Michigan Department of Transportation

Southwest Michigan Region Nonmotorized Transportation Plan 2020

Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren Counties

Developed by the
Southwest Michigan Planning Commission
with funding from the
Michigan Department of Transportation

SWMPC Southwest Michigan Planning Commission

MDOT Michigan Department of Transportation

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Cass County Road Commission
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Van Buren County Road Commission

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South Haven Area Chamber of Commerce
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Bike Michiana Coalition
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The Southwest Michigan Planning Commission would also like to extend a special thank you to all of the citizens, trail groups and enthusiasts that played such an important role in the development of this plan. Further, the media in southwest Michigan were a critical partner in promoting meetings and getting the message out about this project.

Photos credits on the cover page from left to right:
Friends of the Kal Haven Trail, Southwest Michigan Planning Commission, Friends of the Kal Haven Trail

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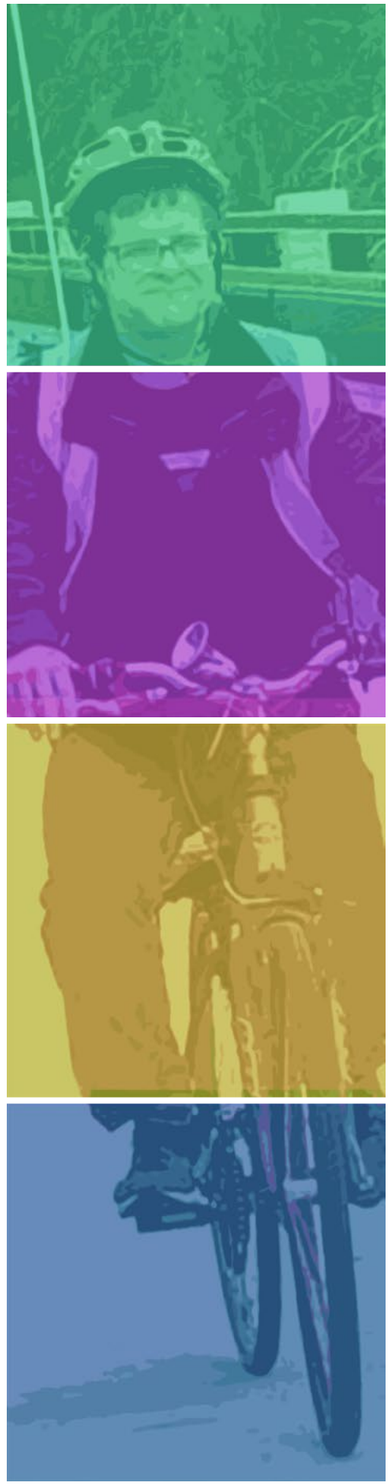

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EXECUTIVE SUMMARY

Nonmotorized transportation, with facilities designed primarily for pedestrians and bicyclists (paved shoulders, bike lanes, and shared use paths), is a critical element of an integrated transportation system. A connected regional system of nonmotorized facilities will help to increase mobility choices, relieve traffic congestion, reduce air pollution and fuel consumption, promote physical activity and healthy lifestyles, and improve quality of life.

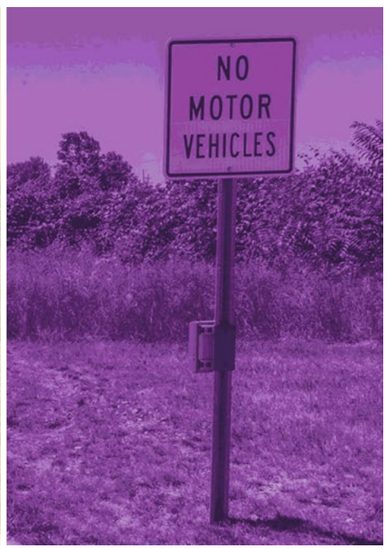
Many communities in southwest Michigan aspire to provide nonmotorized facilities for their residents and visitors and have been working to establish a connected regional system. This plan provides a nonmotorized transportation system vision for the Michigan Department of Transportation's (MDOT) Southwest Region, which includes Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren counties. This plan does not replace local, metropolitan or county plans; in fact, it builds and depends upon these local plans and initiatives. This plan strives to:

- Provide a region-wide vision for a connected system of off-road shared use paths and on-road facilities (paved shoulders/bike lanes);
- Encourage dialogue and more coordinated planning among state, county, and local entities; and
- Enhance partnerships and increase communication among state, county, and local agencies regarding the implementation and operation (construction, maintenance, marketing, etc.) of nonmotorized facilities.

In southwest Michigan, there are currently 568 miles of on-road nonmotorized facilities (paved shoulders and bike lanes), 176 miles of off-road improved facilities and 29 miles of off-road unimproved facilities.

This plan highlights the major gaps in southwest Michigan to achieve a connected region-wide system. With extensive public participation, desired and planned nonmotorized facilities were solicited and mapped. Regional priority corridors along with local priority routes were identified for each of the counties. There are five north-south and four west-east priority regional corridors and many of the local/county priority routes correspond to the regional corridors. The priority corridors and routes will help guide MDOT's investment in the region's nonmotorized transportation system.

For planning and implementation efforts, communities should collaborate and coordinate with neighboring communities, regional planning commissions, metropolitan planning organizations, local road agencies, MDOT, and other stakeholders. Nonmotorized projects that are part of or connect with a regional network are often looked upon favorably by funding agencies. This plan is a living document that represents the current and desired nonmotorized transportation needs in the southwest region. It will need to be updated periodically as facilities are built, other potential connections are found, or when the needs within a community change.



INTRODUCTION

Project Overview and Background

Agencies, community leaders, public health officials, residents, nonprofits, and businesses are recognizing the benefits of bicycle and pedestrian travel and are looking for ways to better accommodate people who travel this way – whether they do so by choice or by necessity. Nonmotorized transportation includes facilities designed primarily for use by pedestrians and bicyclists, such as paved shoulders and shared use paths. These facilities provide transportation to both, allowing access to goods, services, and activities and recreation. Users may consider a particular trip to serve both objectives. Nonmotorized transportation planning is important to help increase mobility choices, relieve traffic congestion, reduce air pollution and fuel consumption, promote physical activity and healthy lifestyles, and improve quality of life. This plan and the accompanying GIS database were developed in order to continue to support these overall goals and benefits.

Many organizaitons and communities have adopted nonmotorized and complete streets plans. These plans incorporate nonmotorized elements into planning documents, such as recreation plans, transportation plans, corridor plans, or master plans. These plans vary in scale from the neighborhood, community or county levels. This plan is focused on the regional level, specifically MDOT's Southwest Region, which includes Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren counties.

MDOT has been supporting nonmotorized planning and implementation in southwest Michigan for years. In 2001, MDOT funded the development of a Southwest Michigan Nonmotorized Investment Plan. This plan was intended to guide MDOT's investment in nonmotorized facilities for five years. In 2006, MDOT provided funding to the Southwest Michigan Planning Commission (SWMPC) to develop a Road and Trail Bicycle Guide for the MDOT Southwest Region. This map included on-road and off-road nonmotorized facilities along with traffic count information and points of interest. Then MDOT provided SWMPC with funding to update the 2006 Road and Trail Bicycle Guide and to develop a 2011 southwest region nonmotorized plan. Along with this current plan update in 2020, SWMPC is also creating a new Road and Trail Bicycling Guide.

For MDOT, this document serves as guidance for context-sensitive planning and development by identifying priorities along or connecting to MDOT-owned trunklines. This plan will also guide MDOT's investment in the region's nonmotorized system, such as the allocation of Transportation Alternatives Program (TAP) funds. At the local level, this plan provides information and resources to assist in identifying and improving priority corridors that serve both local and regional needs within the nonmotorized network.

Benefits of Nonmotorized Transportation

Nonmotorized transportation (walking and biking) facilities provide numerous benefits to a community. These include increased mobility options, economic development, social, environmental, health, and overall quality of life.

> Thirty-nine percent of households in Michigan reported someone in their home used a bike for transportation in the last year. (MDOT 2014 study)

Nonmotorized facilities provide an alternative form of transportation to the automobile. Pedestrian and bicycle facilities that are connected provide critical transportation options for young people, seniors, those who are mobility challenged or those who cannot afford or choose not to have an automobile. Nonmotorized transportation facilities can help people connect to public transit such

as bus and train stops and can provide safer routes to walk or bike to school.

The economic vitality of a community can be greatly improved with nonmotorized travel options. A 2015 report funded by MDOT estimates out-of-state participation in organized bicycle events contributes nearly $22 million to the state economy. Shared use paths can also positively impact property values. Realtors indicated that homes along the Paint Creek Trail in Michigan were selling for 10 percent more than comparable homes not located along the path. In a 2015 study by the National Association of Realtors, 85 percent of survey respondents thought sidewalks were very or somewhat important and 57 percent thought bike lanes and paths being nearby were very or somewhat important in deciding where to live.

Economic Benefits of Nonmotorized Facilities

- Increases real estate values
- Increases tax revenue
- Retains and attracts businesses
- Retains and attracts residents
- Attracts tourism spending

Further, a connected nonmotorized network offers numerous health and safety benefits. As the nation's obesity epidemic is quickly becoming one of the largest health problems, these facilities can provide a place to easily and inexpensively engage in physical activity. Nonmotorized options can help reduce the amount of congestion on roadways, reducing the amount of air pollution from vehicles. Poor air quality can contribute to respiratory problems and overall health issues.

Pedestrians and cyclists are the most vulnerable roadway users. While crashes involving pedestrians and cyclists make up only 1.3 percent of the Southwest Region's total crashes, they account for 18.3 percent of fatal crashes and 10.9 percent of serious injury crashes (between 2013-2017; Michigan Crash Facts). Incorporating well-designed pedestrian and bicycle facilities encourages predictable behavior and alerts motorists to their presence, thus improving safety for all roadway users.

Health and Quality of Life Benefits of Nonmotorized Facilities

- Reduces air pollution
- Encourages physical fitness
- Helps prevent obesity-related chronic diseases
- Creates safer neighborhoods
- Provides safe alternative transportation options
- Helps connect people, neighborhoods and communities

NONMOTORIZED TRANSPORTATION PLANNING

Michigan Department of Transportation (MDOT)

To ensure a connected nonmotorized transportation network there needs to be coordination and support from all levels of government. Over the last few years, there has been growing support for the development of a connected statewide shared use path system. The coordinating agency that handles transportation planning for the State of Michigan is MDOT. Their mission is to provide the highest quality integrated transportation services for economic benefit and improved quality of life. MDOT has made nonmotorized transportation planning a priority. MDOT is enhancing nonmotorized transportation planning and implementation by funding regional nonmotorized transportation plans and maps for the entire state.

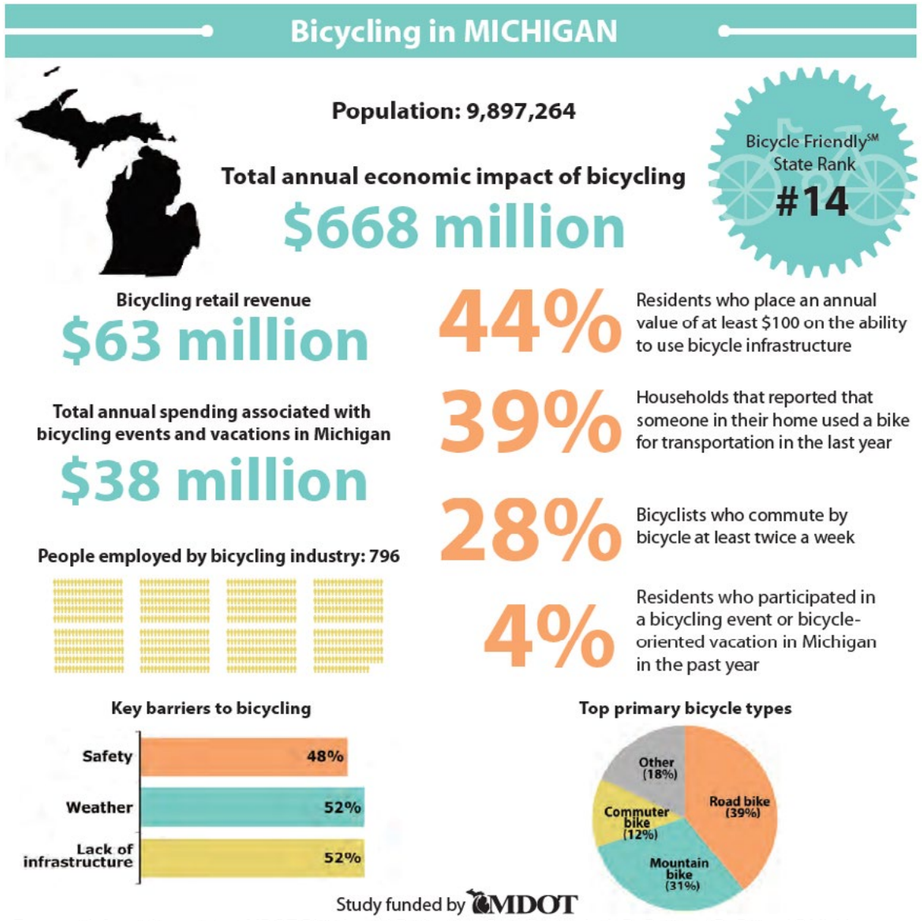
Michigan's state transportation law requires a minimum of 1 percent of state transportation funds be spent on nonmotorized transportation. Section 10k of Public Act 51 of 1951, as amended, allows for nonmotorized plans, services, and improvements to a road, street, or highway that facilitates nonmotorized transportation by the widening of lanes, striping lanes to designate bike lanes, or any other appropriate measure considered a qualified nonmotorized facility for the purpose of this section. State law allows bicycles to ride on all public roads except where restricted or on limited access highways. Therefore, bicyclists are found in travel lanes on streets, roads shoulders, bike lanes, and shared use paths across the state.

MDOT is demonstrating its commitment to an integrated system through the inclusion of nonmotorized projects in MDOT's standard operating procedures. The 2026 Call for Projects states that "FHWA strongly encourages the inclusion of accommodations for all modes of transportation and providing accommodations for pedestrians where appropriate should be included in projects."

There are a significant number of pedestrian/bike research projects, initiatives and programs within MDOT that are cumulatively working toward increased safety, achieving greater connectivity, educating, documenting, and collaborating. This work contributes to understanding, growing, and implementing context sensitive solutions and complete streets throughout the state. The development of this Regional Nonmotorized Plan document (and the Regional Road and Trail Bicycling Guide) is just one of those efforts and tools that can help to further ensure collaboration toward a more livable, sustainable community. Complete Streets is a major initiative of MDOT. Several other related MDOT initiatives and programs are further detailed in the Appendix.

Complete Streets

Michigan Public Act 135 of 2010 *(https://www.Michigan.gov/documents/MDOT/MDOT_2010-PA-0135_339674_7.pdf)* defines Complete Streets as: "… roadways planned, designed, and constructed to provide appropriate access to all legal users in a manner that promotes safe and efficient movement of people and goods whether by car, truck, transit, assistive device, foot, or bicycle." Complete Streets is an approach to transportation



For more information, contact MDOT Bicycle and Pedestrian Coordinator Josh DeBruyn at DeBruynJ@Michigan.gov.

planning – one that supports balanced mobility and the appropriate provision for safe and convenient travel by all the ground transportation modes: transit, walking, bicycling, motor vehicles, and freight movement.

> *A complete street in a rural area will look quite different from a complete street in a highly urban area. But both are designed to balance safety and convenience for everyone using the road.* - National Complete Streets Coalition

The context of the road and surrounding land use play a pivotal role in what may be the appropriate complete street response. There is no one design prescription for complete streets. Elements that may be found on a complete street include: sidewalks, bike lanes, wide paved shoulders, special bus lanes, comfortable and accessible public transportation stops, frequent crossing opportunities, median islands, accessible pedestrian signals, curb extensions, and more. A rural road may not have the same solutions and provisions as an urban road. There is no "one size fits all" solution that can be applied to all roads and corridors. The State Transportation Commission approved their Complete Streets Policy in 2012. Many Michigan communities have approved their own local versons of complete streets policies.

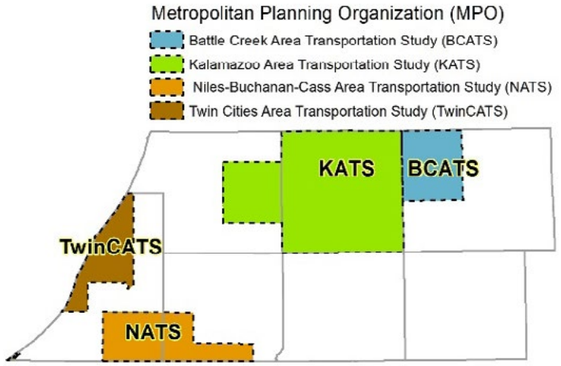
Southwest Michigan

At the regional level, metropolitan planning organizations (MPOs), along with the Federal Highway Administration (FHWA), MDOT, and county and local municipalities, develop short and long-range transportation plans that address local nonmotorized transportation needs. Agencies and advocates should review and give input on the transportation improvement programs (TIP) and long-range transportation plans (LRPs) at the state, region and local levels to ensure that nonmotorized facilities are considered early in the planning process.

The MDOT Southwest Region encompasses two planning regions. The Southcentral Michigan Planning Council (SCMPC) serves Barry, Branch, Calhoun, Kalamazoo, and St. Joseph counties *(https://smpcregion3.org/).* (Barry County is not within MDOT's Southwest Region.) The Southwest Michigan Planning Commission (SWMPC) serves Berrien, Cass, and Van Buren counties *(www.swmpc.org)*.

There are four MPOs in MDOT's Southwest Region:

- Battle Creek Area Transportation Study (BCATS),
- Kalamazoo Area Transportation Study (KATS),
- Niles-Cass-Buchanan Area Transportation Study (NATS), and
- Twin Cities Area Transportation Study (TwinCATS).



In 2014, the TwinCATS (Benton Harbor-St. Joseph area) and the KATS each approved Complete Streets policies for federal aid-eligible roads in their respective MPO areas.

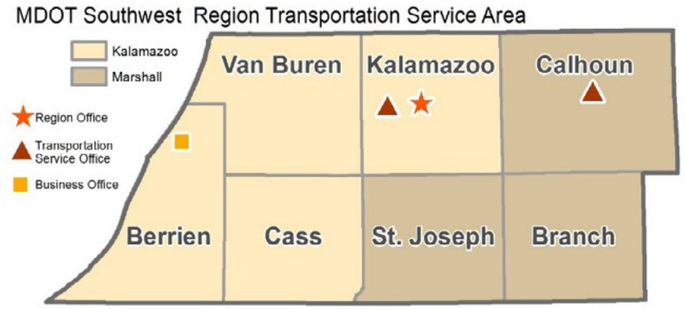
This plan will serve as a tool not only for MDOT staff but also for the vast number of stakeholders, agencies, and organizations in the region. The primary goals of the plan are to:

- Document the existing and proposed nonmotorized network,
- Identify opportunities to enhance nonmotorized transportation,
- Help prioritize nonmotorized investment at the local and state levels, and
- Continue to foster cooperative planning across municipal/county boundaries.

Advocates and agencies working to expand the nonmotoried network should use the information in this plan in funding proposals to demonstrate a regional connected network.

PROJECT METHODOLOGY

The MDOT Southwest Region includes seven counties: Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren. The region is divided into two Transportation Service Center (TSC) service areas: Kalamazoo and Marshall (triangles on the map), with a business office in Coloma. The region office is in Kalamazoo (star on the map).



SWMPC, MDOT Southwest Region, and Lansing staff facilitated the development of this plan from February 2018 through March 2020. The plan development was guided by a Southwest Michigan Pedestrian and Bicycle Committtee led by the MDOT Southwest Region. There were a number of outreach efforts in order to gather input and feedback. The primary tasks associated with the development of the plan included:

- Inventory and data gathering,
- Outreach and engagement,
- Analysis, and
- Plan development.

