Northeast Michigan Regional Non-Motorized Transportation






Alcona County
Alpena County
Cheboygan County
Crawford County
Iosco County
Montmorency County
Ogemaw County
Oscoda County
Otsego County
Presque Isle County
Roscommon County

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Funded by:
Michigan Department of Transportation
2009

NORTHEAST MICHIGAN REGIONAL NON-MOTORIZED TRANSPORTATION PLAN

2009-2013

Prepared For:

Alcona County, Alpena County, Cheboygan County, Crawford County
Iosco County, Montmorency County, Ogemaw County, Oscoda County
Otsego County, Presque Isle County, Roscommon County
Michigan Department of Transportation

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September of 2009

NEMCOG

NORTHEAST MICHIGAN REGIONAL
NON-MOTORIZED TRANSPORTATION PLAN

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INTRODUCTION

Background

In October of 2007, NEMCOG initiated a one-year planning effort funded by the Michigan Department of Transportation. The purpose was to develop a comprehensive, regional *Non-Motorized Transportation Plan and Investment Strategy* for *Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle and Roscommon Counties,* see **Figures 1.1 and 1.2**. The end product will be used by the Michigan Department of Transportation and local officials to prioritize projects, identify funding sources and guide investment in the region's non-motorized transportation system. In addition, local officials may use or adopt any portion of the plan as their own.

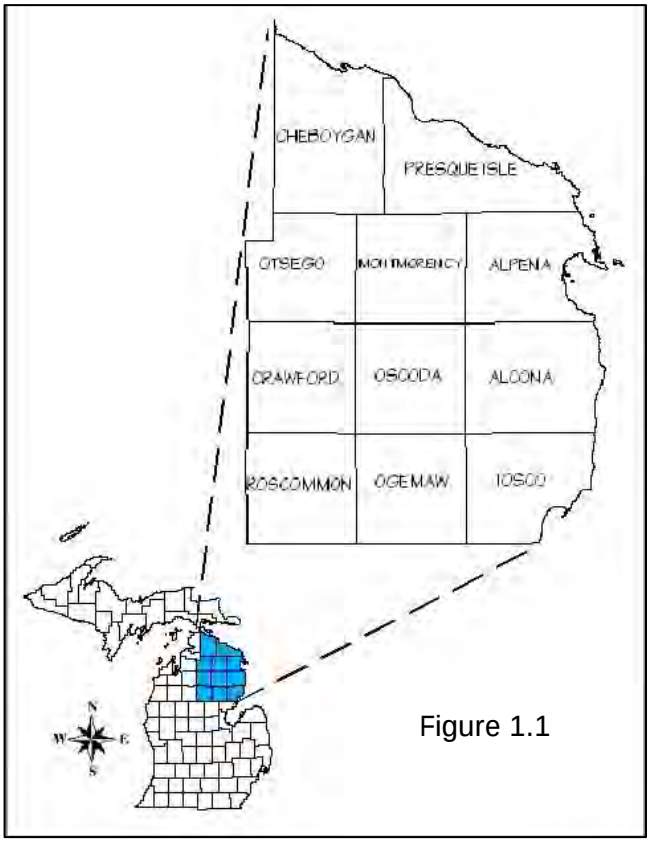
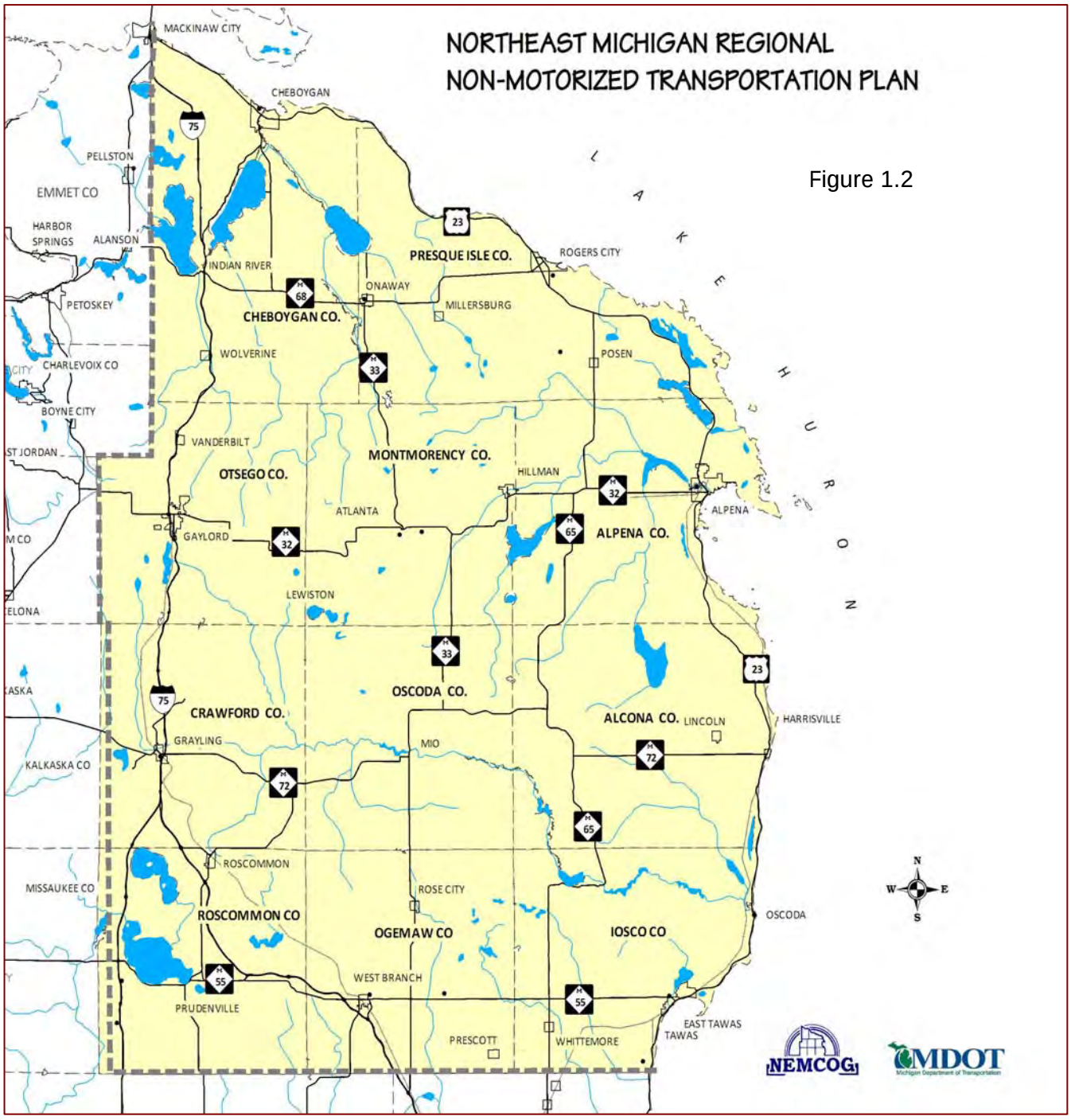


