purposes, planners and developers of trails should budget the following amount for annual maintenance when developing a trail. The early years will require less spending on maintenance than out years but an annual investment should be made into a fund to flatten the annual lifecycle cost.

Typical Annual Maintenance Budget Recommended per mile: \$7,000*

*The above number does not include specialty trail components such as bridges, boardwalks, and retaining walls. The annual trail maintenance budget should be adjusted to address these specialty items.

*Based on 2022 costs, 5% escalator should be added to this number annually.

Below is a breakdown of the typical maintenance activities for shared use paths and trails, although maintenance may be necessary at any time to address immediate concerns. It is recommended that agencies budget for all of these items when constructing a trail. Estimated maintenance costs can be found in the Appendix.

Twenty Times Per Year:

- Sweeping/Blowing to Remove Debris
- Trash Removal
- Mowing Trail (Three foot minimum on each side of trail)

Ten Times Per Year:

- Application of Herbicide or Pesticides

Four Times Per Year:

- Drainage Maintenance(power washing, silt removal, etc.)
- Seasonal Plantings

Two Times Per Year:

- Vegetation Management (leaf clearing, pruning of trees, etc.)

Annually:

- Minor repairs
- Maintenance and Supplies
- Equipment Fuel and Repairs

Three To Five Years:

- Restriping

Ten To Twenty Years:

- Resurfacing

ADDITIONAL RESOURCES

Advocacy Advance – How Communities are Paying to Maintain Trails, Bike Lanes and Sidewalks
https://bikeleague.org/sites/default/files/AA_MaintenanceReport.pdf

Rails-to-Trails Conservancy – Best Practices in Trail Maintenance: A Manual by the Ohio River Greenway (IN)
<https://www.railstotrails.org/resourcehandler.ashx?name=best-practices-in-trail-maintenance-a-manual-by-the-ohio-river-greenway&id=21221&fileName=Best%20Practices%20in%20Trail%20Maintenance.pdf>

The Two Rivers Greenway Trail Maintenance Plan
<https://www.railstotrails.org/resourcehandler.ashx?name=two-rivers-greenway-trail-maintenance-plan&id=24002&fileName=NO%20Appendix%20-%20TWO%20RIVERS%20GREENWAY%20TRAIL%20MAINTENANCE%20PLAN%20-%20FINAL.pdf>

FUNDING FOR PLANNING & CONSTRUCTION

The following pages include multiple potential funding sources for the proposed recommendations. Each funding source has its own set of requirements and it will need to be determined at the local level whether that specific project qualifies. Additional information can be found on the FHWA and MDOT's Bicycling in Michigan websites.

Berrien County, local municipalities, and trail organizations are encouraged to be creative and explore all possible legal ways to raise funds for their projects. Leveraging the multiple benefits of this proposed system and the recommendations can be used to secure funds from differing funding sources and open up opportunities for cost sharing.

*These funding sources can change from year to year and new funding sources may become available. Contact the Southwest Michigan Planning Commission for up-to-date funding opportunities.

LOCAL FUNDING SOURCES

While local funding sources will vary from jurisdiction to jurisdiction, some examples can include local millages, tax increment financing (TIF) district funds, and state and local philanthropic organizations. A number of local millages are in place in the Southwest Region that are assisting in the implementation of road improvements, trails, and non-motorized facilities. Also, some communities are setting up endowments for long-term maintenance of trails and amenities.

Government bodies can explore the option of partnering with nonprofit organizations to expand their available funding opportunities for active recreation and transportation projects they might not normally qualify for.

SAFE ROUTES TO SCHOOLS (SRTS)

SRTS is an international movement to make it safe, convenient, and fun for children to bicycle and walk to school. In Michigan, the program is funded under the TAP and administered by The Michigan Fitness Foundation and MDOT. Developing an SRTS plan is a process that involves schools, cities, and community groups working together to develop a plan that helps students walk or bike to school safely and in greater numbers.

The Michigan SRTS program offers communities two kinds of opportunities to receive federal funding: the mini grant and the major grant. The mini grant is a programming-only grant to help schools build a culture of walking, biking, and rolling among students. Mini grants fund things like a walking school bus, incentive program, remote drop site, and bike rodeos. Mini-grant limits are \$10,000 per school and \$100,000 per district for multiple schools.

The major grant is to help communities build sidewalks, crosswalks, and any other infrastructure improvements that may be needed to make it possible for students to walk, bike, and roll safely to school. Major grant limits are \$220,000 per infrastructure and \$10,000 per noninfrastructure. Major grants require an in-depth planning process prior to submitting an application. Funding details can be found at saferoutesmichigan.org.

FUNDING FOR PLANNING & CONSTRUCTION

ACT 51

Created by Public Act 51 of 1951, this is where all state fuel taxes and license plate fees are deposited. This revenue is shared among transportation agencies for construction, maintenance, and operation of Michigan's transportation systems. Act 51 funds can be spent on pedestrian/ bike items such as:

- Shared use paths
- Sidewalk/ramps/curb cuts
- Non-motorized planning and education
- Bike lanes
- Shoulder paving

Local agency work being funded with Michigan Transportation Funds must have a clear transportation purpose. This work typically takes place within the road rights of way or is reasonably appurtenant to the roadway.

Transportation Projects Versus Recreation Projects

Funds distributed to local road agencies under Act 51 must be spent on projects and services associated with state trunklines, county roads, and city and village streets. For projects supporting pedestrians and bicyclists to satisfy the Section 10k requirement, projects must serve a transportation purpose and not be solely for recreation. To aid in making that determination, the following should be considered: A project may be considered a transportation project if it is reasonably adjacent to a transportation facility or within a transportation corridor, or provides access to services or destinations by means of non-motorized transportation in lieu of a motor vehicle.