Stakeholder Involvement

A number of MDOT staff and nonmotorized stakeholders participated in the Southwest Michigan Pedestrian and Bicycle Committee. This committee helped to collect data, review drafts and ensure this will be a useful tool for stakeholders in the region and state. The committee met quarterly during the development of this plan and served as a:

- Peer review team,
- Local knowledge base,
- Resource for community contacts, and
- A resource for assisting with planning and promoting public input opportunities.

SWMPC conducted meetings with each county road agency and contacted all city/villages in the seven-county region to gather input. SWMPC also developed a website, active since February 2018, and held public meetings. The primary purpose of the website was to serve as an informational portal to describe the project, announce meeting dates/times, post draft maps and documents for review, and provide contact information for comments and input.

A series of seven county public meetings were held during the development of the plan from February to June 2019. The goals of the meetings were for the public to learn more about the project, review and confirm data that had been collected, help the team understand what's happening in each geographic area, and provide input related to major connections, gaps, priorities, and concerns. The major concerns were funding for development and maintenance of nonmotorized facilities, the desire for more marked bike routes, and more accomodation on Amtrak for bicycles. SWMPC partnered with several organizations to plan and promote these events. See the outreach promotional materials (agenda, postcard, Facebook event, press release) in the Appendix. Special thanks to all the co-sponsors of the county meetings that helped with logistics and promotion. The dates and attendance of each meeting are as follows:

Berrien County	Feb. 6, 2019	101 people
Cass County	June 5, 2019	23 people
Van Buren County	June 11, 2019	17 people
Calhoun County	June 17, 2019	21 people
St. Joseph County	June 18, 2019	16 people
Branch County	June 20, 2019	12 people
Kalamazoo County	June 24, 2019	18 people
Total: 208 participants		

Photo Courtesy of Kris Martin, SWMPC

Data Sources and Database Development

Development of a Geographic Information Systems (GIS) database and related mapping was a crucial and extensive part of the planning process. The inventory and data gathering process was extensive, including online research of existing plans and data on nonmotorized facilities, aerial imagery interpretation, feedback from municipalities, outreach meetings, county and municipal public input, and input from MDOT staff. Both existing and proposed nonmotorized facilities along with other existing data sets related to bicycle and pedestrian travel were synthesized into the GIS to form the basis for an understanding of existing and planned nonmotorized facilities in the region.

The Existing and Proposed Nonmotorized Inventory was created using ArcMap 10.5 and organized in a geodatabase. The GIS database is built using the Michigan Geographic Framework (MGF) base information version 17a. All attributes of the roadway and right of way (route designations, bike lanes, side paths, etc.) are referenced to the centerline using a unique segment identifier. This facilitates data portability and permits the information to be mapped at a variety of scales.

During the development of this plan, considerable effort went into collecting existing plans and resources in the Southwest Region that document various agencies nonmotorized visions. These were all mapped and PDF files were created and available for stakeholders to review.

Requests for the GIS data developed during this project will be reviewed by MDOT staff. All requests should identify how the data is intended to be used. This data is for local government planning, personal, and non-commercial use only. It may not be modified, copied, distributed, displayed, reproduced, published, licensed, used to create derivative works, sold, or transferred. Information, products, or services obtained from Michigan.gov are copyrighted and not for reproduction unless the law otherwise provides, or the State of Michigan gives you prior written permission. Files are large and requests, if granted, may need a site made available to upload data. Send requests to Cindy Krupp *(KruppC@Michigan.gov)* for GIS data file availability.

SOUTHWEST MICHIGAN OVERVIEW

The MDOT Southwest Michigan region includes Berrien, Branch, Cass, Calhoun, Kalamazoo, St. Joseph, and Van Buren counties. The region is fairly well-connected in terms of major highways and roads, including I-94, I-69, I-196, US-12, US-31, and US-131. The region is served by Michigan's three Amtrak passenger rail services, all of which are bicycle-friendly: Pere Marquette (Chicago-St. Joseph-Bangor-Holland-Grand Rapids), Wolverine (Chicago-New Buffalo-Niles-Dowagiac-Kalamazoo-Battle Creek and on to Albion-Jackson-Ann Arbor-Dearborn-Detroit-Royal Oak-Birmingham-Pontiac), and the Blue Water (Chicago and the same stations as the Wolverine through Battle Creek, but then splits off to East Lansing-Durand-Flint-Lapeer-Port Huron).

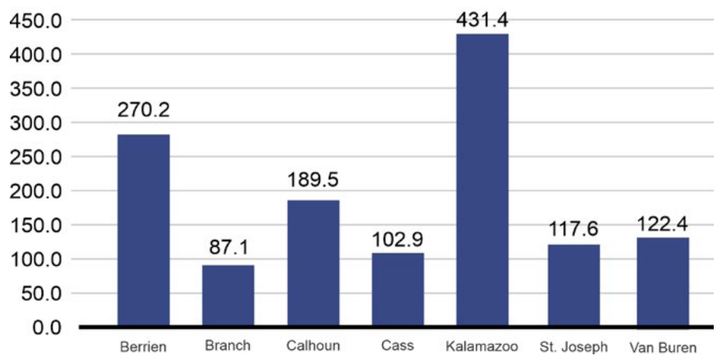
The Southwest Region includes major destinations, including the Lake Michigan shoreline and beach towns, and a number of universities and colleges, including Western Michigan University, Andrews University, Albion College, Glen Oaks Community College, Kalamazoo College, Kalamazoo Valley Community College, Kellogg Community College, Lake Michigan College, and Southwestern Michigan College. Major public lands in the region include the MSU Kellogg Biological Reserve and Experimental Forest, state parks and state game/wildlife areas, including Fort Custer State Park, Coldwater State Park, Kal-Haven Trail State Park, Van Buren State Park, Van Buren Trail State Park, Grand Mere State Park, Warren Dunes State Park, Warren Woods State Park, Boyle Lake State Wildlife Area, Crane Pond State Game Area, Three Rivers State Game Area, Fulton Stae Game Area, and Keeler State Game Area. Counties and other local units of government also maintain forests, parks, and other public lands.

Demographics

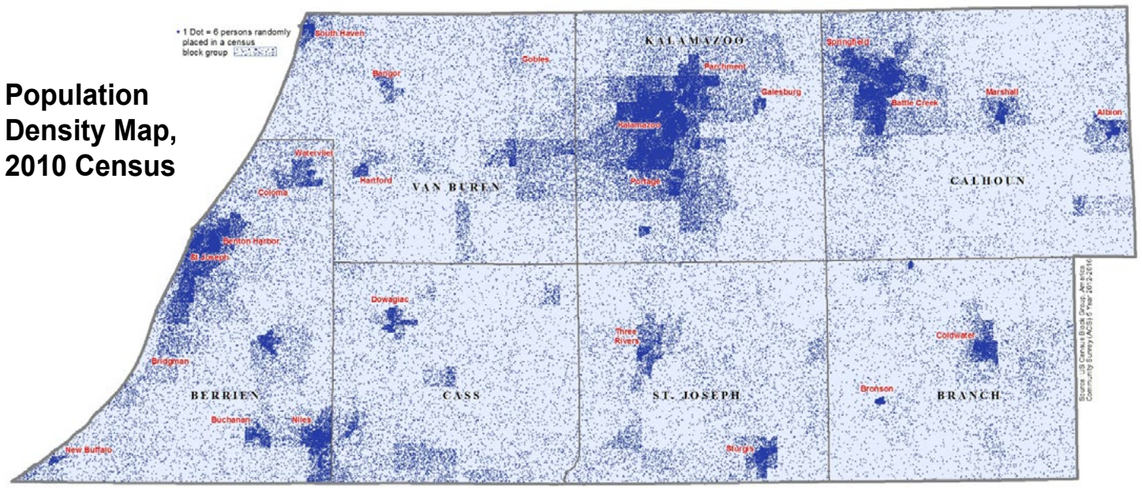
The 2015 U.S. census estimates show a population in the seven-county Southwest Region of 780,629, an increase of an annual rate of only 0.3 percent from 2000. Populations range from 43,664 in Branch County to 260,263 in Kalamazoo County. Kalamazoo County was the only county in the Southwest Region that grew in population over the five-year period, by almost 4 percent. Population growth in Kalamazoo County and declines in the other Southwest Region counties are a trend that continued from 2000 and 2010 population figures. Kalamazoo, Berrien, and Calhoun counties constitute 70.3 percent of the total population in the Southwest Region

County	2010 Population	2015 Population	% Change
Berrien	156,813	154,636	-1.4%
Branch	45,248	43,664	-3.5%
Calhoun	136,146	134,314	-1.4%
Cass	52,293	51,657	-1.2%
Kalamazoo	250,331	260,263	4.0%
St. Joseph	61,295	61,018	-0.5%
Van Buren	76,258	75,077	-1.6%
Southwest Region	**778,384**	**780,629**	**0.3%**
Michigan	**9,883,640**	**9,922,576**	**0.4%**

Persons Per Square Mile (2010)



Kalamazoo County has the greatest number of people per square mile, 431. Branch County has the lowest density, with 87 people per square mile (2010). As illustrated on the Population Density Map, the greatest density of people in the region are in urbanized areas: Kalamazoo, Battle Creek, Benton Harbor-St. Joseph, and Niles.



Population Density Map, 2010 Census

Population Density Map, 2010 Census

Within the Southwest Region, Cass County (42.5) and Berrien County (41.0) have the oldest median age, while Kalamazoo County (34.2) and St. Joseph County (38.6) have the youngest median age. Behavior studies show that walking and biking for utilitarian purposes are highest for younger people, while the rates for exercise and recreation are highest among older people.

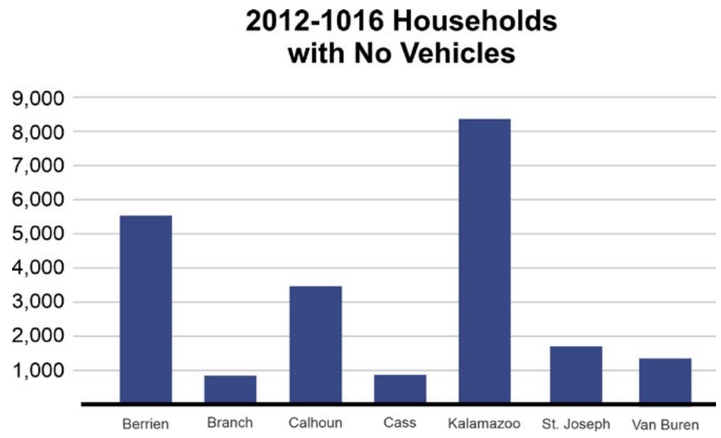
County	2010 Median Age	2010 Ages 64+
Berrien	41.0	27,485
Branch	39.8	7,185
Calhoun	39.1	21,717
Cass	42.5	9,108
Kalamazoo	34.2	33,325
St. Joseph	38.6	9,826
Van Buren	39.7	11,442

Ensuring mobility options for all is paramount for those who choose not to have a car and for young people, seniors, or those physically or financially unable to drive. A connected nonmotorized network provides an opportunity to meet multiple mobility needs. As estimated by the American Community Survey (ACS) (five-year estimates 2012-2016), 8 percent of households in Michigan do not have access to a vehicle (9 percent in the U.S.). As is illustrated in the table, in the Southwest Region, Kalamazoo County has the highest number of households with no vehicle. This is followed by Berrien County and Calhoun County.

County	2012-2016 Renter Households with No Vehicles	2012-2016 Owner Households with No Vehicles	2012-2016 Total Households with No Vehicles
Berrien	3,898	1,508	5,406
Branch	687	388	1,075
Calhoun	3,246	1,271	4,517
Cass	570	330	900
Kalamazoo	6,374	1,634	8,008
St. Joseph	989	809	1,798
Van Buren	955	695	1,650

Safety

Many nonmotorized travelers face daily challenges and safety concerns when utilizing the same roadway as motorized travelers, making the nonmotorized users especially vulnerable when a crash occurs. Nonmotorized safety is a concern in urban and rural communities. However, rural pedestrian crashes are nearly twice as likely to result in a fatality and rural bicycle crashes are three times as likely to result in a fatality compared to urban crashes (from UNC Highway Safety Research Center, 2006).



In the Southwest Region, there has been an average of 43.1 crashes per year per county over the last five years (2015-2019) that involved a pedestrian or bicycle. The five-year average is a typical way to report crash statistics to account for yearly variation. The values in the tables below are the yearly average of 2015 through 2019.

County	Average number of pedestrian crashes per year	Average number of bicycle crashes per year	Average nonmotorized crashes per 1,000 residents	Nonmotorized crashes as percent of total crashes
Berrien	30.6	20.2	0.3	1.1%
Branch	7.0	5.2	0.3	0.8%
Calhoun	27.6	18.0	0.3	1.0%
Cass	6.2	3.8	0.2	0.7%
Kalamazoo	77.6	61.4	0.5	1.6%
St. Joseph	16.0	9.0	0.4	1.5%
Van Buren	12.8	6.6	0.3	0.8%
Seven-County Average	**25.4**	**17.7**	**0.3**	**1.2%**

Source: Michigan Traffic Crash Facts, 2015-2019

In addition to the number of crashes, the prevalence of injuries can be used to gauge pedestrian and bicycle safety. The table below shows the number of pedestrian and bicycle crashes that resulted in a fatality or serious injury. Throughout the seven counties, on average, 24 percent of crashes that involve a pedestrian or bicyclist result in a fatality or serious injury. In other terms, one out of every four instances of a pedestrian or cyclist being hit results in either a pedestrian or cyclist being killed or taken to the hospital. On the other hand, the rate of fatalities and serious injuries for drivers is 2 percent. A pedestrian or cyclist is far more likely than a driver to be seriously injured or killed if they are involved in a crash.

County	Average number of nonmotorized crashes that resulted in a fatality	Percent of nonmotorized crashes that resulted in a fatality	Average number of nonmotorized crashes that resulted in a serious injury	Percent of nonmotorized crashes that resulted in a serious injury
Berrien	4.4	8.7%	9.4	18.5%
Branch	0.8	6.6%	1.4	11.5%
Calhoun	2.2	4.8%	4.8	10.5%
Cass	2.0	20.0%	1.6	16.0%
Kalamazoo	4.2	3.0%	22.0	15.8%
St. Joseph	1.0	4.0%	3.6	14.4%
Van Buren	1.8	9.3%	5.0	25.8%
Seven-County Average	**2.3**	**5.4%**	**6.8**	**15.8%**

Source: Michigan Traffic Crash Facts, 2015-2019

Note: The values in the table represent the number of crashes that resulted in a fatality or a serious injury, not necessarily the number of people who were injured or killed. Some crashes may result in both a fatality and a serious injury or multiple serious injuries. The data is sorted by the worst injury that occurred due to the crash. The number of injured was not available.

FACILITY TYPES

MDOT utilizes terms and definitions that are used by the FHWA as it relates to the various types of nonmotorized facilities. The following are the most common facility types in the Southwest Region and are based on the American Association of State Highway and Transportation Officials (AASHTO): Guide for the Development of Bicycle Facilities 2012. These are brief introductions to the common facility types. More detailed design considerations can be found in the Appendix. Some of the facilities are for both pedestrians and cyclists, such as shared use paths and in some cases wide paved shoulders and side paths. On-street bike lanes and marked shared lanes (sharrows) are facilities for cycling.

Photo Courtesy of Apple Cider Century

Design of nonmotorized facilities should be guided by the AASHTO Guidebook, the Michigan Manual on Uniform Traffic Control Devices (MMUTCD), the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide and engineering judgement. As noted by the FHWA 2013 Guidance Memo, the FHWA is in support of taking a flexible approach to bicycle and pedestrian facility design. The memo notes that the NACTO Urban Bikeway Design Guide as well as the Institute of Transportation Engineers (ITE) Designing Urban Walkable Thoroughfares guide builds upon the flexibilities provided in the AASHTO guides. See more resources in the Appendix.

Shared Use Path/Trail

A shared use path or trail is a facility 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 also may be used by pedestrians, skaters, wheelchair users, joggers, and other nonmotorized users. Most shared use paths are designed for two-way travel. Its minimum width is 10 feet and 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.

Photos Courtesy of MDOT

Photo Courtesy of Friends of Kal Haven Trail

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 buffered bike lane is a bicycle lane accompanied by a designated buffer space, separating the bicycle lane from the adjacent travel 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.

Photo courtesy of Cindy Krupp, MDOT

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.

Paved Shoulder

A paved 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 bicyle 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.

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.

Bike Route/Bikeway

A bikeway is a generic term for any road, street, path, or way in which some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

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 boarder, 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.

EXISTING FACILITIES

A significant amount of effort was devoted to documenting the existing facilities within the region. This plan and the associated database are considered a first step in capturing the existing nonmotorized conditions and agencies, organizations, and communities plans for facilities in the future. Many agencies, cities, and communities have made substantial investments in bicycle and pedestrian infrastructure, particularly in the last decade. The system and network are evolving at a rapid pace; therefore, the maps and graphics included in this plan represent a “snapshot” in time. It is fully realized that the database created during this planning effort will need to be regularly and continually updated to reflect current conditions and plans.

Overall in the Southwest Region, there has been an increase in the miles of off- and on-road nonmotorized facilties. The Southwest Region has had an increase of on-road facilities (bike lanes and paved shoulders) from 2011 to 2019. As of 2019, there are 568 miles of on-road facilities in the Southwest Region. Kalamazoo County has the most on-road facilities, followed by Calhoun and Berrien counties. All of the counties had an increase in on-road facilities except for St. Joseph County, which remained unchanged.

Miles of Existing On-Road Nonmotorized Facilities in Southwest Michigan, 2011 and 2019

County	On-Road Facilities* (miles) 2011**	On-Road Facilities (miles) 2019	Change in On-Road Facilities (miles) 2011 to 2019
Berrien	76	90	+14
Branch	23	29	+3
Calhoun	97	107	+10
Cass	38	54	+16
Kalamazoo	143	201	+58
St. Joseph	40	40	0
Van Buren	27	47	+20
Total	**444**	**568**	**+124**

**Paved Shoulder/Bicycle Lane*
***The on-road facilities for 2011 do not match the numbers in the previous plan because an error was discovered where there was an overlap of lines in shapefiles. The numbers in this table have been corrected for 2011.*

Many of the roads in southwest Michigan, where traffic is low (less than 2,500 average daily traffic (ADT) count) and where sight distances are not problematic, offer important connections, especially in rural areas. In the Southwest Region, there are more than 2,200 miles of paved roads with ADT counts less than 2,500 vehicles per day. This figure does not include many roads for which traffic counts are not available, so the number of miles is quite higher than reflected, especially in rural areas. These roads provide experienced bicyclists with many miles of biking opportunities in a shared use configuration.

Miles of Road With Less Than 2,500 Average Daily Traffic (ADT), 2011 and 2019*

County	State Roads ADT Less Than 2,500 2011	State Roads ADT Less Than 2,500 2019	Other Roads ADT Less Than 2,500 2011	Other Roads ADT Less Than 2,500 2019
Berrien	11	10	347	446
Branch	12	13	363	269
Calhoun	2	14	436	277
Cass	4	9	257	324
Kalamazoo	0	0.3	202	180
St. Joseph	0.8	7	326	347
Van Buren	0	0	301	364
Total	**29.8**	**53.3**	**2,232**	**2,207**

**For the miles of state and other roads, it is not a comparison as the ADT information isn't the same in 2019 as it was in 2011. The data is just a snapshot in time based on the available data.*

There are 176 miles of improved off-road facilities (shared use pathways/trails) and 29 miles of unimproved off-road facilities for a total of 205 miles of off-road facilities in the Southwest Region. Kalamazoo County has the most off-road facilities, followed by Calhoun and Van Buren counties. In Van Buren County, the decrease in off-road unimproved facilities reflects the paving of the shared use path between South Haven and the Van Buren State Park. Each county in the Southwest Region saw an increase in total off-road facilities from 2011 to 2019.