Figure 1.1

By definition, non-motorized facilities can include: bicycle, pedestrian, hiking, horseback riding and in some instances, such as rail-trails, snowmobiles may be allowed. The Regional Non-Motorized Transportation Plan and Investment Strategy focuses on bicycle facilities and is designed to complement other statewide non-motorized and trails initiatives. Bicycle facilities can include grade-separated trails, paved road shoulders, bike lanes, and low volume paved roads. Surfaces may include asphalt, concrete, compacted limestone, gravel and dirt. Trail connectivity is the primary consideration in identifying routes. Bicycle facilities should link communities to each other, link communities to regional trail systems, link communities to parks and forestlands, link people to their community and to their environment, and link communities and recreational facilities to commercial centers.

Non-motorized transportation has been experiencing increasing levels of interest in recent decades. Communities are building multi-use trails to provide recreational opportunities for their residents. Abandoned rail corridors are being converted to multi-use trails. In addition, wide paved shoulders and marked bike lanes support the use of bikes as a transportation alternative to the automobile. Benefits of bicycle and other non-motorized transportation facilities are many fundamental elements for creating livable communities. Facilities encourage physical fitness and healthy lifestyles; provide vital connections within and between communities; present alternatives to automobile travel; create safeways for pedestrians and bikers to get to destinations; connect people to parks and forestlands thereby fostering an appreciation of nature; help support the economic well being of a community.