Non-motorized transportation projects include sidewalks, bike lanes, paved shoulders, and side paths within a road right of way. Sidewalks or shared use pathways outside a road right of way may also be transportation projects if they are constructed in a transportation corridor (i.e., railroad right of way, etc.) or the project provides reasonable access to services and destinations that would otherwise only be accessible by a motor vehicle. A project that fills a gap in a local or regional network, or connects the larger network to services or destinations, could be considered a transportation project.

Recreational projects include linear or looped trails or pathways in parks, or projects solely within a park or parcel that provides access to a facility, such as a sidewalk or pathway:

- Between a parking lot and a pavilion, another building or accessory structure
- Between a pavilion and a bathroom or another accessory building or structure
- Fitness walks or access to activity sites within a park
- Natural surface hiking or walking trails

Questions regarding cost eligibility for items not discussed in this guidance, or for assistance in calculation of expenditures, may be directed to Josh DeBruyn, MDOT pedestrian and bicycle specialist, at 517-355-2918 or debruynj@michigan.gov.

FUNDING FOR PLANNING & CONSTRUCTION

CONGESTION MITIGATION AND AIR QUALITY (CMAQ)

The primary goal of the CMAQ Improvement Program is to reduce traffic congestion and enhance air quality. These funds can be used for either the construction of bicycle transportation facilities and pedestrian walkways (new construction), bike lanes on existing streets, or non-construction projects, such as bike share equipment. Funds are available to counties designated as non-attainment areas for air quality, based on federal standards. The standard local match is 20 percent. Applicants are required to work with MPOs or regional planning agencies in selecting projects that are most effective in reducing congestion and transportation-related emissions in a cost-effective manner. Additional MDOT CMAQ program details are available at michigan.gov/CMAQ.

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

TAP (or TA, the newer, shorter name) is a funding source designated by Congress under the Fixing America's Surface Transportation (FAST) Act to be used for activities that enhance the intermodal transportation system and provide safe alternative transportation options, including pedestrian and bicycle infrastructure. Additionally, investments made through TAP support place-based economic development by offering transportation choices, promoting walkability, and improving quality of life. Urban areas also receive a direct allocation of TAP funds. This includes the Kalamazoo Area Transportation Study (KATS), the Twin Cities Area Transportation Study (TWINCATS), and the Niles-Buchan-Cass Area Transportation Study (NATS). MDOT also awards TAP funds through a statewide competitive grant process.

Criteria for MDOT TAP funding include:

- Connecting and developing documented regional or statewide bicycle and pedestrian transportation networks
- Broad public engagement and strong support (which this Plan accomplishes)
- Project coordination with other infrastructure work, economic development, or community improvement initiative
- Strong, detailed maintenance plan, including sources of funding
- High match (40 percent and higher, ability to pay is considered)
- High-constructability level

Constructability on a typical trail project is measured by use of industry design standards, secured right of way, and ease of obtaining all necessary permits and approvals.

Eligible applicants include county road commissions, cities, villages, regional transportation authorities, transit agencies, state and federal natural resource or public land agencies, nonprofits responsible for the administration of local transportation safety programs, and tribal governments. MDOT may partner with a local agency to apply for funding and implement the project. Other organizations, such as townships or trail groups, may work with an eligible agency to apply. Grant coordinators are available to assist you by providing more information on the program, guidance on competitive projects, and how to best develop a competitive application. Further information on TAP can be found at michigan.gov/TAP.

FUNDING FOR PLANNING & CONSTRUCTION

COMMUNITY FACILITIES PROGRAM (U.S. DEPARTMENT OF AGRICULTURE)

The Community Facilities (CF) program offers primarily loan dollars to municipalities, nonprofit organizations and tribal entities interested in improving or developing essential community facilities. This may include motorized and non-motorized transportation infrastructure as well as equipment to maintain infrastructure. Loan rates are typically lower than those available on the open market and can have terms equivalent to the life of the infrastructure, up to 20 years. Loan guarantees may also be available to work in partnership with local lenders. Eligible rural areas must have a population of 20,000 or less, demonstrate a need for assistance, and have a documented ability to repay. Additional priority can be given to projects that include multi-jurisdictional collaboration. More details and local office contact information is available at www.rd.usda.gov/mi.

MICHIGAN NATURAL RESOURCES TRUST FUND (MNRTF)

The MNRTF provides grants to local governments and the Michigan Department of Natural Resources (MDNR) to acquire and develop lands for recreational purposes. Trail projects connecting communities to one another and to natural resources are usually a priority of the Trust Fund Board and are routinely awarded grants through the MNRTF.

Additionally, since the MNRTF is a state source of funds, it can be used as match for TAP or other federal grant projects. Applications are due April 1 and applicants must have an MDNR-approved recreation plan. The development grant maximum is \$300,000 with a 25 percent minimum local match. There is no maximum for acquisition grants and local match is 25 percent minimum.

LAND AND WATER CONSERVATION FUND (LWCF)

The LWCF federal program provides matching grants to local governments and the MDNR for the acquisition and development of public outdoor recreation areas and facilities. Applications are due April 1 and applicants must have an MDNR-approved recreation plan. The maximum grant request is \$150,000 and there is a 50 percent local match. Pedestrian paths, trailheads, and support amenities have been funded in the past. Additional LWCF details: https://www.Michigan.gov/DNR/0,4570,7-350-79134_81684_79209_81655---,00.html.

RECREATION PASSPORT

PA 32 of 2010 created the Local Public Recreation Facilities Fund to be used for the development of public recreation facilities for local units of government. Money for this fund is derived from the sale of the Recreation Passport, which replaced the resident Motor Vehicle Permit (MVP), or window sticker, for state park entrance. All local units of government are eligible. Applications are due April 1 and applicants must have an MDNR-approved recreation plan or capital improvement plan. The maximum grant request in 2020 was \$150,000 and there is a minimum 25 percent local match.

Renovation of trails and trail heads, accessible pathways, restrooms, and related amenities have been funded in the past. Additional Recreation Passport details: https://www.michigan.gov/DNR/0,4570,7-350-79134_81684_79209_81659--,00.html.