Miles of Existing Off-Road Nonmotorized Facilities in Southwest Michigan, 2011 and 2019

County	Off-Road Facilities Improved (miles) 2011	Off-Road Facilities Improved (miles) 2019	Off-Road Facilities Unimproved (miles) 2011	Off-Road Facilities Unimproved (miles) 2019	Total Off-Road Facilities (miles) 2011	Total Off-Road Facilities (miles) 2019
Berrien	9	17	3	5	12	22
Branch	2	5	2	1	4	6
Calhoun	35	40	0	1	35	41
Cass	0	2	0.1	0	0.1	2
Kalamazoo	56	75	2	9	58	84
St. Joseph	0	2	0	0	0	2
Van Buren	27	35	15	13	42	48
Total	**129**	**176**	**22**	**29**	**151**	**205**

National/State Significant Systems

There are two national, two interstate, and two state significant pedestrian/bike routes that traverse through the Southwest Region and provide connections for communities and counties within the region, to adjacent regions, to adjacent states and beyond.

U.S. Bicycle Route 35

The U.S. Bicycle Route (USBR) System is a national network of regionally and nationally significant bicycling routes spanning multiple states. The purpose of the USBR numbering system is to provide travel between states on routes identified as suitable for long-distance cycling and for those comfortable riding with traffic. USBRs can include a variety of conditions and traverse various facility types, including shared use trails, paved shoulders, no paved shoulders, etc.U.S. Bicycle Route 35 is a 500-mile route that runs from Indiana through Michigan to Sault Ste. Marie, Canada, generally following the Lake Michigan shoreline and through the eastern Upper Peninsula. While some portions of U.S. Bicycle Route 35 have signs, users should not rely solely on signs for navigating the route.

North Country National Scenic Trail

The National Park Service - North Country National Scenic Trail is a 4,600-mile-long hiking trail that crosses seven northern states from New York to North Dakota, including traversing through the Southwest Region via Calhoun and Kalamazoo counties. Sections of the North Country Trail vary on bicycle use; users should contact the North Country Trail Association or land management partners for more information. *https://northcountrytrail.org/*

Marquette Greenway

The Marquette Greenway is an interstate trail that will stretch 58 miles from the shores of Calumet Park in Chicago to the beaches of Harbor Country in New Buffalo, Michigan. Directly touching along the south shore of Lake Michigan, the Marquette Greenway will wind through a diverse landscape rich in history and scenic beauty. Trail users will experience the breadth of the Indiana Dunes National Park, the region's industrial heritage and a number of prime destinations.

As of 2020, more than half of the proposed route is either built or funded for construction. In Michigan, the proposed route will pick up on Grand Beach Road at the state line and continue to New Buffalo. There are plans for a trail to continue on to St. Joseph, South Haven and beyond. Visit *https://harborcountrytrails.org/* for more information.

Indiana Michigan River Valley Trail

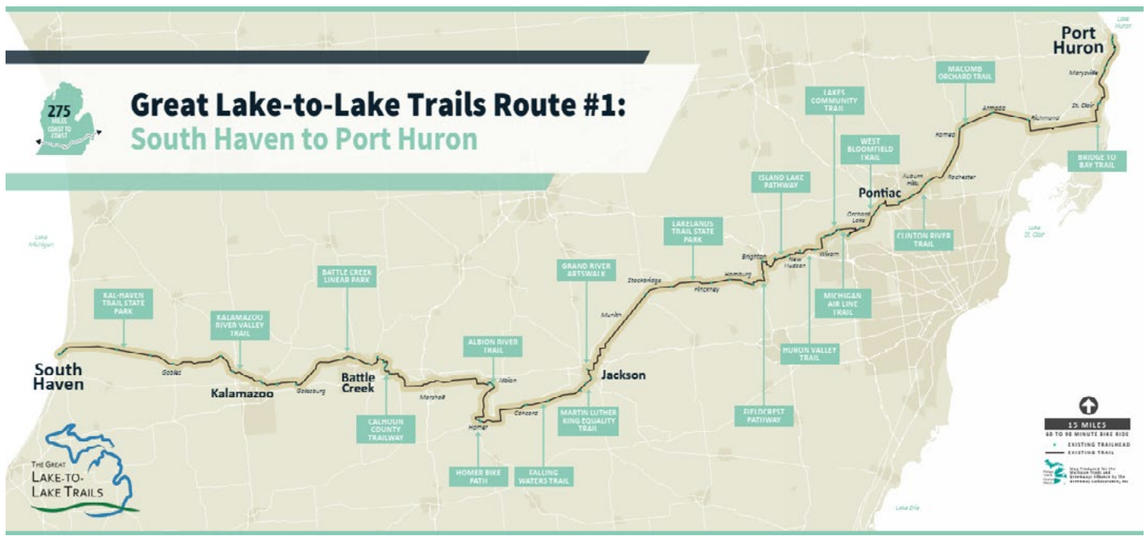
The Indiana Michigan River Valley Trail is an interstate, 17-mile paved pedestrian/ bicycle trail connecting Niles, Michigan, to South Bend and Mishawaka, Indiana, including the campus of Notre Dame University. Future phases of this trail will continue southeast to connect to Elkhart, and continue northwest to connect to Berrien Springs then St. Jospeh/ Benton Harbor. The trail was partially built on the old railroad right of way for the Cleveland, Cincinnati, Chicago and St. Louis Railroad. The Michigan segment of the trail system is 6 miles long from Plym Park in Niles to Stateline Road. *https://www.swmpc.org/inmitrail.asp*

Michigan's Iron Belle Trail

The Iron Belle Trail (which has two routes) will traverse from Belle Isle in Detroit to Ironwood in the Upper Peninsula. The trail includes a 1,273-mile hiking route that heads west from Detroit and connects up with the North Country National Scenic Trail. The 791-mile bicycle route utilizes existing multi-use trails and on-road facilities on the east side of the state. This trail traverses through the Southwest Region via Calhoun and Kalamazoo counties on the North Country National Scenic Trail. The Iron Bell Trail separates from the North Country Trail heading east from Homer, while the North Country Trail heads south from Homer. *Visit https://michigantrails.org/trails/featured-trails/iron-belle-trail/* for more information.

Great Lake-to-Lake Trail Route #1

Formerly known as the Airline Trail, this trail system will be 270 miles long and go through 34 towns, 42 townships and nine counties from South Haven to Port Huron. The trail utilizes 16 existing trail systems. In the Southwest Region, it utilizes the Kal-Haven Trail State Park, Kalamazoo River Valley Trail, Battle Creek Linear Park, Calhoun County Trailway, and the Albion River Trail. For more information, visit *https://greatlaketolaketrails.org/*.



Regional and Local Systems

At times, regional systems use parks, rail corridors, greenways along rivers, local community facilities, or routes with yet-to-be determined facility types to provide regional connectivity. Several of these regional systems also serve as the route for state and national interests, such as the North Country Trail, Iron Belle Trail, U.S. Bicycle Route 35, and Great Lake-to-Lake Trail Route #1.

Battle Creek Linear Park - This shared use path has more than 22 miles of paved pathway winding through wooded areas, open fields, parks, and commercial areas. Historical, cultural, and point of interest signs are found along the way. *https://bcparks.org/134/Linear-Park*

Kalamazoo River Valley Trail (KRVT) - The KRVT connects the Kal-Haven Trail, the Battle Creek Linear Park, and the Portage Bicentennial Linear Park. Currently, there are 22 miles complete of this nonmotorized, asphalt-paved shared use path. *kalcounty.com/parks/krvt/krvtmaps.htm*

Kal-Haven Trail - Kal-Haven Sesquicentennial State Park is a 34-mile crushed limestone/slag path connecting South Haven and Kalamazoo built on an abandoned railroad corridor. The shared use path meanders through wooded areas, past farmlands, and over rivers and streams. The path is ideal for bicycling and hiking. Portions of the path are open for equestrian and snowmobile use. *www.kalhaven.org*

Van Buren 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. *https://www2.dnr.state.mi.us/ParksandTrails/Details.aspx?id=354&type=SPTR*

Portage Bikeway System - This system currently has 21 miles of off-road paved trails and 41 miles of bicycle lanes. See maps online at *https://www.portagemi.gov/214/Portage-Bikeway*. Part of this system is the 4-mile Portage Creek Bicentennial Trail. More information can be found at *https://www.portagemi.gov/Facilities/Facility/Details/Portage-Creek-Bicentennial-Park-19.*

Calhoun County Trailway - This will be 51 miles of trail across Calhoun County connecting Homer, Albion, Marshall, and Battle Creek. Portions of the trail are in beautiful Ott Preserve. It will link with the Falling Waters Trail in Jackson and the Kalamazoo River Valley Trail in Kalamazoo County, along with the North Country Trail, the Iron Belle Trail, and the Great Lake-to-Lake Trail.

There are many local systems that are developing and tying into the larger systems in St. Joseph/Benton Harbor, Buchanan (McCoy Creek Trail), Paw Paw/Mattawan (Antwerp Township Regional Trail), Vicksburg, Three Rivers, Marshall, Coldwater, Sturgis, Cassopolis, and Dowagiac.

Bike Route/Bikeway - There are also several local and county on-road signed or mapped bike routes and bikeways in southwest Michigan, including the 20 Back-Road Bikeway routes in Berrien County: *https://www.applecidercentury.com/backroad-bikeways*. The Southwest Michigan Bikeway (SWMB) is a proposed regional network consisting of existing and planned routes to be signed as "Southwest Michigan Bikeway." More information on this system is found in the KATS 2045 Metropolitan Transportation Plan at *https://katsmpo.org.*

Typical Elements of a Regional Corridor

- Connection from one community, county, and/or the region to another.
- Serve as primary "arteries" that connect to other more local corridors.
- Often include significant existing or planned on- or off-road systems.

SOUTHWEST MICHIGAN GAP ANALYSIS AND PRIORITIES

This section of the plan includes a summary and associated maps that highlight for the Southwest Region as a whole, as well as each county, existing and planned networks, and priorities and desired connections.

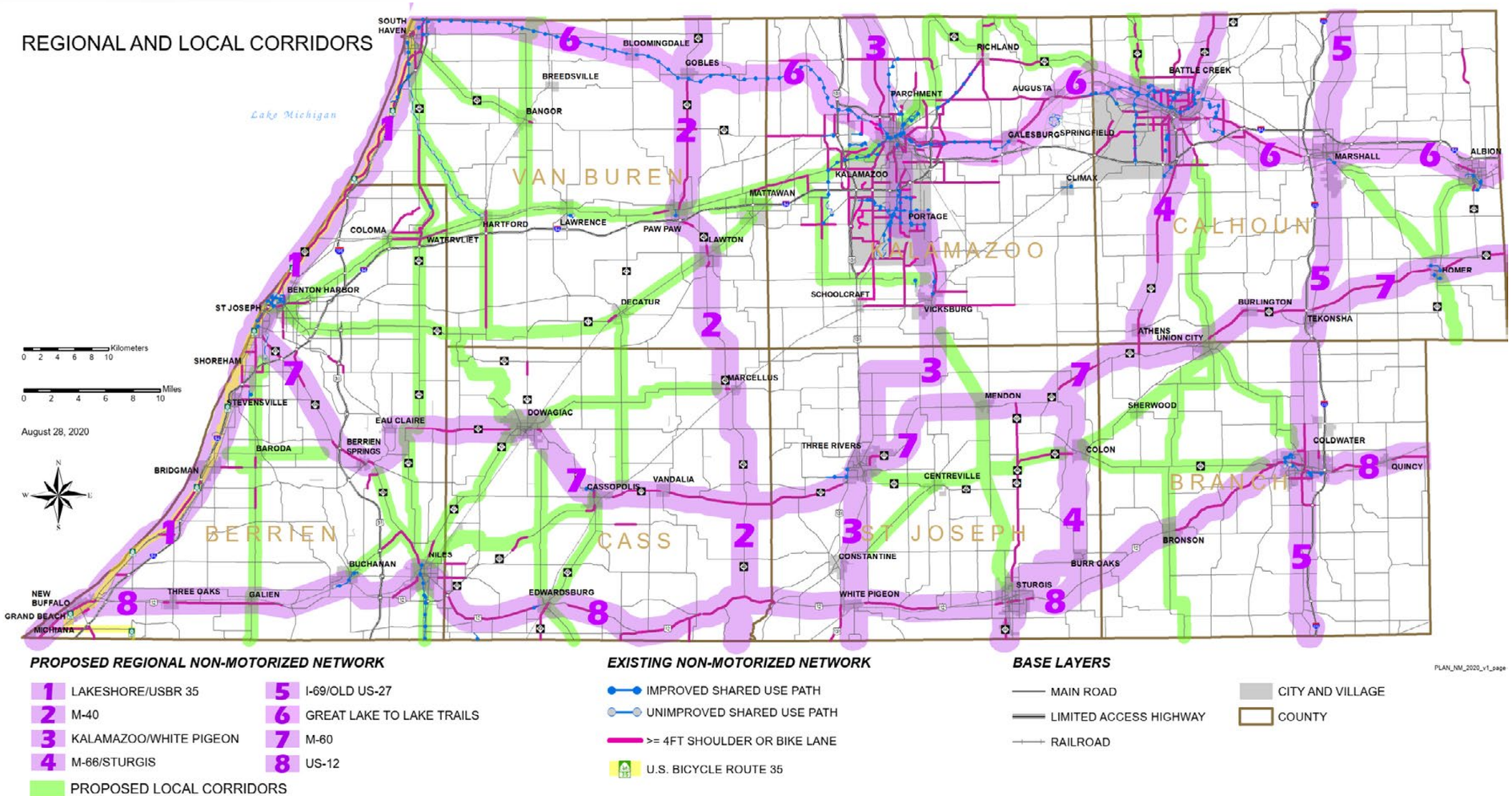
In this map, the shaded areas suggest the desire to find nonmotorized connections from one community, county and/or region to another. For planning and developing more refined on-road nonmotorized routes or deciding where to improve on-road nonmotorized infrastructure (paved shoulders, bike lanes, etc.), the following resources may prove useful:

- Google bike route mapping,
- cycling “heat maps” (further explained on the next page)
- online long-distance cycling maps (further explained on the next page),
- input from area planners from the jurisdictions involved,
- recognized state and national experts,
- local bicyclist and citizen knowledge,
- community stakeholders,
- technical standards and guidelines,
- printed maps,
- local nonmotorized plans, and
- other documented resources.

This section of the plan and the associated maps should be considered part of a living document that will need to be updated periodically. MDOT fully anticipates that there will be changes in these corridors over time. Facilities may need upgrading to accommodate more users. Portions of a corridor may change if other routes prove more feasible. Regional corridors may be added. In several cases, alternate, nearby routes, even though they are not as direct, may be preferred due to lower-stress vehicle speeds, volumes, or trucks. They may not necessarily represent actual or planned routes; rather, they reflect the desire for connectivity.

Priorities and desired connections in each county are at various stages. Some are merely in the discussion phase, while others have been fully vetted with detailed feasibility studies and cost estimates completed. Further planning by a variety of agencies and stakeholders may be required to fully vet these systems and routes. Communities are encouraged to coordinate their bicycle and pedestrian planning efforts with this document, thus strengthening local, county, and regional efforts.

The following map of the Southwest Region illustrates five priority regional north-south corridors and three regional east-west corridors. It also shows several local corridors to connect small rural towns together and into the larger regional network. This map was updated from the previous plan based on public input and local, regional and statewide nonmotorized plans. It is important to note that additional project development opportunities may present themselves over time. As appropriate, these opportunities should be considered and/or pursued in addition to the priorities listed in this plan. Also, the routes identified in this general regional plan may not be feasible. A more feasible route may be identified during local planning. In addition, the facility type desired may not be feasible due to local circumstances. Local conditions will ultimately dictate the facility type and its location.



For planned facilities and priorities: Additional project development opportunities may present themselves over time. As appropriate, these opportunities should be considered and/or pursued in addition to the priorities listed in this plan. Note that the routes in this regional plan may not be feasible. A more feasible route may be identified during local planning. Also, the facility type desired may not be feasible due to local circumstances. Local conditions will ultimately dictate the facility type and its location.

"Heat maps" composed of aggregated actual ride GPS tracks uploaded to the Internet by cyclists may be suggestive, keeping in mind that these are comprised of a subset of the total number of bicyclists. One such heat map is available at no cost from Strava at *https://www.strava.com/heatmap#7.00/-120.90000/38.36000/hot/all*.

Online long-distance cycling maps may be reviewed on a number of publicly available websites. Sites that do not require registration include but are not limited to extensive route databases found at Ride With GPS *(https://ridewithgps.com/find)* and Randonneurs USA route database (*https://rusa.org/cgi-bin/permsearch_GF.pl*).

These sites require site registration: People For Bikes' Ride Spot (*https://ridespot.org/*) and MapMyRide (*https://www.mapmyride.com/*).

For planning commuter routes, KATS has established a detailed set of steps and guidelines, including approximately 20 criteria that were used to narrow approximately 400 transportation-oriented routes down to less than 75. This information can be found in Appendix F of the KATS 2045 Metropolitan Plan at *www.katsmpo.org*. You can find additional information and resources at *https://bikefriendlykalamazoo.org/*.

Priority Regional North-South Corridors

Lakeshore/U.S. Bicycle Route 35 - This corridor follows the Lake Michigan shoreline and would also provide a portion of U.S. Bicycle Route 35. In southwest Michigan, the route traverses through South Haven in Van Buren County and St. Joseph, Bridgman and New Buffalo in Berrien County. The major gaps are from the Indiana state line to St. Joseph in Berrien County. The Berrien County Road Department and local jurisdictions are working on an off-road trail in Union Pier to Bridgman. Local stakeholders are also working on the Marquette Greenway between New Buffalo and the Indiana state line.

M-40 - This corridor would follow M-40, connecting the communities of Gobles, Paw Paw and Lawton in Van Buren County, and Marcellus in Cass County. There are major gaps from Gobles north to Allegan County and also from Paw Paw south to the Cass County line in Van Buren County. In Cass County, there is a gap from the Van Buren County line to US12.

Kalamazoo/White Pigeon - This corridor would connect Parchment, Kalamazoo, Portage, and Vicksburg in Kalamazoo County, and Three Rivers, Constantine and White Pigeon in St. Joseph County. In Kalamazoo County, there is a gap connecting St. Joseph County to Portage. In St. Joseph County, there is a gap from White Pigeon to the Kalamazoo County line.

M-66/Sturgis - This corridor would follow M-66, connecting the communities of Battle Creek and Athens in Calhoun County, and Colon and Burr Oak in St. Joseph County. There is a gap from K Drive S to S Drive S in Calhoun County. In St. Joseph County, there is a gap from Sturgis to Colon to M-60.

I-69/Old US-27 - This corridor would follow I-69/Old US-27 as it traverses through the communities of Marshall and Tekonsha in Calhoun County and Coldwater in Branch County. In Calhoun County, there is a gap from the Branch County line north to the county line with Barry and Eaton counties. In Branch County, there is a gap from the Indiana state line to the Calhoun County line.

Priority Regional West-East Corridors

Great Lake-to-Lake Trail Route 1 - This is a statewide priority corridor that would connect the segments of the Kal-Haven Trail beginning in South Haven in Van Buren County to the Kalamazoo River Valley Trail and the city of Kalamazoo in Kalamazoo County, and the Battle Creek Linear Park and Calhoun County Trailway in Calhoun County as it heads east to connect with Port Huron on Lake Huron. There are few gaps in Kalamazoo County, especially where there are railroad crossings, and in Calhoun County.

M-60 - This corridor would follow M-63/M-60, starting near the lakeshore in St. Joseph/Benton Harbor and connecting to Berrien Springs and Eau Claire in Berrien County. It would head east through Dowagiac, Cassopolis and Vandalia in Cass County, then connect to Three Rivers and Mendon in St. Joseph County, and on to Union City, Burlington and Homer in Calhoun County. It would pass through Burlington and Homer in Calhoun County before continuing east beyond the southwest Michigan region. In Berrien County, there is a need to connect St. Joseph/Benton Harbor to Berrien Springs as part of the IN-MI River Valley Trail extension. There is a gap in Cass County from Dowagiac to Cassopolis. In St. Joseph County, there is a gap from Three Rivers to east of Mendon. There is a gap in Branch County the entire span of the county. In Calhoun County there is a small gap in Burlington.