NORTHEAST MICHIGAN REGIONAL
NON-MOTORIZED TRANSPORTATION PLAN
MACKINAW CITY
CHEBOYGAN
PELLSTON
EMMET CO
HARBOR SPRINGS
ALANSON
INDIAN RIVER
PRESQUE ISLE CO.
ROGERS CITY
ONAWAY
MILLERSBURG
PETOSKEY
CHEBOYGAN CO.
WOLVERINE
POSEN
CHARLEVOIX CO
BOYNE CITY
VANDERBILT
MONTMORENCY CO.
OTSEGO CO.
HILLMAN
ATLANTA
ALPENA
GAYLORD
ALPENA CO.
LEWISTON
OSCODA CO.
CRAWFORD CO.
ALCONA CO.
LINCOLN
HARRISVILLE
GRAYLING
MIO
KALKASKA CO
ROSCOMMON
MISSAUKEE CO
ROSE CITY
ROSCOMMON CO
OGEMAW CO
IOSCO CO
OSCODA
WEST BRANCH
PRUDENVILLE
PRESCOTT
WHITTEMORE
EAST TAWAS
TAWAS
LAKE HURON
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E
S
NEMCOG
MDOT

Figure 1.2

Defining Non-Motorized

According to the Michigan Department of Transportation, *Non-motorized facilities can be grouped by one of two general types: On-Road or Off-Road. These two groups can be broken down further into more specific types and/or uses:*

*• **Bicycle facilities on-road** can be marked and designated, or marked and undesignated, or simply unmarked. On-road facilities can be as simple as a wider than normal travel lane, or a wide paved shoulder. Narrow, striped lanes, specifically dedicated to bicycle use, are becoming more common in the roadway. However, the provision of dedicated left-turn lanes for bicyclists is still rare.*

*• **Sidewalks** are the most common pedestrian facility. They might be adjacent to the roadway, or separated from the travel lanes by green space, parking, or a utility and furniture zone. Most sidewalks are included as part of the street right-of-way.*

*• **Shared-use off road paths** frequently follows green space, abandoned rail beds, or might be adjacent to natural features like rivers. Due to their separation from vehicular traffic, they provide a popular alternative means of travel for many types of users. Bicyclists, pedestrians, rollerbladers, wheelchair users, runners, and others who require a smooth surface typically use paved paths. Unpaved paths are more popular with hikers, mountain bikers, and equestrians. In Northern Michigan, these same paths may facilitate either cross-country skiing or snowmobiling in the winter, where permitted under sufficient snow cover to avoid damage to the trails.*

*• **Side paths** are another type of shared-use off-road facility but are only appropriate in areas with minimal conflicts from driveway access and intersections. These off-road paths are typically designed for two-way traffic and are seldom part of the road infrastructure but often are built in proximity to major road networks. The definition of non-motorized has to be broad enough to encompass all these different types of users and the vast array of facilities designed for their use. In this report, we will often default to discussions of bicyclist and pedestrian accommodations as primary users but that does not mean other users are not*

important to consider. In many cases, taking care of the bicyclist and pedestrian will also provide facilities suitable to other non-motorized users.[1]

Highlighted Facilities

Communities have focused on development of facilities within their boundaries or in conjunction with their neighbors. City of Alpena, Gaylord, Mackinaw City, Grayling, Rogers City, Presque Isle Township and Alabaster Township provide excellent examples of bicycle and pedestrian facilities. The City of Grayling has implemented a network of striped bicycle lanes on their city streets. Communities are now partnering to create and connect to regional systems. In 2007, a MDOT, DNR and multi-community partnership resulted in upgrading the Gaylord to Mackinaw City Rail-Trail to a compacted limestone surface, year round multi-use trail. This effort connected seven communities, parks, water features and extensive wildlands along a 62-mile trail. The immediate success of the Gaylord to Mackinaw Trail has heightened interest in developing other regional trails. Key corridors include Old-27 corridor from Houghton Lake, through Grayling and connecting to Gaylord – Mackinaw City Rail Trail; US-23 Corridor through Arenac, Iosco, Alcona, Alpena, Presque Isle and Cheboygan Counties; and the Au Sable River Corridor from Grayling to Oscoda.

The Michigan Department of Natural Resources has developed several regional hiking/equestrian trails in northern Michigan. The east-west Shore to Shore Trail traverses the study area from Grayling to Oscoda. There is a strong interest in expanding the trailhead facility near Luzerne to improve equestrian access. The High Country Pathway encircles the four corners of Cheboygan, Montmorency, Otsego and Presque Isle Counties. The Shore to Shore/Midland to Mackinaw Trail traverses the study area north to south.

Statewide Efforts

The Michigan Trails and Greenways Alliance is spearheading an effort called *CONNECTING MICHIGAN*, a proactive and broad-based initiative to identify and address the critical issues that are impeding Michigan's progress on developing a statewide interconnected system of trailways and greenways. On July 18, 2006, Governor Jennifer M. Granholm announced the state will work with the Michigan Natural Resources Trust Fund to link Michigan's trail system by building new trails and upgrading existing trails throughout the state. Subsequently, the Michigan Department of Natural Resources in collaboration with the Michigan Department of Transportation developed a report called, *Michigan Trails at the Crossroads, A Vision for Connecting Michigan*. This Regional Non-Motorized Transportation Plan and Investment Strategy, funded by MDOT, focuses on bicycle and pedestrian facilities and is designed to complement the above two efforts.