FUNDING FOR PLANNING & CONSTRUCTION

FHWA FUNDING SOURCES

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds

September 9, 2022

This table indicates potential eligibility for pedestrian and bicycle activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects need to meet program eligibility requirements. See notes and basic program requirements below, with links to program information. Project sponsors should integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects.

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds																															
Key: \$ = Activity may be eligible. Restrictions may apply, see program notes and guidance. ~\$ = Eligible, but not competitive unless part of a larger project.																															
Activity or Project Type	OST Programs							Federal Transit					NHTSA			Federal Highway Administration															
	RAISE	INFRA	RCP	SS4A	Thrive	RRIF	TIFIA	FTA	ATI	TOD	AoPP	402	405	BFP BIP BRR	CRP	CMAQ	HSIP	RHCP	NHPP	PRO TECT	STBG	TA	RTP	SRTS	PLAN	NSBP	FLTTP	TTP	TTPSF		
Access enhancements to public transportation (benches, bus pads)	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$				\$	\$			\$	\$	\$	\$				\$	\$	\$			
Americans with Disabilities Act (ADA)/504 Self Evaluation / Transition Plan				\$	TA					\$	\$				\$						\$	\$	\$		\$		\$	\$	\$		
Barrier removal for ADA compliance	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$	~\$			\$	\$				\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		
Bicycle plans			~\$	\$				\$		\$	\$				\$					\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		
Bicycle helmets (project or training related)												\$									\$	SSRTS		\$				\$			
Bicycle helmets (safety promotion)																					\$	SSRTS		\$					\$		
Bicycle lanes on road	~\$	~\$	\$	\$		~\$	~\$	\$	\$		~\$				\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		
Bicycle parking (see Bicycle Parking Solutions)	~\$	~\$	\$	\$		~\$	~\$	\$	\$	\$	~\$				\$	\$			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		
Bike racks on transit	~\$		\$	~\$			~\$	\$	\$		~\$				\$	\$					\$	\$						\$	\$		
Bicycle repair station (air pump, simple tools)	~\$		\$	~\$		~\$	~\$	\$	\$						\$						\$	\$						\$	\$		
Bicycle share (capital and equipment; not operations)	~\$	~\$	\$	~\$		~\$	~\$	\$	\$	\$					\$	\$			\$		\$	\$						\$	\$		
Bicycle storage or service centers (example: at transit hubs)	~\$		\$	~\$		~\$	~\$	\$	\$	\$					\$	\$			\$		\$	\$						\$	\$		
Bridges / overcrossings for pedestrians and/or bicyclists	\$	\$	\$	\$		~\$	~\$	\$	\$					\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Bus shelters and benches	\$	\$	\$	~\$		~\$	~\$	\$	\$						\$	\$			\$	\$	\$	\$					\$	\$	\$		
Coordinator positions (State or local) (limits on CMAQ and STBG)				\$							\$					\$					\$	SSRTS		\$					\$		
Community Capacity Building (develop organizational skills/processes)				\$	TA					\$	\$														\$				\$		
Crosswalks for pedestrians, pedestrian refuge islands (new or retrofit)	\$	\$	\$	\$		~\$	~\$	\$	\$						\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Curb ramps	\$	\$	\$	\$		~\$	~\$	\$	\$						\$	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Counting equipment		\$	\$	\$			~\$	\$	\$										\$		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Data collection and monitoring for pedestrians and/or bicyclists	\$	\$	\$	\$			~\$	\$	\$	\$	\$	\$			\$		\$		\$		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Emergency and evacuation routes for pedestrians and/or bicyclists	\$	\$	\$	~\$			\$	\$	\$	~\$	~\$				\$				\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Historic preservation (pedestrian and bicycle and transit facilities)	~\$		~\$	~\$		~\$	~\$	\$	\$		~\$				\$	~\$					\$	\$				\$	\$	\$	\$	\$	
Landscaping, streetscaping (pedestrian/bicycle route; transit access); related amenities (benches, water fountains); usually part of larger project	~\$	~\$	~\$	~\$		~\$	~\$	\$	\$	~\$	~\$				\$				~\$	\$	\$	\$						\$	\$		
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$				\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Maps (for pedestrians and/or bicyclists)				\$				\$	\$	\$	~\$				\$	\$					\$	\$		\$	\$	\$	\$	\$	\$	\$	
Micromobility projects (including scooter share)	\$		\$	~\$		~\$	~\$			~\$					\$	\$					\$	\$						\$	\$	\$	
Paved shoulders for pedestrian and/or bicyclist use	\$	~\$	\$	\$		~\$	~\$							\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Pedestrian plans	\$	~\$	~\$	\$				\$		\$	\$				\$						\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Rail at-grade crossings	\$	\$	\$	~\$		\$	\$	\$	\$						\$		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Recreational trails	\$		\$	~\$			~\$														\$	\$	\$	\$			\$	\$	\$	\$	
Resilience Improvements for pedestrians and bicyclists	\$	\$	\$	~\$		~\$	~\$			\$	~\$			~\$	~\$	~\$			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Road Diets (pedestrian and bicycle portions)	\$	\$	\$	\$		~\$	\$								\$	\$	\$			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	