US-12 - This corridor would follow the US-12 Heritage Route as it starts in New Buffalo and connects to Three Oaks, Galien, Buchanan, and Niles in Berrien County. It then connects to Edwardsburg in Cass County, White Pigeon in St. Joseph County, and shifts slightly northwest past Sturgis in St. Joseph County before heading to Bronson, Coldwater and Quincy in Branch County. There are gaps in Berrien County from New Buffalo to Three Oaks, and from Galien to Niles. In Cass County, there is a gap east of Edwardsburg to near Calvin Center Road. In St. Joseph County, there is a gap from the Cass County line to White Pigeon, from Shimmel Road to Sturgis, and from Sturgis to the Branch County line. In Branch County, there is a gap from the St. Joseph County line to Bronson.

Priorities by County

The following county-specific priorities surfaced during public planning sessions ending in 2019 and in materials received from local agencies through 2019. The information listed in these sections may be dated or otherwise incomplete at the time of printing, especially comments regarding the need for repair or maintenance, which are ongoing needs and subject to change almost constantly. Such items are pointed out to provide constructive input that may not have otherwise been brought to light via other processes. All were derived from public comments received at public input sessions.

Berrien County

Below is a list of local/regional efforts to expand nonmotorized opportunities in the county. The list of on-road (shoulders/bike lanes) and off-road network priorities were identified through public input and from local planning efforts. These are not listed in any order.

Harbor Country Hike and Bike Plan - Presents a vision for connected on- and off-road facilities for Chikaming Township, the City of New Buffalo, New Buffalo Township, Three Oaks Township, Grand Beach, and the Village of Three Oaks. The plan can be found at *https://harborcountrytrails.org/*.

Friends of McCoy Creek Trail, Buchanan - Friends of McCoy's Creek Trail was established by resolution of the City of Buchanan in April 2004 as a subcommittee of the Buchanan Area Recreation Board. They have developed pathways through E. B. Clark Woods and have continued the shared use path to downtown Buchanan along McCoy Creek and are now working to connect to Niles (IN-MI River Valley Trail) and New Buffalo.

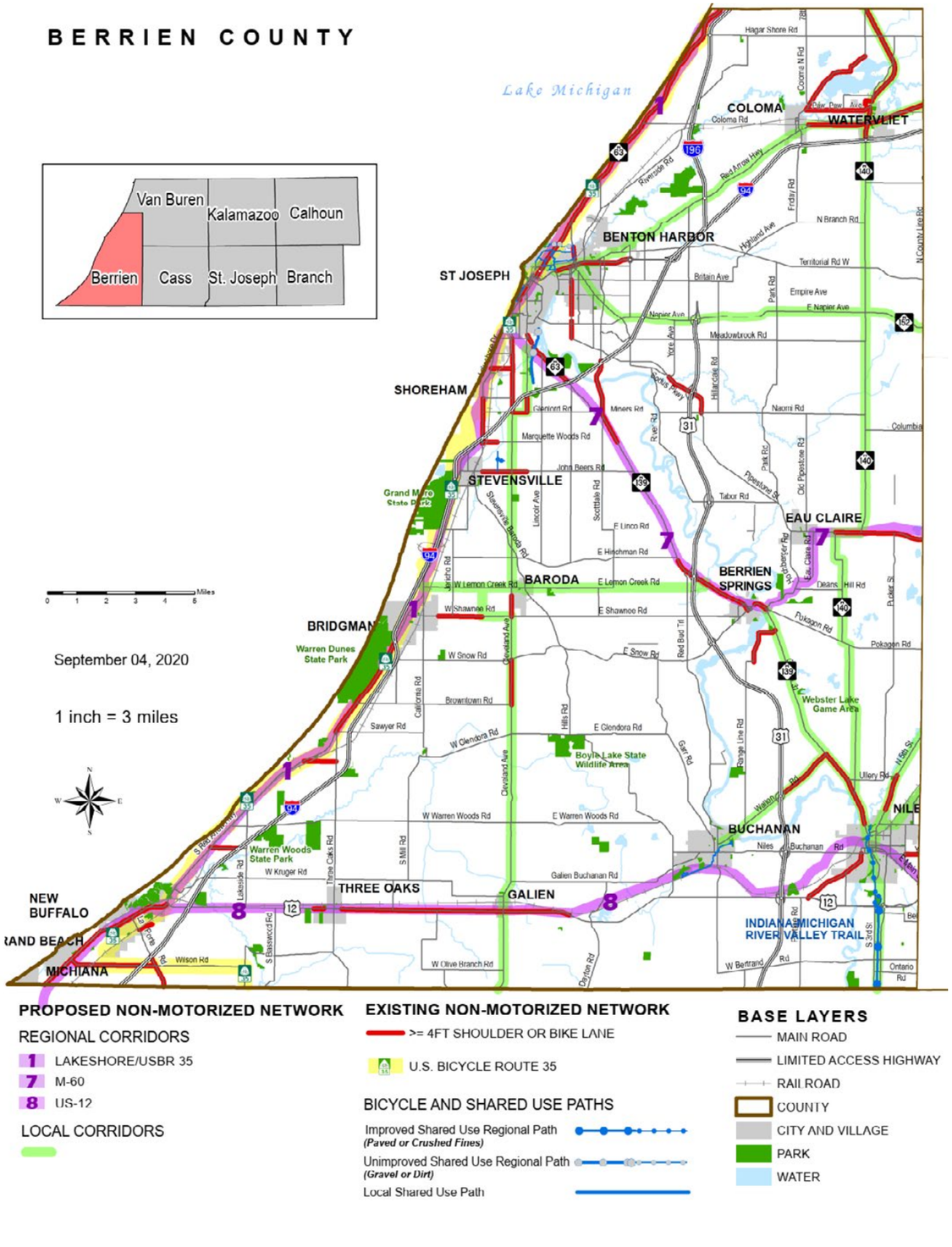
Galien to Baroda (Cleveland Road) - Cleveland Road has some existing on-road facilities but they are not complete. This would provide a north-south connection, in addition to a connection to the US-12 corridor.

Bridgman to Berrien Springs - Shawnee Road may provide a good east-west connection.

Ox Creek Trail - There is an old railroad corridor that runs along Ox Creek that would connect the downtown Benton Harbor Arts District to the main retail area of Berrien County (Orchards Mall).

M-60 Corridor - In Berrien County, there is a need to connect St. Joseph/Benton Harbor to Berrien Springs as part of the IN-MI River Valley Trail extension.

US-12 Corridor - There are gaps in Berrien County from New Buffalo to Three Oaks, and from Galien to Niles.



The following is a map of a master trails plan for Berrien County that is included in the county's Recreation Plan. Major gaps are from the Indiana state line to St. Joseph in Berrien County. The Berrien County Road Department and local jurisdictions are working on an off-road trail in Union Pier to Bridgman. Local stakeholders are also working on the Marquette Greenway between New Buffalo to the Indiana state line, in addition to an extension of the IN-MI River Valley Trail from Niles to Berrien Springs.

On-Road Network Priorities:

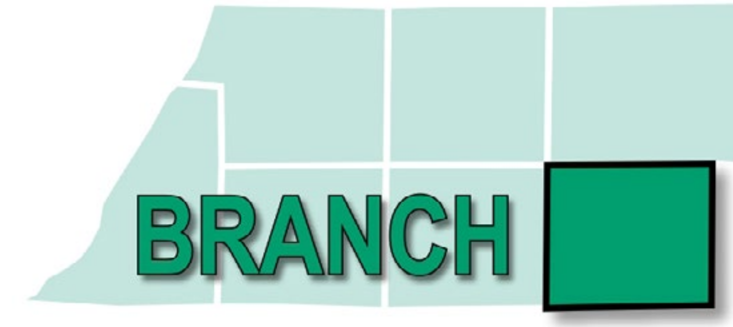
- M-139/M-63 (Berrien Spring to St. Joseph)
- Napier Avenue (St. Joseph to Lake Michigan College)
- Shawnee Road (Berrien Springs to Bridgman/Lake Michigan)
- Niles Buchanan Road (It is too narrow - add lane or striping) (Buchanan to Niles)
- Bakertown Road (Buchanan to US-12) (side path or bike lane to connect to proposed County Linear Trail)
- S. Cherry Beach Road and crossover to Red Arrow Highway to Youngren Road
- Warren Woods Road (Red Arrow Highway to S. Prairie Road)
- East Road (Red Arrow Highway to S. Prairie Road)
- Sawyer Road (Red Arrow Highway to Flynn)

- Three Oaks Road (Sawyer Road To US-12)
- Rangeline Road (Berrien Springs to Buchanan at Walton Road)
- Walton Road (Buchanan to Niles)
- Lemon Creek Road (Berrien Springs to Baroda to Bridgman)
- Snow Road (Berrien Springs to Browntown Road)
- Browntown Road (Flynn Road to Hills Road)
- Hochberger Road and Deans Hill (Berrien Springs, M-139 to Eau Claire)
- Red Bud Trail (Berrien Spring to Buchanan)
- M-139/Ferry Street intersection in Berrien Spring - address pedestrian conflict
- W. Marquette Woods Road (Roosevelt to Cleveland - paved shoulder)
- Lakeshore Drive (St. Joseph to Shoreham)
- Pipestone Road (I-94 to downtown Benton Harbor)
- Stevensville Baroda Road (Stevensville to Baroda)
- Hills Road (Baroda to East Glendora)
- Cleveland Avenue (Galien to St. Joseph)
- Main Street (Garr Road to Buchanan)
- Garr Road (Snow Road to Main Street)
- M-140 (Eau Claire to Watervliet)
- Coloma Road (M-63 to the city of Coloma)

Off-Road Network Priorities

- Along Hickory Creek sewer easement (Stevensville - St. Joseph)
- Ox Creek Corridor (Orchards Mall area to Benton Harbor Arts District)
- Extension of IN-MI River Valley Trail (Niles to Berrien Springs to St. Joseph) (potential trailhead at Wolf's Prairie Park in Berrien Springs)
- Along Walton Road from River Street (Buchanan to Niles (IN-MI River Valley Trail))
- Marquette Greenway (Chicago to New Buffalo)
- County Linear Park along Red Arrow Highway (New Buffalo to Bridgman)
- US-12 (New Buffalo to Niles)
- Cleveland Avenue Side Path (Maiden Lane to Glendora)
- Tuttle Road/Old Railroad Corridor (Hill Road to Red Bud Trail - parallel between Lemon Creek and Shawnee)
- Buchanan Rail (Bakertown Road to Redbud Trail)
- US-31 (Andrews University to Lake Michigan College)

Branch County



Below is a list of local/regional efforts to expand nonmotorized opportunities in the county. The list of on-road (shoulders/bike lanes) and off-road network priorities were identified through public input and from local planning efforts. These are not listed in any order.

I-69/Old US-27 Corridor - There is a gap from the Indiana state line to the Calhoun County line.

M-60 Corridor - There is a gap in Branch County the entire span of the county.

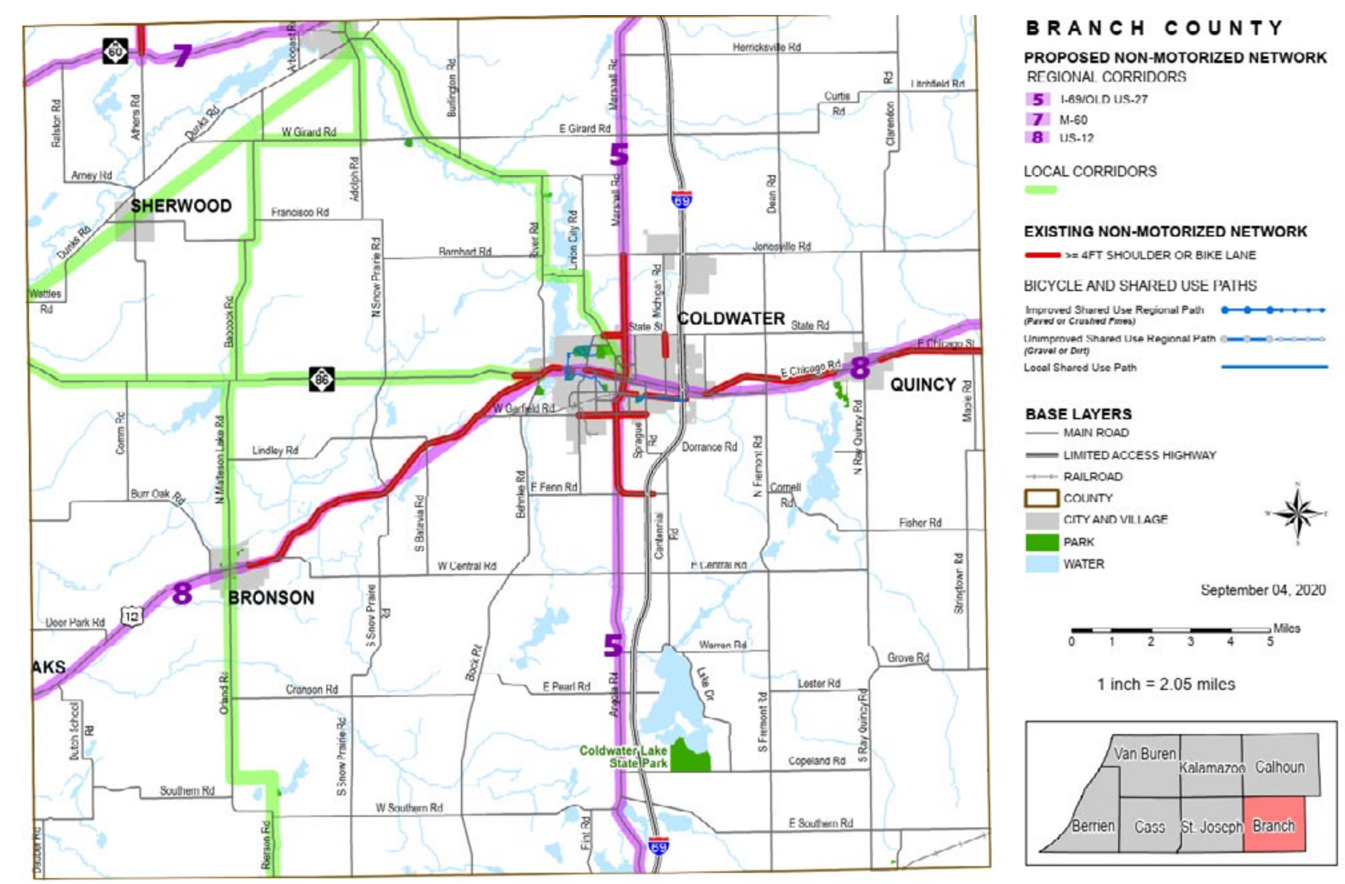
US-12 Corridor - In Branch County, there is a gap from the St. Joseph County line to Bronson.

On-Road Network Priorities

- East Pearl Street from Coldwater Lake to Rose Lake/ Lake of the Woods
- Union City Road - Coldwater to Girard
- Girard to Marshall (Vincent to county line to Marshall Road)
- Coldwater State Park to Quimby Road to East Central to North Freemont Road
- Old US-27 - Coldwater to Angola to Pokagon State Park
- Willow Brook
- Jonesville Road
- Narrows Road
- M-86
- Marshall Road North
- East Copeland to Coldwater State Park
- West Girard to River Bend Park

Other

- Connect to Angola, Indiana trail system
- Potential off-road trail on utility corridor from Coldwater to Girard
- Improve crossings on US-12 in Coldwater (at Marshall Road and the west end of town



Calhoun County

Below is a list of local/regional efforts to expand nonmotorized opportunities in the county. The list of on-road (shoulders/bike lanes) and off-road network priorities were identified through public input and from local planning efforts. These are not listed in any order.

Great Lake-to-Lake Trail Route #1 Corridor - There are several gaps in Calhoun County that also coincide with the Iron Belle Trail.

Calhoun County Trailway Alliance - The Calhoun County Trailway is owned and managed by the Calhoun County Parks Department. In 2015, a 5.6-mile section of trail was constructed, connecting Historic Bridge Park to the Battle Creek Linear Park at Emmett Street. The Calhoun County Trailway will connect to trails such as the Great Lake-to-Lake Trail and the Iron Belle Trail.

M-66 /Sturgis Corridor - There is a gap from K Drive S to S Drive S north of Athens.

I-69/Old US-27 Corridor - There is a gap from the Branch County line north to the county line with Barry and Eaton counties.

M-60 Corridor - A gap exists in the village of Burlington along M-60.

M-99 - A facility from Homer to Albion along M-99 is needed.

On-Road Network Priorities

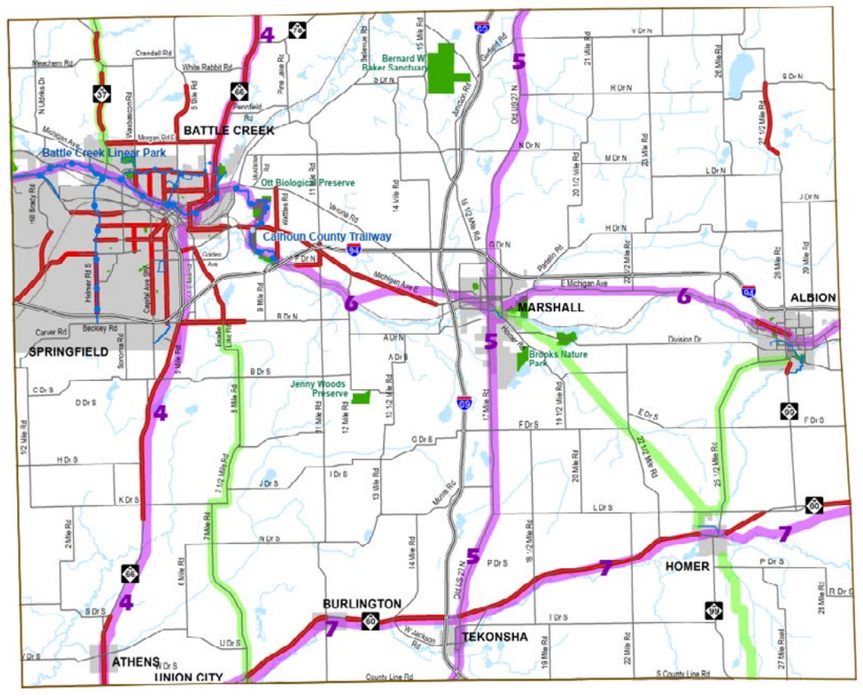
- Michigan Avenue - Marshall to Albion
- Veterans Bridge
- B Drive - Albion to Marshall
- Verona Road - Marshall to Battle Creek
- 11 Mile Road - Battle Creek to Burlington

Off-Road Network Priorities:

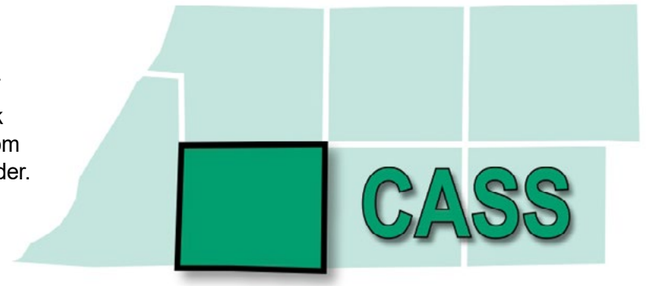
- Connect Ketchum Park - connection between Michigan Avenue and B Drive N
- F. Drive/11 Mile Road
- Michigan Avenue - Battle Creek to Marshall to Albion
- M-60 - Homer to Concord
- 6.5 Mile Road to 6 Mile Road - Battle Creek to Union City
- 29 Mile Road to N Drive - Albion to Homer

Other

- Dikeman Road (sign updates are needed)
- Develop an Albion Trailhead with bathrooms - south of Albion along M-89 and Condit Road
- Connect the Great Lake-to-Lake Trail Route #1



Cass County



Below is a list of local/regional efforts to expand nonmotorized opportunities in the county. The list of on-road (shoulders/bike lanes) and off-road network priorities were identified through public input and from local planning efforts. These are not listed in any order.