[1] Michigan Department of Transportation; State Long Range Transportation Plan 2005-2030; Non-Motorized Transportation Technical Report; March 2007

Planning Process

This plan was developed over a 12-month period. Given local community input was crucial to the success of this planning effort, NEMCOG developed a comprehensive list of contacts. The list included local officials from village, city, township, and county government; state and local agencies and organizations; businesses and individuals. The list contains 452 contacts. A comment form and web page were developed to increase access and facilitate input to the planning process.

A series of meetings were held across the 11-county planning area. First, NEMCOG sponsored a regional summit/kick-off meeting with state, county and local officials in the region, non-profit organizations and many others who either manage trails or have an interest in the non-motorized trail system within the region. Intent of the Regional Summit was to inform communities about the planning effort, deliver non-motorized transportation information sessions and solicit input on existing trails and potential future trails. The comprehensive mailing list was used to invite communities to the Regional Summit. The comment form was sent along with the summit invite to allow persons not able to attend the ability to provide input. Next, one meeting was held in each of the eleven counties. Based on public and community input a draft plan was developed and presented at three sub-regional meetings. Attendees had an opportunity to comment on the Northeast Michigan Non-Motorized Transportation Plan and Investment Strategy. The plan was revised, based on comments, and presented to MDOT and provided to entities that participated in the planning effort. In addition, the plan was posted on NEMCOG's website.

Purpose of Plan

While the interest in non-motorized transportation has steadily grown over the past two decades, funding for development of new facilities has become increasingly constrained. Local, state and federal entities must deal with increasing demands and costs for many services, however, revenues have not kept up with needs. Each year, MDOT receives more applications for non-motorized transportation facility development than it's grant programs can fund. It is the intention of this comprehensive plan to identify priority projects within the region which will help guide MDOT's investment in the region's non-motorized transportation system. It is also expected to provide guidance to local road agencies and local communities who provide non-motorized transportation opportunities to their constituents.

COMMUNITY PROFILE

Population and Age Distribution

The 2000 U.S. Census shows a population in the eleven county planning region ranging from 9,418 in Oscoda County to 31,314 in Alpena County. Six of the counties had populations over 21,000. Between 1990 and 2000, Otsego, Roscommon, Cheboygan and Oscoda had population growth rates greater than 20 percent. Iosco County lost population due to the closing of Wurtsmith Air Force Base. **Table 2.1** shows the population change between 1990 and 2000. **Figure 2.1** depicts the percent population change between 1990 and 2000. It is important to note that according to the U. S. Census, over the last two decades there has been an increase in the number of housing units in all counties, including those showing a decrease in year round population. This data supports the growth in seasonal residents in Northeast Michigan.

Table 2.1
Population Change 1990-2000

Unit of Government	1990	2000	% Change 1990 to 2000
Alcona County	10,145	11,719	15.5%
Alpena County	30,605	31,314	2.3%
Cheboygan County	21,398	26,448	`23.6%
Crawford County	12,260	14,273	16.4%
Iosco County	30,209	27,339	-9.5%
Montmorency County	8,936	10,315	15.4%
Ogemaw County	18,681	21,645	15.9%
Oscoda County	7,842	9,418	20.1%
Otsego County	17,957	23,301	29.8%
Presque Isle County	13,743	14,411	4.9%
Roscommon County	19,776	25,469	28.8%
Michigan	9,295,297	9,938,444	6.9%

Source: U.S. Bureau of the Census

The Census tally, taken on April first, does not count persons who winter elsewhere. A review of the 2000 Census housing characteristics for the 11 counties shows a high rate of seasonal, recreational, or occasional use housing units. Percent seasonal housing units range from 10.8 percent in Alpena County to 48 percent in Alcona, Oscoda and Roscommon Counties, compared to less than six percent for the State of Michigan. Therefore, the population may be expected to increase by more than one-third to one-half during the summer months. **Table 2.2** shows the total housing units and percent seasonal housing units from the 2000 U.S. Census. It is anticipated the number of seasonal homes will decrease as people retire and move north to the vacation home.