FUNDING FOR PLANNING & CONSTRUCTION

FHWA FUNDING SOURCES

Activity or Project Type	Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds																												
	Key: \$ = Activity may be eligible. Restrictions may apply, see program notes and guidance. ~\$ = Eligible, but not competitive unless part of a larger project.																												
	OST Programs						Federal Transit				NHTSA			Federal Highway Administration															
	RAISE	INFRA	RCP	SS4A	Thrive	RRIF	TIFIA	FTA	ATI	TOD	AoPP	402	405	BFP	CRP	CMAQ	HSIP	RHCP	NHPP	PROTECT	STBG	TA	RTP	SRTS	PLAN	NSBP	FLTTP	TTP	TTPSF
Road Safety Assessment for pedestrians and bicyclists			\$	\$	TA		~\$					~\$					\$	\$			\$	\$			\$		\$	\$	\$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike traffic safety laws				\$								~\$	\$	\$			\$							\$	\$			\$	
Safety education positions				\$								~\$	\$											\$				\$	
Safety enforcement (including police patrols)				\$								\$	\$				\$							\$	\$			\$	
Safety program technical assessment (for peds/bicyclists)			\$	~\$	TA							~\$	\$				\$							\$	\$		\$	\$	\$
Separated bicycle lanes	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Shared use paths / transportation trails	\$	\$	\$	\$		~\$	~\$	\$	\$		~\$			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Sidewalks (new or retrofit)	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$	~\$			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Signs, signals, signal improvements (incl accessible pedestrian signals) see note	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$	~\$			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Signing for pedestrian or bicycle routes	\$	\$	\$	\$		~\$	~\$	\$	\$	~\$				\$	\$	\$		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Spot improvement programs (for pedestrian and bicycle facilities)	\$	\$		\$		~\$	~\$	\$		~\$				\$		\$	\$	\$	\$		\$	\$	\$	\$			\$	\$	\$
Stormwater impacts related to pedestrian and bicycle project impacts	\$	\$	\$	~\$		~\$	~\$	\$	\$								\$	\$	\$	\$	\$	\$	\$	\$			\$	\$	\$
Traffic calming	\$	\$	\$	\$		~\$	~\$	\$						\$		\$	\$	\$	\$	\$	\$	\$	\$	\$			\$	\$	\$
Trail bridges	\$	\$	\$	~\$		~\$	~\$	\$						\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$			\$	\$	\$
Trail construction and maintenance equipment				~\$		~\$	~\$									\$						\$	\$	\$			~\$	~\$	~\$
Trail/highway crossings and intersections	\$	\$	\$	\$		~\$	~\$							\$	\$	~\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Trailside/trailhead facilities (restrooms, water, not general park amenities)	~\$					~\$	~\$								~\$							\$	\$	\$		\$	\$	\$	\$
Training				\$	TA						~\$	\$				\$	\$					\$	\$	\$	\$	\$	\$	\$	\$
Training for law enforcement on ped/bicyclist safety laws				~\$								\$	\$			~\$	\$							\$	\$			\$	
Tunnels / underpasses for pedestrians and/or bicyclists	\$	\$	\$	\$		\$	\$	\$	\$					\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Vulnerable Road User Safety Assessment			\$	\$	TA												\$					\$	\$	\$	\$	\$	\$	\$	\$

Abbreviations

ADA/504: Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973

[RAISE](#): Rebuilding American Infrastructure with Sustainability and Equity

[INFRA](#): Infrastructure for Rebuilding America Discretionary Grant Program

[RCP](#): Reconnecting Communities Pilot Program

[SS4A](#): Safe Streets and Roads for All

[Thrive](#): Thriving Communities Initiative (TA: Technical Assistance)

[RRIF](#): Railroad Rehabilitation and Improvement Financing (loans)

[TIFIA](#): Transportation Infrastructure Finance and Innovation Act (loans)

[FTA](#): Federal Transit Administration Capital Funds

[ATI](#): Associated Transit Improvement (1% set-aside of FTA)

[TOD](#): Transit-Oriented Development

[AoPP](#): Areas of Persistent Poverty Program

NHTSA [402](#): National Highway Traffic Safety Administration State and Community Highway Safety Grant Program

NHTSA [405](#): National Highway Traffic Safety Administration National Priority Safety Programs (Nonmotorized safety)

[BFP](#): Bridge Formula Program; [BIP](#): Bridge Investment Program; [BRR](#): Bridge Replacement and Rehabilitation Program

[CRP](#): Carbon Reduction Program

[CMAQ](#): Congestion Mitigation and Air Quality Improvement Program

[HSIP](#): Highway Safety Improvement Program

[RHCP](#): Railway-Highway Crossings (Section 130) Program

[NHPP](#): National Highway Performance Program

[PROTECT](#): Promoting Resilient Operations for Transformative, Efficient, and Cost Saving Transportation

[STBG](#): Surface Transportation Block Grant Program

[TA](#): Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program, Transportation Enhancements)

[RTP](#): Recreational Trails Program

[SRTS](#): Safe Routes to School Program (and related activities)

[PLAN](#): Statewide Planning and Research (SPR) or Metropolitan Planning funds

[NSBP](#): National Scenic Byways Program

[FLTTP](#): Federal Lands and Tribal Transportation Programs: [Federal Lands Access Program](#), [Federal Lands Transportation Program](#), [Tribal Transportation Program](#), [Federal Lands Planning Program](#) and related programs for Federal and Tribal lands

such as the [Nationally Significant Federal Lands and Tribal Projects](#) program.

[TTP](#): Tribal Transportation Program

[TTPSF](#): Tribal Transportation Program Safety Fund

FUNDING FOR PLANNING & CONSTRUCTION

FHWA FUNDING SOURCES

Cross-cutting notes

This table indicates potential eligibility for pedestrian, bicycle, and micromobility activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects must meet program eligibility requirements. See notes and links to program information below. Although the primary focus of this table is stand-alone activities and projects, programs also fund pedestrian and bicycle facilities as part of larger projects. Project sponsors are encouraged to consider [Complete Streets](#) and Networks that routinely integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects. In these instances, the Federal-aid eligibility of the pedestrian and bicycle elements are considered under the eligibility criteria applicable to the larger highway project. Pedestrian and bicycle activities also may be characterized as environmental mitigation for larger highway projects, especially in response to impacts to a Section 4(f) property or work zone safety, mobility, and accessibility impacts on bicyclists and pedestrians.