Airline Trail - In an effort to create connectivity in Cass County, the Cass County Parks and Recreation Department has started to investigate the potential of a separated nonmotorized facility from the village of Cassopolis heading east connecting the bicycle routes surrounding Diamond Lake, the Cass County Council of Aging walking track (on M-60) to Dr. T.K. Lawless Park outside of the village of Vandalia. The proposed project would utilize land along the M-60 corridor heading east and would also potentially include private lands and an abandoned railroad corridor known as the Airline Railroad.

M-40 Corridor - There is a gap from the Van Buren County line south to US-12.

M-60 Corridor - There are two small sections of M-60 without facilities within the village of Cassopolis and the village of Vandalia. There is also a gap from Dowagiac to Cassopolis.

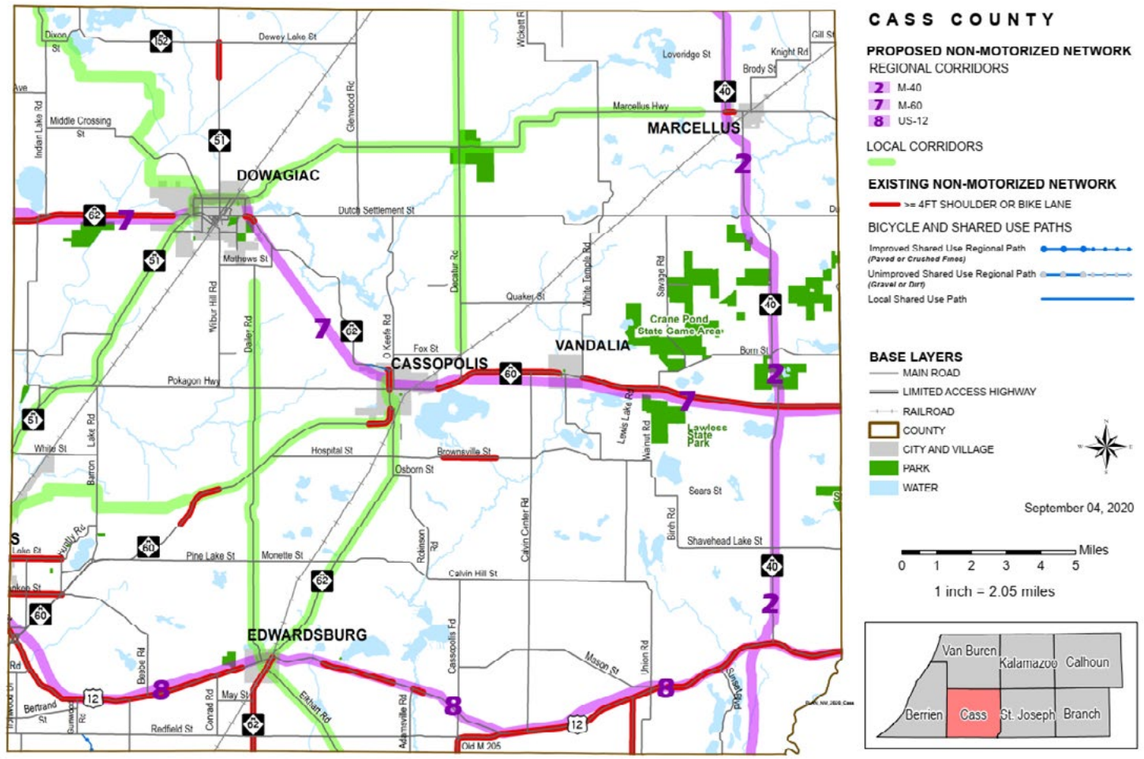
US-12 Corridor - In Cass County, there is a gap east of Edwardsburg to near Calvin Center Road.

On-Road Network Priorities:

- Pine Lake Street
- Redfield Street
- Decatur Road
- Dutch Settlement Road
- Oil City Road
- Pokagon Highway
- Marcellus Highway (Dowagiac to Marcellus)
- Mason Street
- Brownsville to Calvin Center along Calvin Center Road
- Diamond Lake Loop in Cassopolis
- Pokagon Road from Cassopolis to Berrien County
- M-62 - Cassopolis to Dowagiac to Edwardsburg
- Dailey Road - Edwardsburg to North of M-60
- Barron Lake Road - M-60 to Pine Lake
- Maple/Brody/M-40/Gooding Street/Burlington Road/ Love Ridge Street (end at the Rock on Fish Lake)

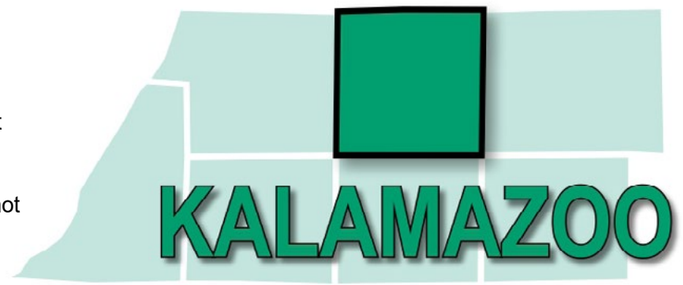
Off-Road Network Priorities:

- Gumwood to Bertrand
- Cassopolis to Dowagiac
- Cassopolis to Jones
- Dowagiac to W. Indian Lake Road to Eau Clare along M-62
- Cassopolis to Niles
- Airline Trail (Decatur Street to Vandalia)



Kalamazoo County

Below is a list of local/regional efforts to expand nonmotorized opportunities in the county. The list of on-road (shoulders/bike lanes) and off-road network priorities were identified through public input and from local planning efforts. These are not listed in any order.



Kalamazoo/White Pigeon Corridor - In Kalamazoo County, there are gaps between its southernmost municipalities (Schoolcraft, Vicksburg and Fulton) and their most closely adjacent neighbors (including, to name a few, Marcellus, Three Rivers, Centreville, Mendon and Athens). From these municipalities, destinations such as White Pigeon, Constantine, Cassopolis, Vandalia, Colon, and Sturgis are already the subject of many informal bike routes available through previously mentioned popular online services.

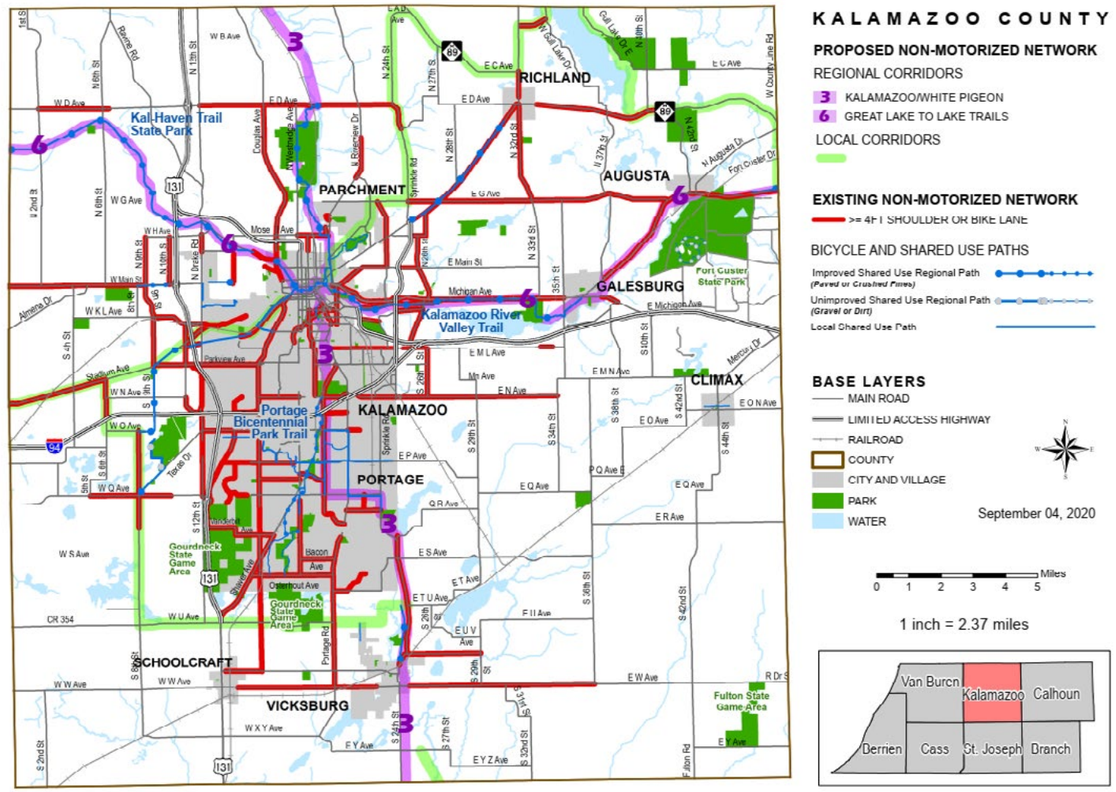
Mattawan to Kalamazoo - This is an important link to the west of Kalamazoo to Cass and Berrien counties. Important connections beyond Mattawan to Kalamazoo include Schoolcraft to Mattawan, Texas Township to Mattawan, Kalamazoo Valley Community College (KVCC) to Paw Paw, Alamo to Mattawan, Paw Paw to Oshtemo, Lawton to Paw Paw, and Lawton to Mattawan.

Southwest Michigan Bikeway (SWMB) - This is a proposed regional network consisting of existing and planned routes being signed as SWMB, More information is found in the KATS 2045 Metropolitan Transportation Plan. From the SWMB, logical connections to other municipalities in other directions include east from Climax and Augusta to Battle Creek, west from Paw Paw to Lawrence, Decatur and Bangor, and north to points in adjacent counties outside of the scope of this document, the most obvious of which includes but is not limited to bike routes to/from Plainwell and Otsego, and to/from SWMB's nodes, such as Alamo Township, Cooper Township and Richland.

Bike Friendly Kalamazoo (*https://bikefriendlykalamazoo.org/*) has many resources on efforts in Kalamazoo and the surrounding area.

On-Road Network Priorities:

- All roads identified on the proposed bike commuter routes map (see map on page 45). Note that this map is being updated and the new version can be found in the Metropolitan Transportation Plan on KATS' webpage at www.katsmpo.org.
- Douglas Road - North Street to W Main Street
- Mosel from Douglas Road to Westnedge Avenue
- Westnedge Avenue
- Kilgore Road
- West Main Street
- Portage Road between Milham Avenue and I-94
- Michigan Avenue to downtown
- Kalamazoo Avenue to downtown
- Douglas Avenue just south of US-131 Business Route
- Nichols Road to connect to the KRVT

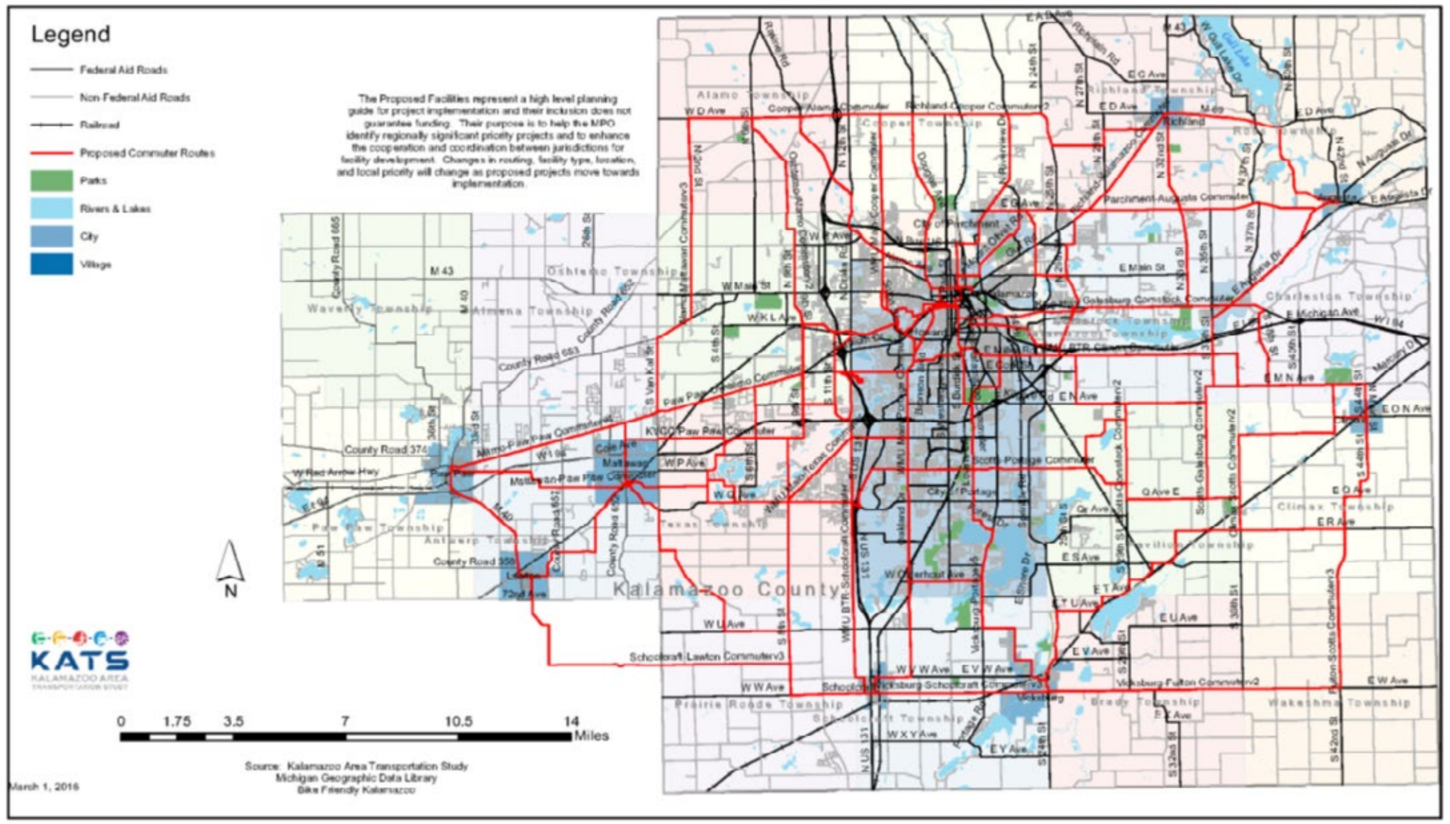


Off-Road Network Priorities:

- Galesburg to Augusta
- Connect KRVT - Douglas Road to rail right of way
- Gaps along Stadium Drive
- Ravine Road gap

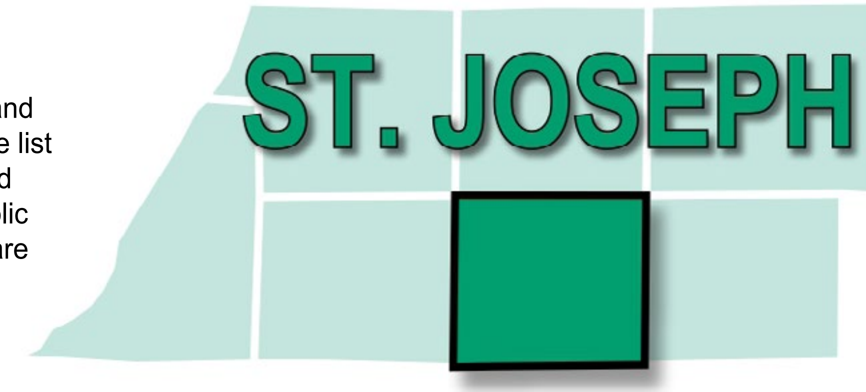
Other

- Repair facilities in bad condition (Vine Street, Crosstown Parkway, Portage Road, and Mills Street at Kings Highway)
- Potentially hazardous KRVT crossings of Nichols Road and Squires Drive
- Connect KRVT to Plainwell
- Finish KRVT connections/railroad crossings for the KRVT
- "Rodent" holes in Kal-Haven trail, west of 10th Street
- Upjohn Park area north to downtown, east-west bike paths
- M-43 - connect with separate facility
- More Amtrak bike facilities



Proposed Bike Commuter Routes, Kalamazoo Area Transportation Study, March 2016 (Note that this map is being updated and the new version can be found in the Metropolitan Transportation Plan on the KATS webpage at *www.katsmpo.org*).

St. Joseph County



Below is a list of local/regional efforts to expand nonmotorized opportunities in the county. The list of on-road (shoulders/bike lanes) and off-road network priorities were identified through public input and from local planning efforts. These are not listed in any order.

Kalamazoo/White Pigeon Corridor - There is a gap from White Pigeon to the Kalamazoo County line.

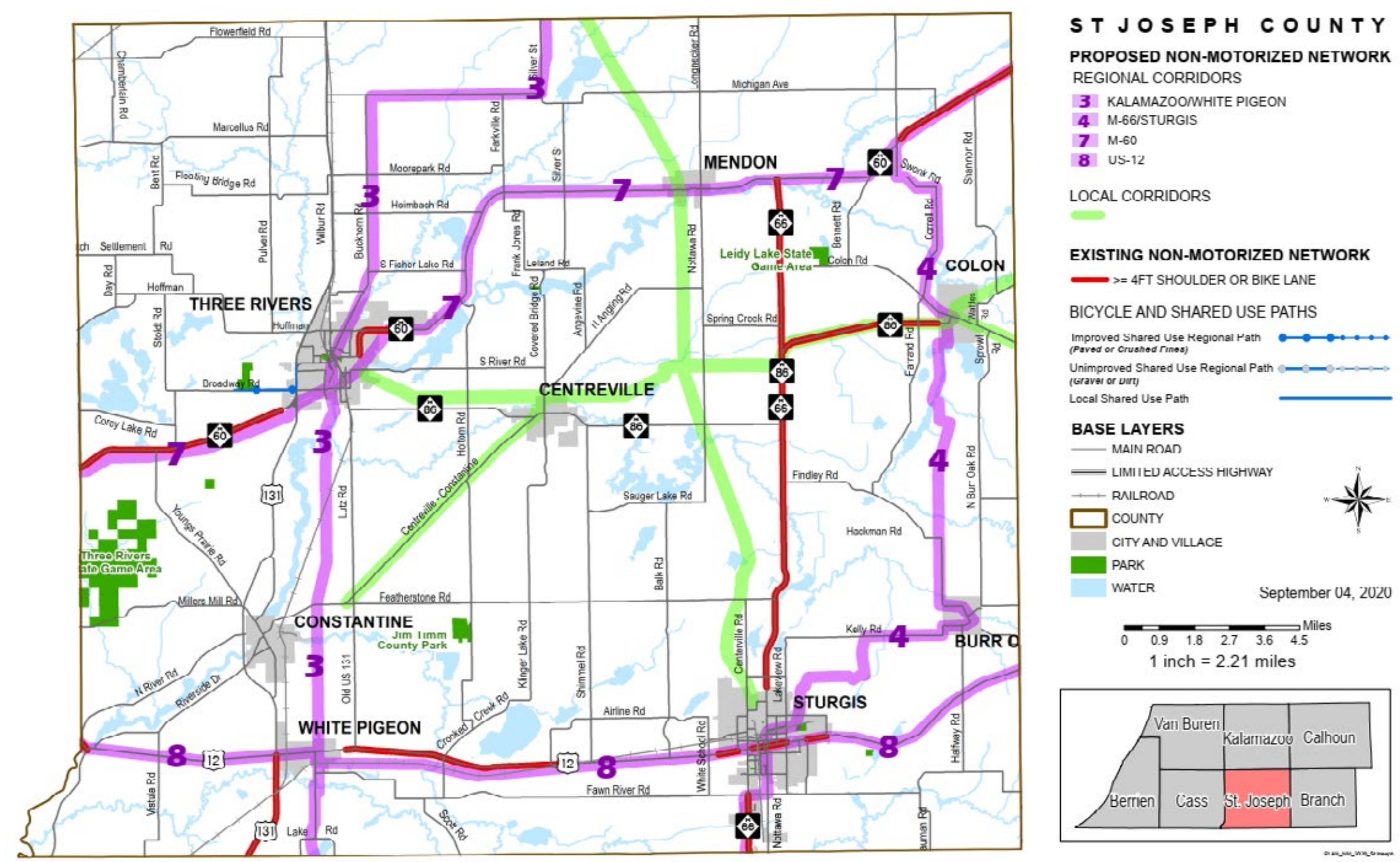
M**-66/Sturgis Corridor -** There is a gap from Sturgis to Colon to M-60.