FIGURE 2.1
% POPULATION INCREASE NORTHEAST REGION COUNTIES: 1990-2000

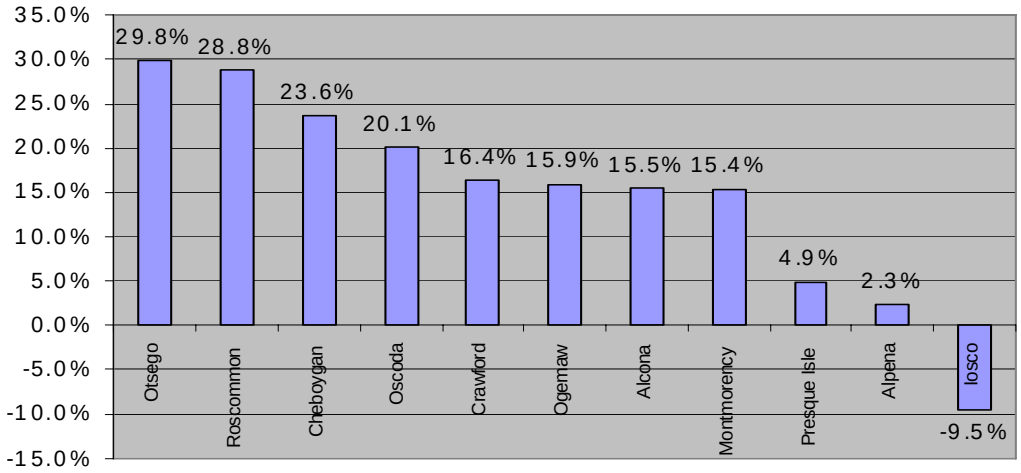


Table 2.2
Percent Seasonal Housing Units - 2000: Project Area Counties & State

Unit of Government	Total Housing Units	Percent Seasonal Housing Units*
Alcona County	10,584	47.9%
Alpena County	15,289	10.8%
Cheboygan County	16,583	28.8%
Crawford County	10,042	40.9%
Iosco County	20,432	33.0%
Montmorency County	9,238	47.5%
Ogemaw County	15,404	37.8%
Oscoda County	8,690	48.0%
Otsego County	13,375	28.4%
Presque Isle County	9,910	33.1%
Roscommon County	23,109	48.0%
Michigan		5.5%

The percent of seasonal housing units as compared to each county's total housing units.
Source: U.S. Bureau of the Census

The median age of the population of all counties in the project area has been increasing over the past few decades, as it has statewide and nationally. **Table 2.3** shows the median age for 11 counties and the state of Michigan for 1990 and 2000. As can be seen, all of the counties had median ages higher than the State with Alcona, Montmorency and Roscommon Counties having median ages more than ten years older then the state. These statistics show northern Michigan is becoming an increasingly popular retirement area. The "young" retirees are looking to live an active life and search out biking and walking opportunities, particularly on dedicated bicycle/pedestrian trails.

Table 2.3
Median Age - 1990 & 2000: Project Area Counties & State

Unit of Government	1990	2000
Alcona County	44.8	49.0
Alpena County	35.3	40.4
Cheboygan County	37.1	41.3
Crawford County	34.7	40.6
Iosco County		44.2
Montmorency County	41.6	47.0
Ogemaw County		42.3
Oscoda County	40.0	43.7
Otsego County		37.7
Presque Isle County	38.5	45.1
Roscommon County		47.2
Michigan	32.6	35.5

Source: U.S. Bureau of the Census

Population Density

In analyzing community service needs such as non-motorized transportation, it is helpful to look at the land area to be served and particular areas where population is clustered. Non-motorized facilities located in population centers, connecting those centers to each other and to points of interest such as parks tend to receive the greatest amount of use for both recreation and travel. It is important to note this map is based on year-round population and therefore areas with high percentages of seasonal homes and associated seasonal population are not highlighted. Generally speaking, communities with considerable waterfront properties have high numbers of seasonal residents. These areas are growing in population as people retire and move north to

the seasonal home. One can also expect to have a high interest in bicycle and pedestrian facilities in seasonal communities.

Income

While all 11 counties have exhibited a steady increase in median income over the past decade, Northeast Michigan still lags behind the state as a whole. **Table 2.4** presents information on the median household income for the project area counties and the State of Michigan. According to the U.S. Census Bureau, Otsego County had the highest median household income in 1999. All of the counties fell below the state-wide household median income in 1989 and 1999.