- See [FHWA Bicycle and Pedestrian Planning, Program, and Project Development](#) (Guidance)
- Bicycle Project Purpose: 23 U.S.C. 217(i) requires that bicycle facilities “be principally for transportation, rather than recreation, purposes”. However, 23 U.S.C. 133(b)(7) and 133(h) authorize recreational trails under [STBG](#) and the [TA Set-Aside](#), therefore, 23 U.S.C. 217(i) does not apply to trail projects (including for bicycle use) using [STBG](#) or [TA Set-Aside](#) funds. Section 217(i) applies to bicycle facilities other than trail-related projects, and section 217(i) applies to bicycle facilities using other programs ([NHPP](#), [HSIP](#), [CMAQ](#)). The transportation requirement under section 217(i) only applies to bicycle projects, not to any other trail use or transportation mode.
- Signs, signals, signal improvements includes ensuring accessibility for persons with disabilities. See [Accessible Pedestrian Signals](#). See also [Proven Safety Countermeasures](#), such as [Crosswalk Visibility Enhancements](#), [Leading Pedestrian Interval](#) signals, [Pedestrian Hybrid Beacons](#), and [Rectangular Rapid Flashing Beacons](#).
- Occasional DOT or agency incentive grants may be available for specific research or technical assistance purposes.
- Aspects of DOT initiatives may be eligible as individual projects. Activities above may benefit safe, comfortable, multimodal networks; environmental justice; and equity.
- The [DOT Navigator](#) is a resource to help communities understand the best ways to apply for grants, and to plan for and deliver transformative infrastructure projects and services.
- FHWA’s [Policy on Using Bipartisan Infrastructure Law Resources to Build a Better America](#).
- FHWA Links to [Technical Assistance and Local Support](#).

Program-specific notes

Federal-aid and other DOT funding programs have specific requirements that projects must meet, and eligibility must be determined on a case-by-case basis. See links to program guidance for more information.

- [RAISE](#) (Infrastructure Investment and Jobs Act (Pub. L. 117-58) (IIJA), also known as the Bipartisan Infrastructure Law (BIL), § 21202): Funds capital and planning grants.
- [INFRA](#) (IIJA § 11110): For projects that improve safety, generate economic benefits, reduce congestion, enhance resiliency, and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements.
- [RCP](#) (IIJA § 11509 and div. J, title VIII, Highway Infrastructure Programs, para. (7)): See [RCP Program Notice of Funding Opportunity](#) for full details. Planning grants and Capital Construction Grants must relate to a transportation facility that creates a barrier to community connectivity.
- [SS4A](#) (IIJA § 24112): Discretionary program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. Projects must be identified in a comprehensive safety action plan (§ 24112(a)(3)).
- [Thrive](#) (Department of Transportation Appropriations Act, 2022 (Pub. L. 117-103, div. L, title I): Technical assistance, planning, and capacity-building support in selected communities.
- [RRIF](#) (Chapter 224 of title 49 U.S.C.): Program offers direct loans and loan guarantees for capital projects related to rail facilities, stations, or crossings. Pedestrian and bicycle infrastructure components of “economic development” projects located within ½-mile of qualifying rail stations may be eligible. May be combined with other grant sources.
- [TIFIA](#) (Chapter 6 of title 23 U.S.C.): Program offers secured loans, loan guarantees, or standby lines of credit for capital projects. Minimum total project size is \$10 million; multiple surface transportation projects may be bundled to meet cost threshold, under the condition that all projects have a common repayment pledge. May be combined with other grant sources, subject to total Federal assistance limitations.
- [FTA / ATI](#) (49 U.S.C. 5307): Multimodal projects funded with FTA transit funds must provide access to transit. See [Bicycles and Transit](#), [Flex Funding for Transit Access](#), the FTA [Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law](#), and [FTA Program & Bicycle Related Funding Opportunities](#).
 - Bicycle infrastructure plans and projects must be within a 3-mile radius of a transit stop or station. If more than 3 miles, within a distance that people could be expected to safely and conveniently bike to the particular stop or station.
 - Pedestrian infrastructure plans and projects must be within a ½ mile radius of a transit stop or station. If more than ½ mile, within a distance that people could be expected to safely and conveniently walk to the particular stop or station.
 - FTA funds cannot be used to purchase bicycles for bike share systems.
- [FTA TOD](#): Provides planning grants to support community efforts to improve safe access to public transportation for pedestrians and cyclists. The grants help organizations plan for transportation projects that connect communities and improve access to transit and affordable housing, not for capital purchases.
- [FTA AoPP](#) (Further Consolidated Appropriations Act, 2020 (Pub. L. 116-94); Consolidated Appropriations Act, 2021 (Pub. L. 116-260)): Promotes multimodal planning, engineering, and technical studies, or financial planning to improve transit services in areas experiencing long-term economic distress, not for capital purchases.
- NHTSA [402](#) (23 U.S.C. 402): Project activity must be included in the State’s Highway Safety Plan. Contact the [State Highway Safety Office](#) for details.
- NHTSA [405](#) (23 U.S.C. 405): Funds are subject to eligibility, application, and award. Project activity must be included in the State’s Highway Safety Plan. Contact the [State Highway Safety Office](#) for details. The [Bipartisan Infrastructure Law](#) expanded the eligible use of funds for a Section 405 Nonmotorized Safety grant beginning in FY 2024; however, for FY 2023 grants, FAST Act eligible uses remain in place.
- [BFP](#), (IIJA, Div. J, title VIII, para. (1)), [BIP](#) (23 U.S.C. 124), [BRR](#) (Department of Transportation Appropriations Act, 2022): For specific highway bridge projects and highway bridge projects that will replace or rehabilitate a bridge must consider pedestrian and bicycle access as part of the project and costs related to their inclusion are eligible under these programs.
- [CRP](#) (23 U.S.C. 175): Projects should support the reduction of carbon dioxide emissions from on-road highway sources.