M-60 Corridor - There is a gap from Three Rivers to east of Mendon.

US-12 Corridor - There is a gap from the Cass County line to White Pigeon, from Shimmel Road to Sturgis, and from Sturgis to the Branch County line.

On-Road Network Priorities:

- Buckhorn Road - city limit to Fisher Lake Road
- Broadway Road from US-131 to Meyer Bros. Park
- Link with Vicksburg/Kal-Haven Trail/KRVT
- Bike lane from Three Rivers west then north to Vicksburg
- Sturgis, north on Nottawa Street to River Run Road
- Three Rivers to White Pigeon via Constantine Road
- Three Rivers to Constantine



- M-60 - Three Rivers to Mendon
- US-12 - East of White Pigeon to Sturgis
- Michigan Street/Buckhorn Drive
- M-86 - Three Rivers to Centerville

Off-Road Network Priorities:

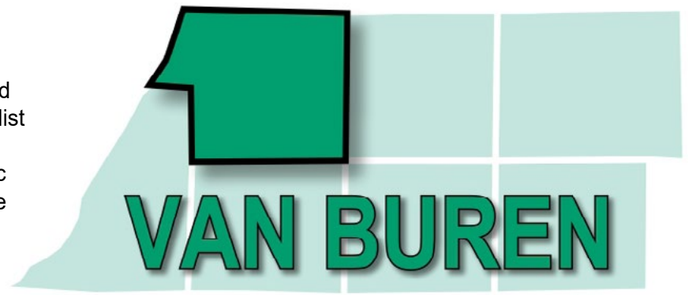
- Old railroad to Vicksburg
- White Pigeon to Sturgis along railway
- Portage River Walk - Water Street (boardwalk)
- E. Broadway/Old Railroad bridge
- Penn Railroad (right of way) west and east - Sturgis to Burr Oak
- Sturgis to Mendon to Vicksburg

Other

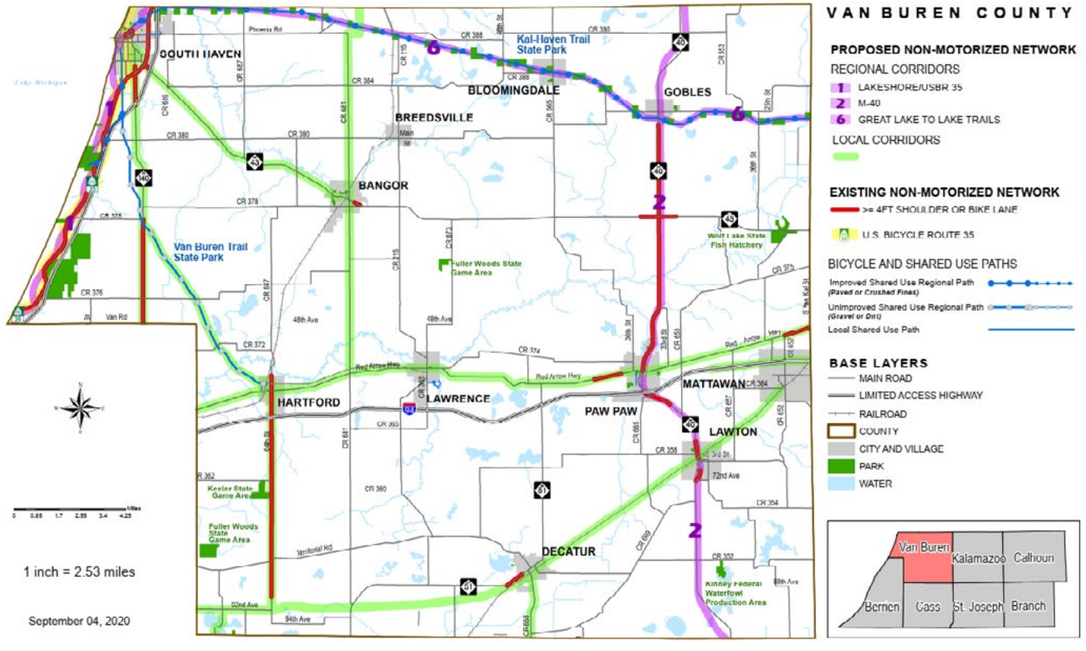
- Link White Pigeon to Pumpkin Vine Trail in Middlebury, Indiana

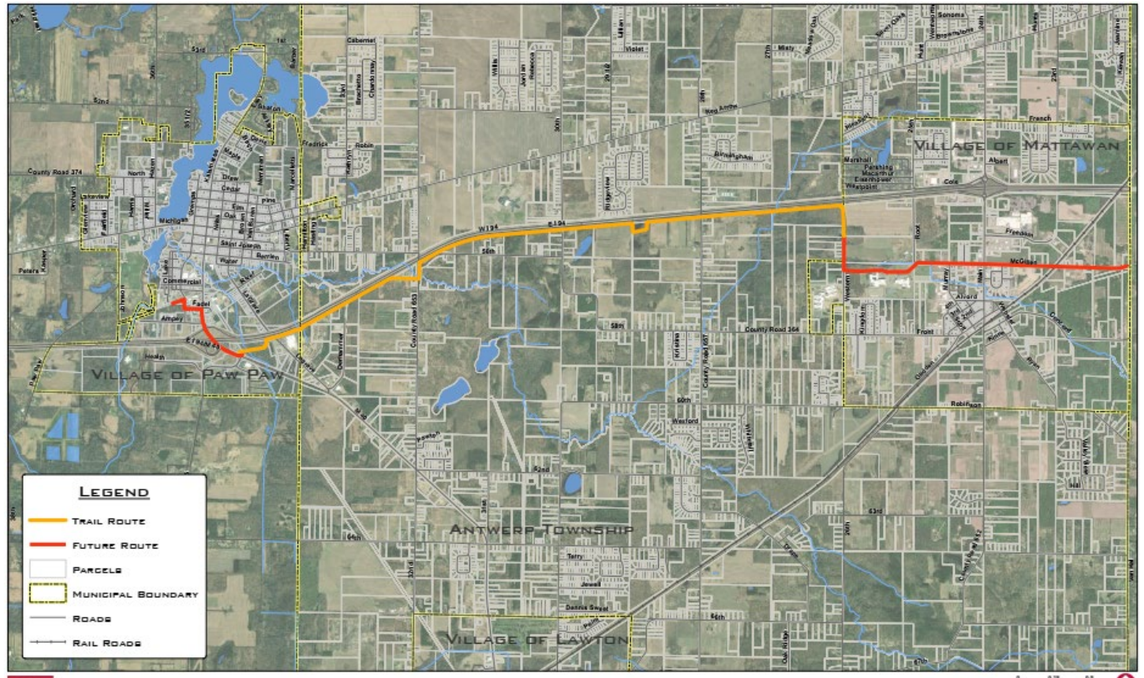
Van Buren County

Below is a list of local/regional efforts to expand nonmotorized opportunities in the county. The list of on-road (shoulders/bike lanes) and off-road network priorities were identified through public input and from local planning efforts. These are not listed in any order.



Blue Star Trail - In 2009, a group of stakeholders from Allegan and Van Buren counties came together to discuss the possibility of creating a nonmotorized connection from South Haven to Saugatuck. The Friends group is seeking contributions for their project and is working with the Allegan County Road Commission to develop their vision of a nonmotorized off-road shared use path along the roadway known as Blue Star Highway. Information can be found at *http://www.fotbst.org/*.





M-40 Corridor - Three sections along M-40 need a facility: in the village of Lawton and Paw Paw, and heading north out of the village of Lawton.

Fruitbelt Trail - This route follows a railroad from Hartford to Paw Paw, making an important east-west connection.

Antwerp Township Regional Trail - This route along I-94 between Paw Paw and Mattawan is an important east-west connection.

On-Road Network Priorities:

- 95th Avenue to CR 690 - Sister Lakes Trail Head
- CR 690 from 95th Avenue to M-152
- M-152 (92nd Avenue) from CR 690 to CR 687
- CR 687 from 92nd Avenue to 90th Avenue
- CR 681 - Kal-Haven Trail to Bangor
- M-43 - South Haven to Bangor
- M-40 - Lawton to Paw Paw
- M-51 - Decatur to I-94

Off-Road Network Priorities:

- Fruitbelt Trail - Hartford to Paw Paw
- N. Van Kal Street
- Antwerp Regional Trail - Paw Paw to Mattawan

Other

- Single track at Van Buren Street Park
- Pave the Van Buren Trail - Van Buren State Park to Hartford
- M-40 - Lawton To Gobles (the rumble strips make the paved shoulders too narrow)

APPENDICIES

State and Federal Initiatives/Resources

Regional Pedestrian/Bike Committees

Each of the seven MDOT regions (including the Southwest Region) hosts a regional pedestrian/bike committee that meets on a periodic basis. The committees include state, regional, and local agencies, communities and advocates that meet to discuss education, encouragement, engineering, evaluation, and planning issues; learn from each other and support each other's efforts; and build relationships and partnerships. The meetings are a venue to identify issues and become more knowledgeable of each other's planning, design, engineering, and funding processes in order to enhance pedestrian and bicycle safety and mobility for improved quality of life in our communities. Contact Brian Sanada, MDOT region planner (*SanadaB1@Michigan.gov*), for more information or to join the e-mail list.

Multi-Modal Development and Delivery (M2D2)

M2D2 is a project to support Michigan's economic recovery by partnering with Smart Growth America to work through an extensive process (in progress) to improve MDOT's institutional capacity to plan, design, construct, operate, and maintain Michigan's transportation system for Complete Streets and multiple modes. M2D2 is intended to result in updated standards that consider multi-modal travel on state trunkline highway facilities and provide MDOT staff with the knowledge and tools to effectively implement multi-modal travel.

Walkability Reviews/Training Wheels

Since 2006, MDOT has conducted a series of walkability and/or bikeability reviews (Training Wheels) on an annual basis in various communities in the state as funding is available. The sessions are designed to teach the basic principles of walkability from a nontechnical perspective, as well as details about the AASHTO guide and design of on-road bicycle facilities. The sessions are geared toward helping local administrators, officials, engineers, planners, business owners, residents, and other community stakeholders learn the benefits of providing safe and attractive environments for walking and biking. Beginning in 2019, MDOT began to offer more "advanced" trainings featuring newer, more complex designs for supporting on-road bicycling. These more complex designs are those found in NACTO publications.

Safe Routes to School (SRTS) Program

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 Transportation Alternatives Program (TAP) and administered by the Michigan Fitness Foundation and MDOT. The program includes the development of an SRTS plan by each school and then eligibility to apply for funding for a variety of infrastructure, education, and encouragement projects. The program is focused on K through 8-aged children and facilities that serve K through 8 schools. *saferoutesmichigan.org*

Studies and Research

In recent years, MDOT has received federal and state funding and contributed to funding a variety of nonmotorized initiatives, studies and research projects. The studies can be found on the MDOT website. Click on Research. Three of the most recent include:

Statewide Economic Impact

Phase I of the Community and Economic Benefits of Bicycling in Michigan report was completed in 2014, with Phase II completed in 2015. The two-phase project explains the economic benefit bicycling has on Michigan's local and statewide economies. The report finds that bicycling provides an estimated $668 million per year in economic benefit to Michigan's economy, including employment, retail revenue, tourism expenditure, and increased health and productivity. Using both quantitative and qualitative data, the report takes a unique approach to illustrate both the economic benefits of bicycling on a statewide basis as well as broader benefits bicycling can have on communities. Case studies were done on five Michigan communities. Phase II of the project includes more specific data on the economic impact of bicycling "events," bicycle touring, and Michigan as a bicycle destination. *https://www.Michigan.gov/documents/MDOT/MDOT_CommAndEconBenefitsOfBicyclingInMI_465392_7.pdf*

Best Design Practices

MDOT led research and developed a document to assist in determining how to optimize pedestrian and bicycle safety while minimizing impacts on vehicular mobility. The document, which was part of a larger study (Share the Road: Optimizing Pedestrian and Bicycle Safety and Vehicle Mobility) includes best practices to provide guidance in the design of nonmotorized improvements that have shown to reduce crashes involving pedestrians and bicyclists. The report is organized as a toolbox for planners and designers. Best practices are summarized into three categories: signalized intersections, unsignalized pedestrian crossing improvements, and corridor improvements. *https://www.Michigan.gov/MDOT/0,4616,7-151-9622_11045_24249-279311--,00.html*

Bicycle Sidepath Applications

MDOT's Intermodal Division conducted a research project to determine when on-road facilities are appropriate, in addition to side paths in urban and suburban environments, to accommodate bicyclists. Inappropriate application and use of side paths may result in higher risk to bicyclists who perceive such facilities as "safe" due to separation from the motor vehicle traffic stream. Objectives of the two-year study include:

- Gain better understanding of bicycle crashes with respect to frequency, location, bicyclists' direction of travel and speed, and severity of sidewalk and side path crashes versus on-roadway crashes.
- Investigate land use characteristics and general context of crash locations.
- Develop an understanding of the different reasons bicyclists choose to ride where they do.
- Produce a tool/spreadsheet model for assessing crash risk/potential of various bicycle facilities that can assist planners, engineers, and bicyclists with information on the facility appropriateness based on land use and crash potential.
- Develop educational materials to inform bicyclists and motorists about safety and crash scenarios with respect to bicycling on different facility types in different land use contexts.

https://www.Michigan.gov/documents/MDOT/SPR-1675_Sidepath_Application_Criteria_Development_for_Bicycle_Use_Final_Report_2018-07-09_628346_7.pdf

U.S. Department of Transportation (USDOT)

The USDOT and FHWA have elevated their focus, resources, research, and encouragement of the importance and need for quality, accessible, and connected pedestrian and bicycle facilities (*https://www.fhwa.dot.gov/environment/bicycle_pedestrian/resources/*). The USDOT has also developed a Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations (*https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/policy_accom.cfm*).

USDOT Policy Statement on Bicycle and Pedestrian Accommodations (2010) Recommended Actions: *Considering walking and bicycling as equals with other transportation modes.* The primary goal of a transportation system is to safely and efficiently move people and goods. Walking and bicycling are efficient transportation modes for most short trips and, where convenient intermodal systems exist, these nonmotorized trips can easily be linked with transit to significantly increase trip distance. Because of the benefits they provide, transportation agencies should give the same priority to walking and bicycling as is given to other transportation modes. Walking and bicycling should not be an afterthought in roadway design.

Ensuring that there are transportation choices for people of all ages and abilities, especially children. Pedestrian and bicycle facilities should meet accessibility requirements and provide safe, convenient, and interconnected transportation networks. For example, children should have safe and convenient options for walking or bicycling to school and parks. People who cannot or prefer not to drive should have safe and efficient transportation choices.

Going beyond minimum design standards. Transportation agencies are encouraged, when possible, to avoid designing walking and bicycling facilities to the minimum standards. For example, shared use paths that have been designed to minimum width requirements will need retrofits as more people use them. It is more effective to plan for increased usage than to retrofit an older facility. Planning projects for the long term should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements.

Integrating bicycle and pedestrian accommodation on new, rehabilitated, and limited-access bridges. USDOT encourages bicycle and pedestrian accommodation on bridge projects, including facilities on limited-access bridges with connections to streets or paths.

Collecting data on walking and biking trips. The best way to improve transportation networks for any mode is to collect and analyze trip data to optimize investments. Walking and bicycling trip data for many communities are lacking. This data gap can be overcome by establishing routine collection of nonmotorized trip information. Communities that routinely collect walking and bicycling data are able to track trends and prioritize investments to ensure the success of new facilities. These data are also valuable in linking walking and bicycling with transit.

Setting mode-share targets for walking and bicycling and tracking them over time. A byproduct of improved data collection is that communities can establish targets for increasing the percentage of trips made by walking and bicycling.

Removing snow from sidewalks and shared use paths. Current maintenance provisions require pedestrian facilities built with federal funds to be maintained in the same manner as other roadway assets. State agencies have generally established levels of service on various routes, especially as related to snow and ice events.

Improving nonmotorized facilities during maintenance projects. Many transportation agencies spend most of their transportation funding on maintenance rather than on constructing new facilities. Transportation agencies should find ways to make facility improvements for pedestrians and bicyclists during resurfacing and other maintenance projects.

Michigan Trails and Greenway Alliance (MTGA)

MGTA is dedicated to helping people and communities develop, connect and promote trails for a healthier and more prosperous Michigan. MTGA is the statewide voice for nonmotorized trail users, working with both public and private partners at the state and local levels to enhance and expand Michigan's network of trails and greenways. michigantrails.org

Public Meeting Promtional Materials

The following are examples of Facebook posts that were created to notify the public about nonmotorized summits that were held in all seven counties.

News releases for each of the seven county meetings were sent out to encourage community members and stakeholders to attend the nonmotorized summit meetings.

Contact:
Marcy Hamilton
Southwest Michigan Planning Commission
hamiltonm@swmpc.org
(269) 925-1137 x1525

FOR IMMEDIATE RELEASE: January 11, 2019

Berrien County Non-Motorized Summit to Focus on Connectivity

The Southwest Michigan Planning Commission (SWMPC), the Best Practices Committee of The Strategic Leadership Council and Andrews University are hosting a Berrien County Non- Motorized Summit on Wednesday, February 6, 2019 from 7:00pm to 9:00pm. It will take place in the lobby of the Howard Performing Arts Center on the campus of Andrews University located at 4160 E. Campus Circle Drive, Berrien Springs, MI 49104.

This summit is open to the public and is free to attend. Refreshments will be provided. There will be a brief presentation on non-motorized facilities in Berrien County and then a work session to gather input on desired facilities and priorities to help develop a vision. Non-motorized facilities include trails or shared use paths, bike lanes and paved shoulders that connect communities.

This free event is funded by the Michigan Department of Transportation (MDOT) and is part of a larger effort to update the Southwest Michigan Non-Motorized Plan and Bicycling Guide for 7 counties (Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph and Van Buren).

Currently, major trail efforts in Berrien County include the following:

- Indiana Michigan River Valley, a 34 mile trail connecting Niles, Michigan to Mishawaka, Indiana. There is interest in expanding this trail to connect to Berrien Springs and ultimately to St. Joseph.
- Berrien County Linear Park is the Berrien County Parks Department effort to link existing county parks with a trail with the first priority along Red Arrow Highway from Bridgman to the Galien River County Park north of New Buffalo.
- Marquette Greenway will be a 58 mile trail connecting New Buffalo to Chicago. Southwest Michigan Planning Commission is working with the municipalities and Friends of Harbor Country Trails to develop a route from the Indiana state line to downtown New Buffalo.

Many communities in Berrien County have trail systems, such as St. Joseph City (John and Dede Howard Family Recreation Trail), Buchanan City (McCoy's Creek Trail) and Benton Harbor City (Harbor Shores trails).
There are also efforts to add bike lanes and paved shoulders on roads to accommodate pedestrians and bicyclists. Some major projects include Napier Avenue (Benton and St. Joseph Townships), Red Arrow Highway (Chikaming and New Buffalo Townships) and M-63 Highway (Hagar Township). Other activities such as adding bike racks, share the road signage and road markings will also make our communities more bike friendly.

For more information about this event, please contact Kris Martin at martink@swmpc.org by phone at 269-925-1137 x 1521. ###

Guest speakers and presentations were included at the beginning of the meetings before the attendees split into groups to work on figuring out which roads held highest priority for nonmotorized trail development. The following document is an example of a typical summit agenda and instructions provided to attendees on how to indicate priority facilities during the breakout sessions.

St. Joseph County Non-Motorized Summit
June 18, 2019 7:00p.m.-9:00p.m.