Table 2.4
Median Household Income for Project Area Counties & State: 1989 and 1999

Unit of Government	1989 Median Household Income	1999 Median Household Income	% Difference
Alcona County	$18,013	$31,362	74%
Alpena County	$22,598	$34,177	51%
Cheboygan Co.	$21,006	$33,417	59%
Crawford County	$24,688	$37,056	50%
Iosco County	$20,091	$31,321	56%
Montmorency Co.	$17,819	$30,005	68%
Ogemaw County	$17,665	$30,474	72%
Oscoda County	$17,772	$28,228	22%
Otsego County	$26,356	$40,876	55%
Presque Isle County	$20,941	$31,656	51%
Roscommon County	$17,047	$30,029	76%
Michigan	$31,020	$44,667	44%

Source: U.S. Bureau of the Census

Transportation Network

The roadway network in the project area consists of US-23, state highways M-32, M-33, M-65, M-68, M-72, and numerous county roads that connect communities and population centers. Major county roads include CO 451, CO 487, CO 489, CO 491, CO 612, 634 Hwy., W. 638 Hwy., F-41, Long Rapids Rd, Metz Hwy., and Werth Rd.

Public Lands

Northeast Michigan has an abundance of publicly owned lands. State and federal lands are used for timber management, wildlife management and outdoor recreation. Good networks of public roads (paved, gravel, dirt and two-tracks) traverse the public lands and offer people ample access to a wide variety of recreational activities. According to the non-motorized trail map, there are 1,161,620 acres of state land and 430,836 acres of federal lands.

Non-Motorized Network/Trails

In 2006, the Michigan Department of Transportation contracted with NEMCOG to create a recreational facilities map aimed at bicyclists, but useful to many other groups seeking recreational opportunities in northeastern Michigan. The map covers the following 11 counties: Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle, and Roscommon.

The comprehensive inventory and map provides the following information:

- State and local parks including amenities available at each site.
- Bike, hiking and snowmobile trails are depicted according to whether they are paved or unpaved.
- All county roads are shown according to high, medium, or low traffic volume and whether or not they have a 4-foot paved shoulder.
- Areas of high elevation
- Points of interest
- State and federal land
- Service levels of the local communities

According to the inventory completed for this project there are:

Trails by type:
Multi-Use Trails = 899 miles
Footpath = 171 miles
Horse Trails (dedicated horse only trails) = 34 miles (horses are allowed on some of the multi-use trails also)

Trails by Surface:
Paved = 100 miles
Natural Surface = 941 miles
Crushed Limestone = 62 miles

Table 2.5
Miles of Roads with Low Traffic Volumes and 4' Paved Shoulders

County	Miles Paved & <2500 AADT	Miles Paved & <2500 AADT & 4' Paved Shoulder
Alcona	397	43
Alpena	268	10
Cheboygan	239	0.2
Crawford	261	19
Iosco	364	6
Montmorency	182	0
Ogemaw	315	6
Oscoda	232	0.21
Otsego	407	1
Presque Isle	426	5
Roscommon	357	16
TOTAL	3448	106.41

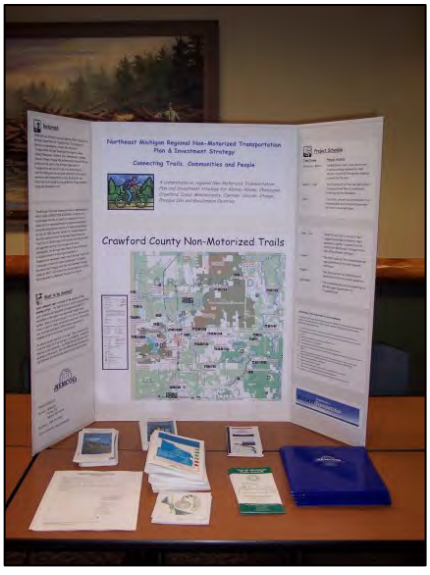
COMMUNITY OUTREACH

Introduction

A robust community outreach component was elemental in developing the Non-Motorized Transportation plan. NEMCOG used news media, website, emails and direct mailings to deliver information and solicit input into the planning process. A series of regional, sub-regional and county meetings were held to present materials on non-motorized transportation, obtain information on existing and planned non-motorized transportation facilities and identify potential future projects needed to enhance non-motorized transportation across the region.

Information Outreach

NEMCOG developed a web page for the project. The web page was used to explain the project, disseminate information on non-motorized transportation, announce meetings, solicit input via a downloadable comment form, and make available draft plans and maps. NEMCOG developed a comprehensive list of contacts, which included local officials from village, city, township, and county government; state and local agencies and organizations; businesses and individuals. The list contains 452 contacts. The mailing list was used to inform communities, agencies and organizations about the planning effort, request input and invite representatives to workshops. An email list of participants was used to interact with interested persons. Press releases resulted in newspaper articles in newspapers around the region.