FUNDING FOR PLANNING & CONSTRUCTION

FHWA FUNDING SOURCES

- [CMAQ](#) (23 U.S.C. 149): Projects must demonstrate emissions reduction and benefit air quality. See the CMAQ guidance at www.fhwa.dot.gov/environment/air_quality/cmaq/ for a list of projects that may be eligible for CMAQ funds. CMAQ funds may be used for shared use paths, but not for trails that are primarily for recreational use.
- [HSIP](#) (23 U.S.C. 148): Projects must be consistent with a State's [Strategic Highway Safety Plan](#) and (1) correct or improve a hazardous road location or feature, or (2) address a highway safety problem. Certain non-infrastructure safety projects can also be funded using HSIP funds as specified safety projects.
- [RHCP](#) (23 U.S.C. 130): Projects at all public railroad crossings including roadways, bike trails, and pedestrian paths.
- [NHPP](#) (23 U.S.C. 119): Projects must benefit National Highway System (NHS) corridors and must be located on land adjacent to any highway on the National Highway System (23 U.S.C. 217(b)).
- [PROTECT](#) (23 U.S.C. 176): Funds can only be used for activities that are primarily for the purpose of resilience or inherently resilience related. With certain exceptions, the focus must be on supporting the incremental cost of making assets more resilient.
- [STBG](#) (23 U.S.C. 133) and [TA Set-Aside](#) (23 U.S.C. 133(h)): Activities marked “\$SRTS” means eligible only as an SRTS project benefiting schools for kindergarten through 12th grade. Bicycle transportation nonconstruction projects related to safe bicycle use are eligible under STBG, but not under TA (23 U.S.C. 217(a)). There is broad eligibility for projects under 23 U.S.C. 206, 208, and 217.
- [RTP](#) (23 U.S.C. 206): Projects for trails and trailside and trailhead facilities for any recreational trail use. RTP projects are eligible under TA Set-Aside and STBG.
- [SRTS](#) (23 U.S.C. 208): Projects for any SRTS activity. FY 2012 was the last year for dedicated - funds, but funds are available until expended. SRTS projects are eligible under TA Set-Aside and STBG.
- [PLAN](#) (23 U.S.C. 134 and 135): Funds must be used for planning purposes, for example: Maps: System maps and GIS; Safety education and awareness: for transportation safety planning; Safety program technical assessment: for transportation safety planning; Training: bicycle and pedestrian system planning training.
- [NSBP](#) (23 U.S.C. 162): Discretionary program subject to annual appropriations. Projects must directly benefit and be close to a designated scenic byway.
- [FLTTP](#) (23 U.S.C. 201-204): Projects must provide access to or within Federal or tribal lands. Programs include: Federal Lands and Tribal Transportation Programs ([Federal Lands Access Program](#), [Federal Lands Transportation Program](#), [Federal Lands Planning Program](#)) and related programs for Federal and Tribal lands such as the [Nationally Significant Federal Lands and Tribal Projects](#) (NSFLTP) program.
 - [Federal Lands Transportation Program](#) (23 U.S.C. 203): For Federal agencies for projects that provide access within Federal lands.
 - [Federal Lands Access Program](#) (FLAP) (23 U.S.C. 204): For State and local entities for projects that provide access to or within Federal or tribal lands.
- [TTP](#) (23 U.S.C. 202): For federally-recognized tribal governments for projects within tribal boundaries and public roads that access tribal lands.
- [TTPSF](#) (23 U.S.C. 202(e)(1) and 23 U.S.C. 148(a)(4)): Grants available to [federally recognized Indian tribes](#) through a competitive, discretionary program to plan and implement transportation safety projects.



7

APPENDIX

**Berrien
County
Trails**
Master Plan

APPENDIX

Community Survey Results	A-2
Benefits of Active Recreation & Transportation	A-3
Example Plan Adoption Resolution	A-5
Construction Estimates	A-6
Maintenance Estimates	A-7

COMMUNITY SURVEY RESULTS

The community survey was used to help guide decisions throughout the planning process. We received 1,962 responses and the full results can be found on the Friends of Berrien County website or by using this [link](#).



Paw Paw River Water Trail

BENEFITS OF ACTIVE RECREATION & TRANSPORTATION

Active recreation and transportation networks have many positive effects on the communities. Beyond personal mobility, they provide positive impacts on quality of life, physical health, mental health, economic development, and the environment.

Berrien County municipalities, trails groups, and community organizations are encouraged to do their part to achieve the recommendations in this Plan. Their communities and Berrien County will benefit from the development of the active recreation and transportation network. A comprehensive and connected network will ensure that county residents and visitors will experience the benefits below and more.

QUALITY OF LIFE & PERSONAL MOBILITY

Development of a comprehensive and connected active recreation & transportation network provides significant improvements to the quality of life for Berrien County residents and visitors, specifically people that don't have access to a vehicle. This change would improve the lives of many seniors, youth and others who aren't able to drive for various reasons.

Providing options other than a personal vehicle allows anyone to achieve the highest quality of life in Berrien County regardless of background, economic base, and physical ability. They can instead live their everyday lives reducing these stressors and increasing happiness outside.

From a recreational perspective, quality infrastructure provides enjoyable opportunities to easily access all parts of the community, the county, and the region. Berrien County is rich with natural experiences, including the beaches, parks and protected lands. Providing comfortable and safe infrastructure allows all residents and visitors to fully appreciate the outdoors and relax.

ENVIRONMENT

Providing opportunities to replace vehicle trips with active recreation and transportation can have a positive effect on the environment. Active recreation and transportation promotes more walkable and bikeable communities which reduces the number of vehicles on the road. This reduces traffic, noise pollution, and greenhouse gas emissions creating a more beautiful Berrien County for residents and visitors.