Welcome – Marcy Hamilton, SWMPC and Carolyn Grace, St. Joseph Conservation District
MDOT Non-Motorized Initiative – Brian Sanada, MDOT
Non Motorized Overview - Marcy Hamilton, SWMPC
Around the Room – Non-Motorized Activity
Break Out Session - Map Review; Prioritize Regional Non-Motorized Projects
~Emphasis is on regional connections~
Report Out
Next Steps– Marcy Hamilton

For more information on the 7-County Non-Motorized Project contact:

Marcy Hamilton	Kris Martin
hamiltonm@swmpc.org	martink@swmpc.org
(269) 925-1137 x 1525	(269) 925-1137 x 1521

https://www.swmpc.org/nonmortorizedmap.asp

On Road Facilities
- Paved Shoulder (4 foot minimum)
- Marked Bike Lane (5 foot minimum)

Off Road Facilities
- Shared Use Path or Side Path (10 foot minimum)

Marking On The Maps
- **Existing Facilities**
  - Shared Use Path or Side Path - **BLUE**
  - Paved Shoulder (4ft)/Bike Lane (5ft) - **BLACK**
- **Planned or Desired**
  - On Road (paved shoulder/marked bike lane) - **PURPLE**
  - Off Road (shared use or side path) – **GREEN**

PRIORITY FACILITIES - ORANGE

Flyers were utilized in advertising the nonmotorized summit meetings.

Van Buren County Non - Motorized Summit

Bicycling and Pedestrian Facilities

Tuesday June 11, 2019
7:00 p.m. - 9:00 p.m.

Van Buren Conference Center
490 S Paw Paw St, Lawrence, MI 49064

Free, Open to the Public, Refreshments Provided

For more information contact: Kris Martin at martink@swmpc.org or 269-925-1137 x1521

Attendees will accomplish the following:
⇒ **Help establish a non-motorized vision**
⇒ **Discuss local priorities**
Give your input for non-motorized transportation (trails, bike lanes, paved shoulders) in Van Buren County. Your input will contribute to the Southwest Michigan 7-County Non-Motorized Transportation Plan and Map.

SWMPC MDOT Michigan Department of Transportation VAN BUREN TRAIL
south haven VAN BUREN COUNTY CONVENTION & VISITORS BUREAU
SouthHaven AREA CHAMBER OF COMMERCE

Highlighted Design Considerations

This section of the document details some general design considerations, resources, and characteristics related to the accommodation of bicycles and pedestrians within road rights of way and off-road corridors. Information is also included related to comfort level and behaviors of pedestrians and bicyclists. This section is not intended to replace the wealth of manuals and design guidance documents that exist. There are a number of design manuals and other guidance that should and/or must be used by agencies, designers, landscape architects, and engineers on how to best accommodate bicycles and pedestrians in their planning efforts.

Design of nonmotorized facilities should be guided by the AASHTO Guidebook, the MMUTCD, MMUTCD, and the NACTO Urban Bikeway Design Guide. As noted by the FHWA 2013 Guidance Memo, the FHWA is in support of taking a flexible approach to bicycle and pedestrian facility design. The memo notes that the NACTO Urban Bikeway Design Guide as well as the Institute of Transportation Engineers (ITE) Designing Urban Walkable Thoroughfares guide builds upon the flexibilities provided in the AASHTO guides.

There are also an extensive number of design details, treatments and considerations that may be applicable to projects that strive to improve the safety and mobility of pedestrians and cyclists. As this document is not intended to replace existing design standards, guidelines, and references, not all design considerations and treatments are discussed or illustrated. These include but are not limited to elements such as:

- Mid-block crossings
- Intersection treatments
- Road diets
- Signalization
- Striping and sign details
- Design details of facilities, such as pavement color/pattern

A brief overview of design considerations for various nonmotorized facility types follows below. Pedestrian and bicycle trips need to be viewed as part of an interconnected and multi-modal transportation system. Pedestrians and bicyclists have similar concerns and needs, including being vulnerable roadway users. However, those needs are not always identical.

Pedestrian Considerations

Walking trips are typically around 20 minutes in length and less than 1 mile in distance. The number of pedestrian trips tend to be higher in urban areas where there is a mix of land uses and the infrastructure exists to support pedestrian travel. Pedestrians are the most vulnerable roadway users. Unlike motorists and cyclists, pedestrians are capable of crossing a street in almost any location. This exposes pedestrians to conflicts with drivers of motor vehicles who are not prepared for their presence. Slow speeds, generally 3 miles per hour, also expose pedestrians to traffic for longer periods (SEMCOG/Metro Region Nonmotorized Plan, 2014; R. Gellar, Portland Office of Transportation). One solution is to design clear pedestrian facilities, including sidewalks, crosswalks, and crossings with signalization (where appropriate), that encourage predictable behavior and alert motorists to pedestrian presence.

Accommodating Pedestrians in the Public Right of Way

There are three primary ways in which pedestrians can be accommodated in the public right of way:

1. Sidewalks
The preferred pedestrian facility and provided on both sides of a street. Provide the greatest degree of comfort for pedestrians and are associated with increased safety for pedestrians.

2. Shared Use Paths or Side Paths
An off-road path can be an appropriate facility in rural or low-density suburban areas. Generally set back from the roads and separated by a green area or trees.

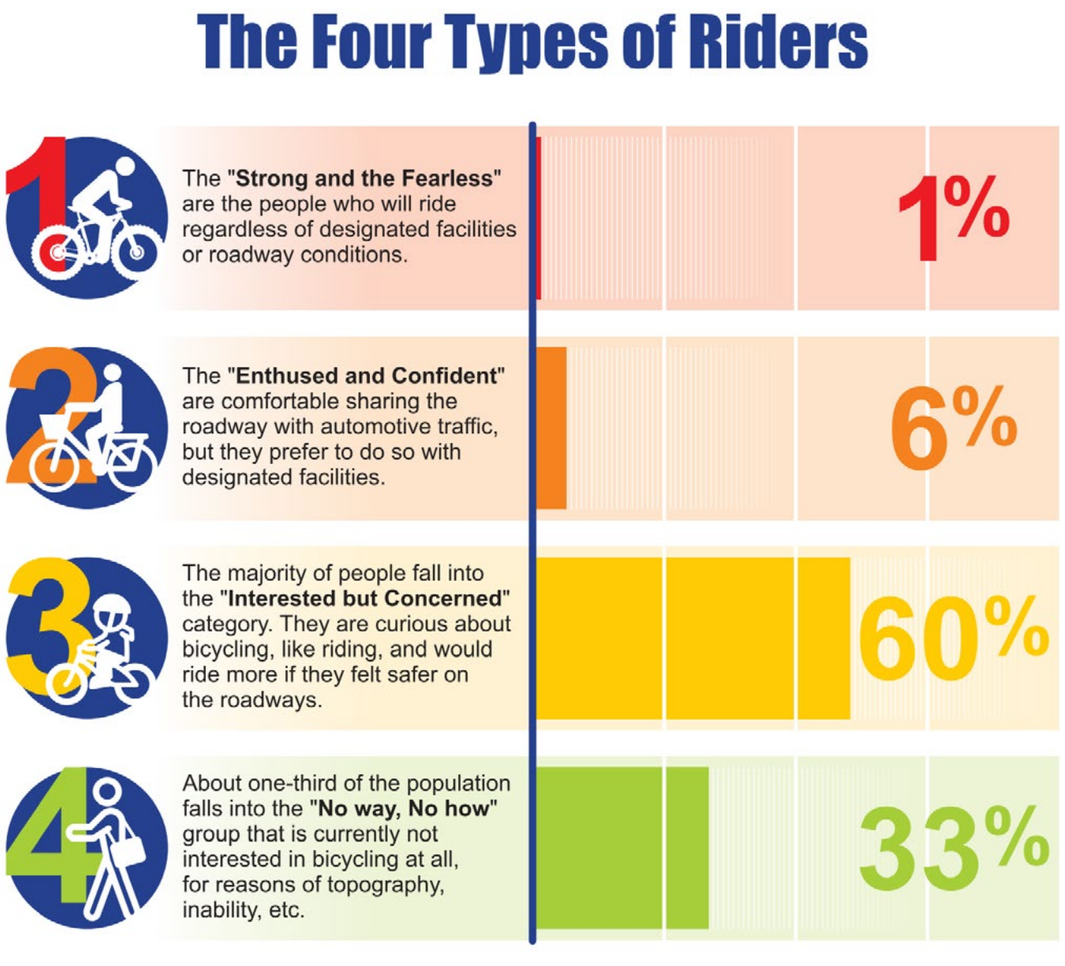
3. Shoulders
Wide shoulders on both sides of a road are a minimum accommodation for providing a possible place for people to walk.
– *pedbikesafe.org*

Bicycling Considerations

People bike for a number of reasons, including recreation, exercise, and for transportation. Depending on the trip purpose, there are varying considerations when developing bicycle infrastructure. Commuting or transportation-related bicycling typically involves the shortest and easiest route to the destination, which is typically within or along road corridors. Trips for exercise or leisure are more likely to include scenic, low-stress routes on off-road facilities and often during off-peak times and weekends.

Before discussing types of facilities and typical design considerations, it is important to discuss the general types of cyclists and how design decisions can impact the number of cyclists using the facilities. Most people can be categorized as one of four types of cyclists as illustrated below.

When working with agencies, stakeholders and advocates to discuss context-sensitive solutions related to encouraging bicycling as a safe mode of transportation, it is the “Interested But Concerned” group of the population that should be kept in mind. This group represents the majority of latent demand for bicycle facilities. As such, their preference should be given significant consideration.



Highlighted MDOT Guidance

MDOT has developed additional guidance and considerations for staff and partnering agencies to reference when planning and designing nonmotorized projects within MDOT right of way. If a facility will be within county or local right of way, ensure that you contact the appropriate road agency to understand their process and requirements.

Considerations for projects located within MDOT right of way

As a nonmotorized project that is within or crosses MDOT right of way moves forward, there are a number of considerations that must be addressed prior to a permit being issued, including the following:

- Identification of affected MDOT slopes, grades, retaining walls, and other structures
- Nonmotorized routing options
- Wetland, floodplains, and streams impacted by the proposed crossings, and related permit issues
- Tree removals
- Impacts on threatened or endangered species
- Impacts on built and natural environment
- Required clearances over, under, and adjacent to MDOT facilities
- Americans with Disabilities Act (ADA) issues for the nonmotorized user
- Safety and security issues for nonmotorized users
- Utility impacts
- Drainage impacts
- Traffic safety issues for both nonmotorized and highway traffic
- Maintenance plans and associated funding commitments from agencies responsible for maintenance and future rehabilitation activities
- Impact on future plans for the highway corridor

Guidelines for Nonmotorized Facilities Along State Trunkline Highways

Constructing nonmotorized facilities for pedestrians and bicyclists along a state trunkline highway will need to consider a number of variables and impacts, depending on the facility type, location (urban or rural), traffic volumes, and other contextual elements. In most cases, construction of nonmotorized facilities will require a permit from MDOT prior to construction; the permit conditions will be identified on a case by case basis.

In general, most nonmotorized facilities will be constructed by a local agency and will require a commitment to ongoing maintenance and rehabilitation. Funding will be provided by the local agency with jurisdiction over the nonmotorized facility; however, there may be opportunities to partner with MDOT on nonmotorized facility construction on a new or replaced roadway or bridge. The nonmotorized facility route will also need to be included in a community or regional nonmotorized plan. The safety of all system users is the primary consideration before allowing a nonmotorized facility on or near a state trunkline.

A. Trunkline Bridges

Widths of nonmotorized facilities are typically based on AASHTO’s Guide for the Development of Bicycle Facilities. Any additional width for nonmotorized facilities on bridges beyond the current standards or guidelines will need funding identified.

Bridge Design Guides and Shoulder Width for New or Replaced Bridges

- Nonmotorized facilities are not allowed on limited access freeway bridges.
- Shoulders on non-freeway corridors and bridges will be constructed based on current design guidelines.

Nonmotorized/Pedestrian Facility Requirements

- A raised sidewalk may be allowed on bridges with speeds below design guidelines.
- Nonmotorized facilities shall be separated from traffic using a concrete barrier or other approved comparable technique for speeds greater than 40 mph.

Bridge Length and Clear Zone Distance

- Nonmotorized facilities can be located behind bridge piers, with filler walls between piers, appropriate slope treatments or retaining walls.
- When replacing a bridge spanning a roadway, generally the face of MDOT’s new bridge abutments will be placed outside the clear zone. The clear zone is measured from the edge of the outside traveled lane. All minimum/maximum distances are based on roadway side slopes, number of lanes, ADT, and related factors.

Grade-Separated Nonmotorized Facilities

- Separate nonmotorized facilities may be constructed over or under a state trunkline, either as a bridge or a tunnel, following MDOT and AASHTO guidelines, and with MDOT design approvals. Permits from other regulatory agencies will be the responsibility of the nonmotorized facility owner.
- Widths of nonmotorized facilities are typically based on AASHTO's Guide for the Development of Bicycle Facilities.
- A permit from MDOT is required prior to construction; the permit conditions will be identified on a case by case basis. MDOT shall review all structural and environmental impacts in coordination with other regulatory agencies prior to issuing a permit.
- All construction and ongoing rehabilitation and maintenance costs will be the responsibility of the agency with jurisdiction over the nonmotorized facility; an approved maintenance agreement with MDOT will also be required.

B. Trunkline Roadways

- A permit from MDOT is required for all proposed nonmotorized facilities prior to construction; the permit conditions will be identified on a case by case basis. MDOT shall review all structural and environmental impacts in coordination with other regulatory agencies prior to issuing a permit.
- Permits from other regulatory agencies will be the responsibility of the nonmotorized facility owner.
- Nonmotorized facilities are not allowed on limited-access freeways. With limited exceptions, nonmotorized facilities may be allowed as close as practicable to the limited access right of way (LAROW) fence or property line, within LAROW or adjacent to LAROW, if no reasonable alternative is available.
- Thorough review and evaluation of nonmotorized facility proposals, adjacent to MDOT LAROW or within MDOT LAROW, will be performed and considered on a case by case basis, and will require MDOT and FHWA approvals.
- Shoulders along rural trunklines may be used for nonmotorized travel but generally will not be signed.
- Signed nonmotorized shoulders along trunklines will require local participation and designation in a nomotorized plan, and will be constructed to the appropriate and current AASHTO guidelines.
- Road diets, or four-to-three-lane conversions, with nonmotorized facilities added may be allowed on surface trunklines, generally limited to urban areas, consistent with MDOT policies, practices and guidelines. This will include consideration of the efficient and safe operation of all traffic on the roadway.
- This concept usually includes a pilot program period, with changes to pavement markings and no permanent physical modifications to the roadway.

Requesting Shared Use Paths within LAROW

MDOT manages the operation and use of LAROW. A LAROW is highway with access limited to intersections; driveways are generally not allowed. Approval and location of a shared use path/trail within LAROW is subject to the approval of not just MDOT but also FHWA.

A key first step is to contact your local MDOT Transportation Service Center (TSC) to begin discussing the idea and process early in the planning phase. MDOT developed a document to provide guidance to MDOT staff and stakeholders that describes a variety of considerations, including items such as:

- A two-step application process to allow the applicant to receive a preliminary response from MDOT and FHWA without having to invest significant resources in developing plans that would not be permitted.
- Demonstrate no feasible alternative.
- Designed per MDOT and AASHTO specifications.
- Agree to assume all financial and operational responsibility and all associated improvements.
- Have an approved master plan identifying the proposed path/trail and preliminary access points.
- Show connectivity to/between other paths.
- Have adopted resolutions from all impacted local and county governments in support of the shared use path/trail.
- Draft operation and maintenance plan agreement between MDOT and applicant.

There are a number of other considerations if planning a shared use path within LAROW; early consultation with local MDOT TSC staff is critical.

Funding Options

Financing the acquisition, development, and maintenance of the nonmotorized system is essential to sustaining the system. Several opportunities exist to fund acquisition and development of the nonmotorized system. Within the local government structure, understanding the far-reaching benefits of a walkable and bikeable community (economic, health, recreation, mobility, transit, etc.) can oftentimes open up opportunities for cost-sharing, thereby reducing the financial burden on one entity, organization, or department. Additional information on federal transportation funding sources for bicycle and pedestrian projects can be found on the FHWA website, as well as MDOT's Bicycling in Michigan website. Most federal funds can be used for bike/pedestrian projects. A few of the most common funding programs are summarized here. It should be noted that being a proposed/planned facility, priority, or desired connection in this plan does not mean the project or facility meets eligibility requirements of these funding sources.

Infrastructure Projects

Regardless of the source of funding, it is advantageous for bicycle and pedestrian projects to be coordinated with other road and infrastructure projects. If included early in the planning and design phases of roadway projects, there is potentially more design flexibility and economies of scale. A number of communities and road agencies throughout Michigan have made significant progress by including pedestrian and bicycle facilities, striping, crosswalks, signals, ramps, signs, etc., in a larger road improvement project.

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. State transportation law (MCLA 247.660k) requires a minimum of 1 percent of state transportation funds be spent on nonmotorized transportation. Act 51 funds can be spent on pedestrian/bike items such as:

- Shared use paths
- Sidewalk/ramps/curb cuts
- Nonmotorized 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.

Work Creditable Against the Section 10k 1 Percent Expenditure Requirement

PA 51 of 1951 as amended
Updated April 2019

Background:

Act 51 of 1951 is a public act of the State of Michigan that, among other things:

- Created the Michigan Transportation Fund (MTF);
- Distributes the MTF for transportation purposes; to promote safe and efficient travel for motor vehicle drivers, bicyclists, pedestrians, and other legal users of roads, streets, and highways.

Michigan Compiled Laws (MCL) Sec. 247.660k, commonly referred to as "Section 10k," allows and requires spending of MTF monies on nonmotorized transportation services and facilities. MCL 247.660k(2) states, "Of the funds allocated from the Michigan Transportation Fund to the State Trunkline Fund and to the counties, cities, and villages, a reasonable amount, but not less than 1 percent of those funds shall be expended for construction or improvement of nonmotorized transportation services and facilities."

Guidance:

The following information has been developed to help road agencies meet the statutory requirements of MCL 247.660k.

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 nonmotorized transportation in lieu of a motor vehicle.

Nonmotorized 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, or
- Natural surface hiking or walking trails.

Cross-jurisdictional Work

State trunklines pass through counties, cities and villages. It is common for state trunklines or county roads to pass through cities and villages, with those cities or villages not having any management or jurisdictional responsibility for the roadway. Several statutes allow for the transfer of certain activities and financial responsibilities between transportation agencies. Specifically, MCL 247.662 and MCL 247.663 allow a road agency to enter into a contract with another road agency to perform construction or reconstruction work on a highway, road or street, or perform work incidental to those roadways.

Accommodations for nonmotorized users are allowed under MCL 247.660k and is considered work incidental to the roadway. As such, cost-sharing for construction or reconstruction of nonmotorized transportation assets that are part of the nonmotorized transportation network is permissible. Agencies contributing financially to those projects can report that expenditure as an eligible expenditure under the 1 percent requirement. This assumes the expenditures meets all other requirements (such as the funding source being the MTF, the project location is in public ownership, etc.).

For example: a city or village, under contract with a county road commission (or MDOT), could build nonmotorized accommodations on a county road (or trunkline) in the city or village. If the city or village pays for the work using MTF monies, the city or village can report those expenditures under the Section 10k requirement.

Design Standards and Considerations

All work must be done to professional engineering standards and relevant guidance and regulations, including but not limited to the AASHTO Guide for the Development of Bicycle Facilities 2012 or newer; Guide for the Planning, Design and Operation of Pedestrian Facilities 2004 or newer, MMUTCD 2005 or newer, and the U.S. Access Board Public Rights-of-Way Access Guidelines (PROWAG), and any of the NACTO Design Guides with the allowable context of the AASHTO guides or the MMUTCD.

Project Eligibility Determination

- New construction or reconstruction: The construction of new infrastructure that supports nonmotorized transportation or the reconstruction of existing infrastructure. Eligible if the project has a nonmotorized transportation purpose.
- Capital preservation projects: Capital preservation projects include certain projects, such as crack and surface treatments, non-structural overlays, resurfacing, restoration, or rehabilitation. Eligible as long as the project supports a nonmotorized transportation facility. See page 4 for further explanation and a list of specific project work type eligibility.
- Routine maintenance: Routine maintenance includes actions performed on a regular or controllable basis, or in response to uncontrollable events, such as but not limited to snow and ice removal, pothole filling, mowing, repairing/replacing lighting, clearing of brush and vegetation, sweeping, or clearing drainage facilities. Ineligible regardless of location.