Workshops

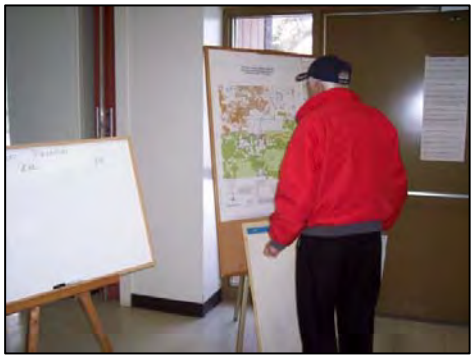
NEMCOG sponsored a regional summit/kick-off meeting with state, county and local officials in the region, non-profit organizations and many others who either manage trails or have an interest in the non-motorized trail system within the region. Intent of the Regional Summit was to inform communities about the planning effort, deliver non-motorized transportation information sessions and solicit input on existing trails and potential future trails. The comprehensive mailing list was used to invite communities to the Regional Summit. A comment form was sent along with the summit invite to allow persons not able to attend the ability to provide input. (see Appendix A). NEMCOG received 25 comment forms and four community trail plans.

The Summit was held on January 8, 2008 at the Sylvan Tree Tops resort in Gaylord. Following an overview of the Non-Motorized Transportation Planning effort, three guest speakers presented. See below listing:

- On-Road Non-Motorized Connections – Cindy Krupp, MDOT Bicycle and Pedestrian Planner
- The Trailway Development Process- Nancy Krupiaz, Executive Director, Michigan Trailways and Greenways Alliance.
- Overview of Rails to Trails Accomplishments in Northern Michigan – Emily Meyerson, AICP, Northern Lower Peninsula Trailways Coordinator, Top of Michigan Trails Council

The final activity involved holding breakout sessions by sub-regions to identify existing trails, identify additional stakeholders and identify proposed/funded projects. Fifty-nine people attended the summit, representing 40 entities.

Next, one meeting was held in each of the eleven counties. The contact list was used to notify communities, organizations and individuals of the workshop/input session regarding non-motorized trails and trail connections within their community. This key meeting allowed representatives an opportunity to provide input into the long range planning process. They were asked to help identify priority projects for future non-motorized facilities such as dedicated trails, bike lanes, wide paved shoulders and on-road biking. The open house format made staff available from 3:00 to 7:00 p.m. There were brief presentations at 3:15 and 5:15. Participants were asked to “mark-up” maps to show needed non-motorized facilities and priority routes.



The following table provides information on the location, date and number of participants of each county workshop.

Table 3.1 Schedule of County Workshops			
County	Date	Location	Number of Participants
Alcona County	March 13, 2008	Alcona County EMS, Harrisville	12
Alpena County	March 12, 2008	Alpena County Library, Alpena	21
Cheboygan County	February 28, 2008	Cheboygan Area Library, Cheboygan	10
Crawford County	March 18, 2008	Devereaux Memorial Library, Grayling	20
Iosco County	March 20, 2008	Robert J. Parks Library, Oscoda	22
Montmorency Co.	March 19, 2008	Montmorency County Road Commission, Atlanta	12
Ogemaw County	March 27, 2008	West Branch City Hall, West Branch	13
Oscoda County	February 26, 2008	Oscoda County Community Center, Mio	16
Otsego County	March 26, 2008	Otsego County Library, Gaylord	8
Presque Isle County	March 13, 2008	Presque Isle District Library, Rogers City	19
Roscommon County	March 6, 2008	Denton Township Hall, Prudenville	12
Source: NEMCOG			

In addition, NEMCOG and MDOT sponsored an organization/agency workshop in March 2009. Discussions focused on trail development and agency coordination. Participants were asked to "mark-up" maps to show needed non-motorized facilities and priority routes.

Based on public and community input a draft plan was developed and presented at three sub-regional meetings. Meetings were located in Grayling, Alpena, and Gaylord. Attendees had an opportunity to comment on the Northeast Michigan Non-Motorized Transportation Plan and Investment Strategy. The plan was revised, based on comments, and presented at a final regional meeting. Copies of the plan were provided to MDOT and to entities that participated in the planning effort. In addition, the plan has been posted on NEMCOG's website.

Appendix D has copies of notices for various workshops.

GOALS

The demand and need for new facilities outpaces funding levels available for implementing projects. This disparity between need and ability to deliver will remain an issue. Investments into existing and future non-motorized facilities should be guided buy the following underlying goals.

Connectivity

Develop a network of trail systems, bike lanes and non-motorized multi-use pathways that will link communities to each other, link communities to regional trail systems, link communities to parks and forestlands, and link people to their community and to their environment.