BENEFITS OF ACTIVE RECREATION & TRANSPORTATION

PHYSICAL HEALTH

Walking and other physical activities are necessary for good health, but many Americans are not active enough to reduce risks of chronic diseases and premature death. Over 70% of Berrien County adults (ages 18+) are not getting enough aerobic activity, and 93% of the same adults do not meet the CDC-recommended amount of weekly physical activity.¹ Increased physical activity is key to a healthy lifestyle and reduces the risk of chronic diseases. Even just a brisk walk multiple times a week can achieve heart rates needed to have a positive impact on physical health.

The relationship between the built environment and health is important, and the design of our communities can encourage or discourage healthy behavior. Providing a comprehensive and connected network can increase opportunity for recreation and transportation-oriented trips using active modes of travel. Promoting active recreation & transportation as a part of everyday life should create outcomes that reduce the risk of chronic diseases associated with physical inactivity.

MENTAL HEALTH

In addition to the physical health benefits derived through increased physical activity, a more active lifestyle has been proven to help improve mental health, which 17% of Berrien County residents struggle with.² Physical activity reduces depression, can improve the quality of sleep, and has been shown to improve cognitive function for older adults. Active recreation and transportation opportunities can influence social cohesion, helping individuals feel more connected to their community and less isolated. Transportation systems that are designed around single operator automobile travel can contribute to feelings of social isolation, and provide fewer opportunities for positive social interaction in public spaces.³

ECONOMIC DEVELOPMENT

Active transportation & recreation has the potential for major positive effects on the economy of Berrien County, its individual municipalities, and the region. This includes trail tourism, complementing surrounding land uses, providing new ways to get to businesses and public spaces, creating jobs, and increasing property values.

Berrien County is in a unique position for trail tourism opportunities with the development of the Marquette Greenway, which connects New Buffalo, Michigan, all the way to Chicago and other major regional connections coming into the county. A study released by MDOT in 2015 reported that the Apple Cider Century bicycle ride generated over \$1.6 million in direct spending to local communities in categories including transportation, lodging, and food and beverage spending. The study noted that the high percentage of out-of-state participation helped contribute to the significant impact with average spending about \$520 per trip.⁴

New businesses will also be needed to support the influx of active recreation & transportation network users. Businesses around the network will also see increased traffic from impulse visitors due to the slower speed of network users.⁵

Trails have even spurred increased residential development and new housing types, especially in the more urban areas. Successful trail networks have seen houses specifically designed around trails, where the front yards face a trail as opposed to a street. Examples of these houses can be seen in Indianapolis along the Monon Trail. They've sold before they've even been built.

¹<http://www.bchdmi.org/ArchiveCenter/ViewFile/Item/528>

² Corewell Health South

³<http://heraldpalladium.mi.newsmemory.com/publink.php?shareid=357481f47>

⁴https://www.michigantrails.org/wp-content/uploads/MDOT_CommAndEconBenefitsOfBicyclingnMI_465392_7.pdf

⁵https://www.michigantrails.org/wp-content/uploads/Final_Report_MDOT_Community_and_Economic_Benefits_of_Bicycling_in_Michigan_489558_7.pdf

EXAMPLE PLAN ADOPTION RESOLUTION

This is an example of a resolution that can be adopted by the implementing jurisdictions to commit to the development of this Plan. A fill in Microsoft Word version can be found on the Friends of Berrien County Trails website or by contacting them directly at berrientrails@gmail.com.

RESOLUTION ____-____

RESOLUTION TO SUPPORT THE “BERRIEN COUNTY TRAILS MASTER PLAN”

At a regular meeting of the _____ Board/Council/Commission, Berrien County, Michigan on _____, 2022/23.

Present:

Absent:

The following resolution was offered by _____ and supported by _____.

WHEREAS, _____ is committed to maintaining and enhancing the quality of life for all citizens throughout the region and recognizes that a network of trails in Berrien County will contribute greatly to quality of life by connecting people, communities and regional assets; and

WHEREAS, the Friends of Berrien County Trails with its partners and steering committee has engaged Berrien County municipalities, the County and its residents in the development of a countywide master plan for trails; and

WHEREAS, the “Berrien County Trails Master Plan” presents a county-wide vision and recommends increasing cooperation and collaboration to create a network that will provide transportation, exercise, leisure, safety, accessibility, recreation and community benefits aimed at enhancing the quality of life for all; and

WHEREAS, many communities, agencies, and trail advocates in the region have taken a lead in planning and/or building local trails, and those efforts can be greatly enhanced by being connected to a larger regional network of trails; and

WHEREAS, trails will help improve the quality of the air we breathe by promoting reduced congestion through increasing safer non-motorized transportation options; and

WHEREAS, trails are freely accessible community assets offering opportunities for transportation, recreation and exercise to all, including seniors, children, youth and families, schools and provide safe places for people to experience a sense of community and create stronger social and family ties; and

WHEREAS, trails have significant impact on the health and economic viability of the region through encouraging active lifestyles, increased levels of tourism, enhanced property values, added jobs related to the construction of and along the trail, as well as enhanced ability to attract and retain businesses to the region due to improved quality of life; and

WHEREAS, the “Berrien County Trails Master Plan” provides the foundation for a long term strategy that will continue to grow and evolve and will provide an invaluable resource for all citizens and visitors; and

WHEREAS, _____ has identified the provision of trails as a priority in the future planning of Berrien County in order to improve connectivity between communities, places of interest and destinations and enhance quality of life and recreational opportunities for residents and visitors of the region.

Now, Therefore, Be It Resolved that _____ is committed to the promotion and continued development of the “Berrien County Trails Master Plan” and in concept to working with neighboring communities to plan, design, build and maintain a system of trails that will connect our communities, people and special regional points of interest for years to come.

Be it further resolved that _____ will incorporate the “Berrien County Trails Master Plan” into our master plan, recreation plan and other relevant planning documents.

ADOPTED:

YEAS:

NAYS:

STATE OF MICHIGAN
COUNTY OF BERRIEN/VAN BUREN

I, the undersigned and duly elected Clerk of _____, Berrien County, Michigan DO HEARBY CERTIFY that the foregoing is a true and complete representation of the certain proceedings conducted by _____ at a meeting held on _____, 2022/23.