The following table represents some specific work items creditable against the Section 10k 1 percent requirement. If your community identifies potential work items that do not appear on the list below, please contact MDOT's pedestrian and bicycle specialists to discuss eligibility.

DESCRIPTION OF WORK	WORK CREDITABLE AGAINST SECTION 10K 1 PERCENT REQUIREMENT	ELIGIBLE COST	
		Engineering	Construction
NON – ROAD FACILITIES			
Shared Use Path as a project	All engineering/construction/ reconstruction.	100%	100%
Shared Use Path as part of a road project	1) All path-related construction/ reconstruction. 2) Non-path work in the road project necessitated by the path component (e.g., extra fill, culvert extension, etc.).	Prorated*	100% of 1 and 2
Shared Use Path Structures	All engineering/construction.	100%	100%
Bicycle Parking	Acquisition and installation.	100%	100%
Sidewalks, Ramps and Curb Cuts	All engineering/construction.	100%	100%
Curb Extensions and Median Refuge Islands	All engineering/construction.	100%	100%
Signs, Pavement Markings, Pedestrian/ Bicycle Signals	All work specifically associated with the signs, markings, and signals specifically intended for nonmotorized users.	100%	100%
Crack and Surface Treatments, Non-structural Overlays, Resurfacing, Restoration or Rehabilitation	All engineering/construction on shared use pathways, side paths or sidewalks.	100%	100%
SERVICES			
Nonmotorized Planning and Education	Costs associated with the development of nonmotorized planning documents or educational materials intended to promote the development, benefits, safety, and use of nonmotorized transportation.	Not Applicable	Not Applicable
ROAD FACILITIES (see notes below)			
Signs, Pavement Markings, Pedestrian/Bicycle Signals	All work specifically associated with the signs, markings and signals specifically intended for nonmotorized users.	100%	100%
Bike Lanes - Pavement, Markings, and Signs as a project	All engineering/construction.	100%	100%
Bike Lanes - Pavement, Markings, and Signs as part of a road or bridge construction	That portion of the engineering and construction that can be attributed to the bike lane.	Prorated	Prorated**
Shoulder Paving as a project	All engineering/construction.	100%	100%
Shoulder Paving as part of a road or bridge construction	That portion of the engineering and construction that can be attributed to the paved portion of the shoulders.	Prorated	Prorated**
Road or Bridge Construction	That portion of the road or bridge project intended for nonmotorized travel.	Prorated	Prorated
Crack and Surface Treatments, Non-structural Overlays, Reconstruction, Resurfacing, Restoration, or Rehabilitation	All engineering/construction for that portion of the roadway meeting the dimensional requirements set forth in the relevant AASHTO guidelines for the on-roadway nonmotorized facility (shoulders or bike lanes).	Prorated	Prorated

* Proration: Enm = (Cnm / Ctot) x Etot, where E=Engineering $s, and C=Construction $s

** Proration: Cnm = (Wnm / Wtot) x Ctot where W = Width of roadway, and C = Construction $s.
Note only road/bridge project pay items that include the nonmotorized width in the width proration.

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*.

ADDITIONAL NOTES:
Non-road facilities are accommodations that occur outside of the edge of the road and may or may not be within the road right of way but still have a transportation purpose. Shared use paths and structures on those paths are off-roadway facilities intended for nonmotorized travel. Ramps and curb cuts where paths or sidewalks cross roadways are eligible; bicycle parking facilities also qualify. Signs, pavement markings, and signals associated with road or non-road facilities intended for the safety and mobility of bicyclists or pedestrian are also eligible expenditures.

Road facilities are nonmotorized accommodations built within a roadway. Marked bicycle lanes and paved shoulders qualify as a bicycle accommodation if they meet national design standards and guidelines for nonmotorized facilities. Portions of/prorated road or bridge construction, reconstruction, resurfacing, widening, rehabilitation, and certain heavy and light capital preservation maintenance (CPM) costs may be eligible if the work supports or takes place on accommodations for nonmotorized users and meet national design standards and guidelines for nonmotorized transport. In the case of resurfacing, rehabilitation and light or heavy CPM, work is eligible only if it is done on existing nonmotorized accommodations; work in motor vehicle travel lanes and turn lanes does not qualify as a nonmotorized expenditure. Road diets or the restriping costs associated with converting a roadway from four lanes to three lanes (two travel lanes, a turn lane and two marked bicycle lanes) within the existing curb alignment can also be considered an eligible expenditure.

As Section 10k was amended effective March 29, 2006, changing from gravel to hard-surface roads, including paving of gravel roads, no longer qualifies as an eligible expenditure toward Section 10(k). Sidewalk "addition or improvement" in a city or village are eligible nonmotorized expenditures; see MCL 247.660k(3) for more information.

The following CPM and rehabilitation projects are Section 10k-eligible when the work is performed on paved shoulders 4 feet wide or greater, in marked bike lanes, or on sidewalks, side paths or shared use pathways. The following work is not eligible for reporting against the Section 10k 1 percent requirement when the work takes place in a travel lane or a dedicated turn lane.

Project Classification	Improvement Type	Description
Heavy CPM*	Bituminous less than 1.5 inches	Bituminous overlays of 1.5 inches or less
Heavy CPM	Micro-surface	Thin surface layer application over pavement
Heavy CPM	Overband crack fill	Overband crack clean and fill
Heavy CPM	Partial remove and repair	Partial-depth concrete removal and repair
Heavy CPM	Skip patching	Intermittent paving the most distressed sections
Heavy CPM	Partial depth concrete pavement repair	Partial-depth concrete pavement repair
Heavy CPM	Concrete joint and surface spall repair	Concrete joint and surface spall repair
Heavy CPM	Concrete pavement restoration	Concrete pavement restoration
Heavy CPM	Ultra-thin bituminous overlay (less than 20 millimeters)	Ultra-thin bituminous overlay (less than 20 millimeters)
Heavy CPM	Cold milling and bituminous overlay (less than 40 millimeters)	Cold milling and bituminous overlay (less than 40 millimeters)
Heavy CPM	Bituminous overlay (less than 40 millimeters)	Bituminous overlay (less than 40 millimeters)
Light CPM	Joint/spall repair	Concrete joint repair and surface spall repair
Light CPM	Joint seal	Concrete joint resealing and crack sealing
Light CPM	Crack seal	Pavement crack seal
Light CPM	Shallow crack fill	Filling shallow pavement cracks
Light CPM	Ultra-thin overlay	MHMA overlay of 0.7 inches average thickness
Light CPM	Bituminous crack treatment	Bituminous crack treatment
Light CPM	Concrete crack sealing	Concrete crack sealing
Light CPM	Concrete joints reseal	Concrete joints reseal
Light CPM	Overband crack fill	Overband crack fill
Rehabilitation	Hot-bituminous recycling	Hot-in-place bituminous recycling
Rehabilitation	Culvert improvement	Culvert extension and headwall repair/rebuild
Rehabilitation	Full remove and repair	Full-depth concrete removal and repair
Rehabilitation	Shoulder improvement	Surfacing of shoulder with higher-quality materials
Rehabilitation	Shoulder resurface	Resurfacing of the shoulder
Rehabilitation	Surface mill and overlay	Surface milling and non-structural overlays
Rehabilitation	Full-depth concrete pavement repair	Full-depth concrete pavement repair
Rehabilitation	Bituminous resurfacing	Bituminous resurfacing
Rehabilitation	Bituminous shoulders	Bituminous shoulders
Rehabilitation	Bituminous resurfacing and bituminous shoulders	Bituminous resurfacing and bituminous Shoulders
Rehabilitation	Bituminous resurfacing and drainage improvements	Bituminous resurfacing and drainage improvements
Rehabilitation	Bituminous shoulder work	Bituminous shoulder work

*CPM – Capital Preservation Maintenance
Adapted from the Transportation Asset Management Council Investment Reporting Tool program

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 availabe at *Michigan.gov/CMAQ*.

Transportation Alternatives Program (TAP)

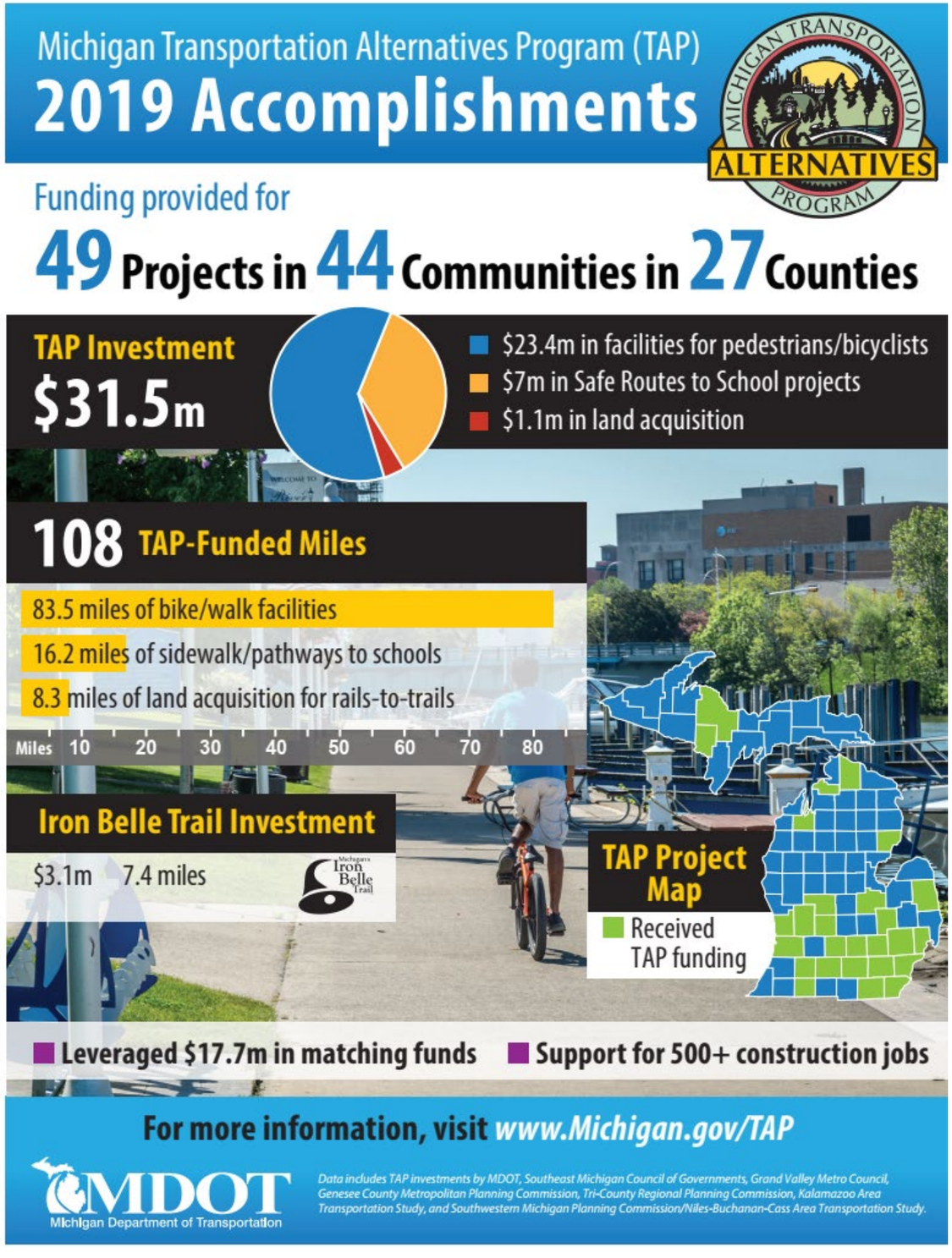
TAP (or TA, the newer, shorter name) is a funding source designated by Congress under the Fixing America's Surface Transportation (FAST) Act to be used for activities that enhance the intermodal transportation system and provide safe alternative transportation options, including pedestrian and bicycle 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 though a statewide competitive grant process.

Criteria for MDOT TAP funding includes:

- Connecting and developing documented regional or statewide bicycle and pedestrian transportation networks
- Broad public engagement and strong support
- 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 and answers to frequently asked questions can be found at *www.Michigan.gov/TAP*.



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 for an SRTS program: 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, $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 non-infrastructure. Major grants require an in-depth planning process prior to submitting an application. Funding details can be found at *www.saferoutesmichigan.org*.

U.S. Department of Agriculture (USDA)

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 nonmotorized transportation infrastructure as well as equipment to maintain infrastructure. Loan rates are typically lower than those available on the open market and can have a term 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*.

Other Funding Sources

Non-traditional sources of funding can also be used for bicycle and pedestrian projects, such as 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 nonmotorized facilities. Also, some communities are setting up endowments for long-term maintenance of trails and amenities.

FHWA Funding Opportunities Chart
https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.cfm

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

Revised August 9, 2018

This table indicates potential eligibility for pedestrian and bicycle projects under U.S. Department of Transportation surface transportation funding programs. Additional restrictions may apply. See notes and basic program requirements below, and see program guidance for detailed requirements. Project sponsors should fully integrate nonmotorized accommodation into surface transportation projects. Section 1404 of the Fixing America's Surface Transportation (FAST) Act modified 23 U.S.C. 109 to require federally-funded projects on the National Highway System to consider access for other modes of transportation, and provides greater design flexibility to do so.

Key: $ = Funds may be used for this activity (restrictions may apply). ~$ = Eligible, but not competitive unless part of a larger project. $* = See program-specific notes for restrictions.

	Pedestrian and Bicycle Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds															
Activity or Project Type	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTTP
Access enhancements to public transportation (includes benches, bus pads)	$	~$	$	$	$	$		$	$	$						$
ADA/504 Self Evaluation / Transition Plan									$	$	$		$			$
Bicycle plans				$					$	$		$	$			$
Bicycle helmets (project or training related)									$	$SRTS		$		$*		
Bicycle helmets (safety promotion)									$	$SRTS		$				
Bicycle lanes on road	$	~$	$	$	$	$	$	$	$	$		$				$
Bicycle parking	~$	~$	~$	$	$	$		$	$	$	$	$				$
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)						$ 1 per State			$	$SRTS		$				
Crosswalks (new or retrofit)	$	~$	$	$	$	$*	$	$	$	$	$	$				$
Curb cuts and ramps	$	~$	$	$	$	$*	$	$	$	$	$	$				$
Counting equipment				$	$		$	$	$	$	$	$	$*			$
Data collection and monitoring for pedestrians and/or bicyclists				$	$		$	$	$	$	$	$	$*			$
Historic preservation (pedestrian and bicycle and transit facilities)	$	~$	$	$	$				$	$						$
Landscaping, streetscaping (pedestrian and/or bicycle route; transit access), related amenities (benches, water fountains), generally as part of a larger project	~$	~$	~$	$	$			$	$	$						$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	$	~$	$	$	$		$	$	$	$	$	$				$
Maps (for pedestrians and/or bicyclists)				$	$	$			$	$		$	$*			
Paved shoulders for pedestrian and/or bicyclist use	$	~$	$			$*	$	$	$	$		$				$

Key: $ = Funds may be used for this activity (restrictions may apply). ~$ = Eligible, but not competitive unless part of a larger project. $* = See program-specific notes for restrictions.

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

Activity or Project Type	BUILD	INFRA	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTTP
Pedestrian plans				$					$	$		$	$			$
Recreational trails	~$	~$	~$						$	$	$					$
Road Diets (pedestrian and bicycle portions)	$	~$	$				$	$	$	$						$
Road Safety Assessment for pedestrians and bicyclists							$		$	$			$			$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike safety									$SRTS	$SRTS		$	$*	$*	$*	
Safety education positions									$SRTS	$SRTS		$		$*		
Safety enforcement (including police patrols)									$SRTS	$SRTS		$		$*	$*	
Safety program technical assessment (for peds/bicyclists)									$SRTS	$SRTS		$	$*	$		
Separated bicycle lanes	$	~$	$	$	$	$	$	$	$	$		$				$
Shared use paths / transportation trails	$	~$	$	$	$	$*	$	$	$	$	$	$				$
Sidewalks (new or retrofit)	$	~$	$	$	$	$	$	$	$	$	$	$				$
Signs / signals / signal improvements	$	~$	$	$	$	$	$	$	$	$		$				$
Signed pedestrian or bicycle routes	$	~$	$	$	$	$		$	$	$		$				$
Spot improvement programs	$	~$	$	$			$	$	$	$	$	$				$
Stormwater impacts related to pedestrian and bicycle projects	$	~$	$	$	$		$	$	$	$	$	$				$
Traffic calming	$	~$	$	$			$	$	$	$		$				$
Trail bridges	$	~$	$			$*	$	$	$	$	$	$				$
Trail construction and maintenance equipment									$RTP	$RTP	$					
Trail/highway intersections	$	~$	$			$*	$	$	$	$	$	$				$
Trailside and trailhead facilities (includes restrooms and water, but not general park amenities; see program guidance)	~$*	~$*	~$*						$*	$*	$*					$
Training						$	$		$	$	$	$	$*	$*		
Training for law enforcement on ped/bicyclist safety laws									$SRTS	$SRTS		$			$*	
Tunnels / undercrossings for pedestrians and/or bicyclists	$	~$	$	$	$	$*	$	$	$	$	$	$				$

Abbreviations

ADA/504: Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973
BUILD: Better Utilizing Investments to Leverage Development Transportation Discretionary Grants
INFRA: Infrastructure for Rebuilding America Discretionary Grant Program
TIFIA: Transportation Infrastructure Finance and Innovation Act (loans)
FTA: Federal Transit Administration Capital Funds
ATI: Associated Transit Improvement (1% set-aside of FTA)
CMAQ: Congestion Mitigation and Air Quality Improvement Program
HSIP: Highway Safety Improvement Program
NHPP: National Highway Performance Program
STBG: Surface Transportation Block Grant Program
TA: Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)
RTP: Recreational Trails Program
SRTS: Safe Routes to School Program / Activities
PLAN: Statewide Planning and Research (SPR) or Metropolitan Planning funds
NHTSA 402: State and Community Highway Safety Grant Program
NHTSA 405: National Priority Safety Programs (Nonmotorized safety)
FLTTP: Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)

Resource List

This plan references and provides links to a number of resources.
These resources have been listed here to serve as a quick reference.

Federal or National Studies, Research, Policies, and Resources

FHWA Bicycle and Pedestrian Program Resources, Research and Encouragement
AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
National Association of City Transportation Officials' Urban Bikeway Design Guide (NACTO)
(only portions compliant with AASHTO and MMUTCD are accepted by FHWA)
United States Access Board Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)
FHWA table on Bicycle Facilities and the Manual on Uniform Traffic Control Devices
FHWA Guide for Maintaining Pedestrian Facilities for Enhanced Safety
Institute of Transportation Engineers (ITE) Designing Walkable Urban Thoroughfares
FHWA Separated Bike Lane Planning and Design Guide (2015)
FHWA Small Town and Rural Multimodal Networks (2016)
FHWA Guidance on Optimizing Rumble Strip Design

Michigan and MDOT Laws, Studies, Research, and Projects

MDOT's Bicycling in Michigan website
Michigan's Iron Belle Trail
Michigan Public Act 135 of 2010 (Complete Streets)
Michigan Complete Streets website
MDOT Context Sensitive Solutions (CSS)
2014 Community and Economic Benefits of Bicycling in Michigan
Best Design Practices for Walking and Bicycling in Michigan
MDOT Guidance for Trunkline Main Streets (2016)
Michigan Manual on Uniform Traffic Control Devices (MMUTCD)
MDOT Design Manual Standards and Guidelines
MDOT Side Path Application Criteria Development for Bicycle Use
MDOT Side Path Intersection and Crossing Treatment Guide

Funding Resources

FHWA's Bicycle and Pedestrian Funding
Safe Routes to School (SRTS) Program
Congestion Mitigation and Air Quality (CMAQ)
Michigan Transportation Alternatives Program (TAP)
USDA Rural Development Community Facilities Program
Michigan Natural Resources Trust Fund (MNRTF)
Land and Water Conservation Fund (LWCF)
Recreation Passport Grants

NOTES:

Southwest Michigan Region Nonmotorized Transportation Plan 2020

Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren Counties