[NAME] [TITLE]

ESTIMATED CONSTRUCTION COSTS

*The calculations in this chart are estimates from Abonmarche and should not be interpreted as final costs. These are intended to be informational. Construction cost estimates will be provided by the hired consultants during the implementation of the recommended routes. (Source: National Trails Alliance)

Other potential soft and hard costs to be taken into account when planning non-motorized trails include:

Soft Costs:

- Engineering Design
- Boundary and Topographic Surveying
- Material Testing
- NEPA Approvals
- Construction Inspection & Testing
- Property Easements & Acquisitions

Hard Costs:

- Retaining Walks
- Driveway Approaches
- Bridges & Boardwalks
- Utility relocations

Table 5: Construction Costs for Non-Motorized Facilities (per mile)			
Paved Shoulder (4' extension of the existing roadway-both sides of the road)			
Item	Unit	Cost Per Mile (trail only)	
		2007	2022
Trenching	Sta	\$ 10,600.00	\$ 18,550.00
8" Aggregate Base	Syd	\$ 23,470.00	\$ 70,410.00
4" HMA (Hot Mix Asphalt) base	Ton	\$ 72,310.00	\$ 123,960.00
2" HMA Top Course	Ton	\$ 36,190.00	\$ 64,625.00
		\$ 142,570.00	\$ 277,545.00
Bike Lane (5' extension of the existing roadway)			
Item	Unit	Cost Per Mile (trail only)	
		2007	2022
Trenching	Sta	\$ 10,600.00	\$ 18,550.00
8" Aggregate Base	Syd	\$ 29,335.00	\$ 88,005.00
4" HMA (Hot Mix Asphalt) base	Ton	\$ 90,370.00	\$ 154,920.00
2" HMA Top Course	Ton	\$ 45,220.00	\$ 80,750.00
		\$ 175,525.00	\$ 342,225.00
Non-Motorized Path (10' separated path from the roadway)			
Item	Unit	Cost Per Mile (trail only)	
		2007	2022
Earth Excavation	Cyd	\$ 19,560.00	\$ 24,450.00
Machine Grading	Sta	\$ 21,200.00	\$ 66,250.00
Subgrade Undercut	Cyd	\$ 23,470.00	\$ 64,542.50
6" Aggregate Base	Syd	\$ 23,468.00	\$ 58,670.00
2" HMA (Hot Mix Asphalt) base	Ton	\$ 45,220.00	\$ 77,520.00
2" HMA Top Course	Ton	\$ 45,220.00	\$ 80,750.00
Granular Material CI II	Cyd	\$ 35,205.00	\$ 64,542.50

ESTIMATED MAINTENANCE COSTS

*The calculations in this chart are estimates from Abonmarche and should not be interpreted as final costs. These are intended to be informational. Maintenance cost estimates are encouraged to be obtained during the implementation of the recommended routes by the hired consultants. (Source: National Trails Alliance)

Activity	Price Per Mile	
	2007	2022
Coating and Sealing of asphalt path	\$ 431.00	\$ 668.05
Pothole repair on asphalt path	\$ 490.00	\$ 759.50
Snow removal on asphalt path	\$ 263.00	\$ 407.65
Surface cleaning of asphalt path	\$ 23.00	\$ 35.65
Grade non-asphalt shared use path	\$ 69.00	\$ 106.95
Keep shared use path-side land clear of trash	\$ 232.00	\$ 359.60
Mowing	\$ 471.00	\$ 730.05
Leaf Removal	\$ 91.00	\$ 141.05
Tree pruning	\$ 71.00	\$ 110.05
Tree removal	\$ 71.00	\$ 110.05
Invasive species removal	\$ 201.00	\$ 311.55
Planning new vegetation	\$ 71.00	\$ 110.05
Application of herbicides or pesticides	\$ 71.00	\$ 110.05
Clearing of drainage channels and culverts	\$ 62.00	\$ 96.10
Surface maintenance of parking areas	\$ 48.00	\$ 74.40
Landscaping/Gardening along shared use path	\$ 48.00	\$ 74.40
Empty trash cans along shared use paths	\$ 124.00	\$ 192.20
Maintenance of stationary toilets at shared use path	\$ 160.00	\$ 248.00
Maintenance of portable toilets at shared use paths	\$ 320.00	\$ 496.00
Empty trash cans along shared use paths	\$ 173.00	\$ 268.15
Maintenance of stationary toilets along shared use path	\$ 157.00	\$ 243.35
Maintenance of informational kiosks	\$ 21.00	\$ 32.55
Maintenance of picnic tables, benches, etc	\$ 48.00	\$ 74.40
Updating information in the informational kiosk	\$ 10.00	\$ 15.50
Installation of signs	\$ 22.00	\$ 34.10
Repair/Maintenance of signs	\$ 48.00	\$ 74.40
Installation of pavement markings	\$ 24.00	\$ 37.20
Maintenance of pavement markings	\$ 28.00	\$ 43.40
Recovery from illegal acts such as dumping and vandalism	\$ 48.00	\$ 74.40
Installation of gates, bollards, and fencing	\$ 36.00	\$ 55.80
Maintenance of gates, bollards, and fencing	\$ 119.00	\$ 184.45
Bridge, tunnel, underpass, and crossing inspection	\$ 14.00	\$ 21.70
Bridge re-decking	\$ 71.00	\$ 110.05
Paint/stain/treat bridge deck or structure	\$ 57.00	\$ 88.35
General bridge maintenance	\$ 48.00	\$ 74.40
Road grade crossing maintenance	\$ 48.00	\$ 74.40



Berrien County Trails Master Plan

BERRIEN COUNTY, MICHIGAN
berrientrails.org/bcmasterplan.asp



 **ABONMARCHE**