Priority Regional Corridors

Promote Regional Corridors that will connect communities and points of interest within the region and outside the region.

- Rail-Trails and where feasible active rail corridors and utility corridors.
- On-Road facilities and side paths
- Multi-use trails and waterways
- Connect to other trails

Existing Multi-Use Facilities

Support maintenance and improvements, and where appropriate expansion of existing trail systems. These trails include biking, hiking, equestrian and snowmobile rail-trails.

On-Road Bicycle Facilities

Expand non-motorized transportation by utilizing on-road facilities such as striped bicycle lanes, wide paved shoulders and low volume paved county roads.

Urban Non-motorized On-Road Facilities

Conduct studies to identify potential locations for on-road bicycle facilities, such as wide shoulders and stripped bicycle lanes within urban built-up areas of the region.

Alternative Transportation Network

Create a network of safe, accessible and convenient non-motorized transportation routes that promote walking and biking as an alternative form of transportation and are integrated into other modes of transportation.

Safety

Provide non-motorized facilities to support safe travel within communities and to other communities whether for work, social, education, or recreation.

- Increase enforcement, education, and communication in local communities.
- Identify and implement best practices for improving pedestrian and bicycle safety.
- Provide education programs for auto drivers and bikers

Economic Development
Recognize the importance of non-motorized facilities in creating livable communities, improving quality of life, and supporting a community's economic well being.

- Work with tourism, community and economic development organizations to incorporate information on non-motorized facilities
- Development standards
- Huron Shores Heritage Route

Recreation
Increase access to non-motorized recreational opportunities for residents and visitors of all ages and levels of mobility.

Community Support
Build community support by providing public outreach and education during all phases of project development, including scoping, design, construction and maintenance.

- Regional Trails Committee
- Presentations to local municipalities, parks and recreation commissions, state and federal agencies, and community organizations.
- Involve all public and private landowners, stakeholders, communities and responsible agencies at all phases of the project development

Funding
Utilize multiple funding sources for facility development including MDOT, DNR, local communities, private and foundations.

PROJECTS AND PRIORITIES

Introduction

A series of outreach meetings were held in the 11-county planning area. Comment forms were mailed to stakeholders, including cities, villages, townships, counties, planning commissions, parks and recreation commissions, road commissions, chambers of commerce, visitor bureaus, trail organizations, state and federal agencies, and state parks. Existing community trail plans were reviewed. Information from these sources was analyzed and compiled to identify potential non-motorized facilities. NEMCOG digitized potential non-motorized facilities into its Geographic Information System (GIS). Regional corridors, on-road bicycle facilities, potential trails and associated facilities were identified as part of this process.

Non-motorized Transportation Facilities

According to the Michigan Department of Transportation, *Non-motorized facilities can be grouped by one of two general types: On-Road or Off-Road. These two groups can be broken down further into more specific types and/or uses:*

*• **Bicycle facilities on-road** can be marked and designated, or marked and undesignated, or simply unmarked. On-road facilities can be as simple as a wider than normal travel lane, or a wide paved shoulder. Narrow, striped lanes, specifically dedicated to bicycle use, are becoming more common in the roadway. However, the provision of dedicated left-turn lanes for bicyclists is still rare.*

*• **Sidewalks** are the most common pedestrian facility. They might be adjacent to the roadway, or separated from the travel lanes by green space, parking, or a utility and furniture zone. Most sidewalks are included as part of the street right-of-way.*

*• **Shared-use off road paths** frequently follows green space, abandoned rail beds, or might be adjacent to natural features like rivers. Due to their separation from vehicular traffic, they provide a popular alternative means of travel for many types of users. Bicyclists, pedestrians, rollerbladers, wheelchair users, runners, and others who require a smooth surface typically use paved paths. Unpaved paths are more popular with hikers, mountain bikers, and equestrians. In Northern Michigan, these same paths may facilitate either cross-country skiing or snowmobiling in the winter, where permitted under sufficient snow cover to avoid damage to the trails.*

*• **Side paths** are another type of shared-use off-road facility but are only appropriate in areas with minimal conflicts from driveway access and intersections. These off-road paths are typically designed for two-way traffic and are seldom part of the road infrastructure but often are built in proximity to major road networks. The definition of non-motorized has to be broad enough to encompass all these different types of users and the vast array of facilities designed for their use. In this report, we will often default to discussions of bicyclist and pedestrian accommodations as primary users but that does not mean other users are not important to consider. In many cases, taking care of the bicyclist and pedestrian will also provide facilities suitable to other non-motorized users.*[1]

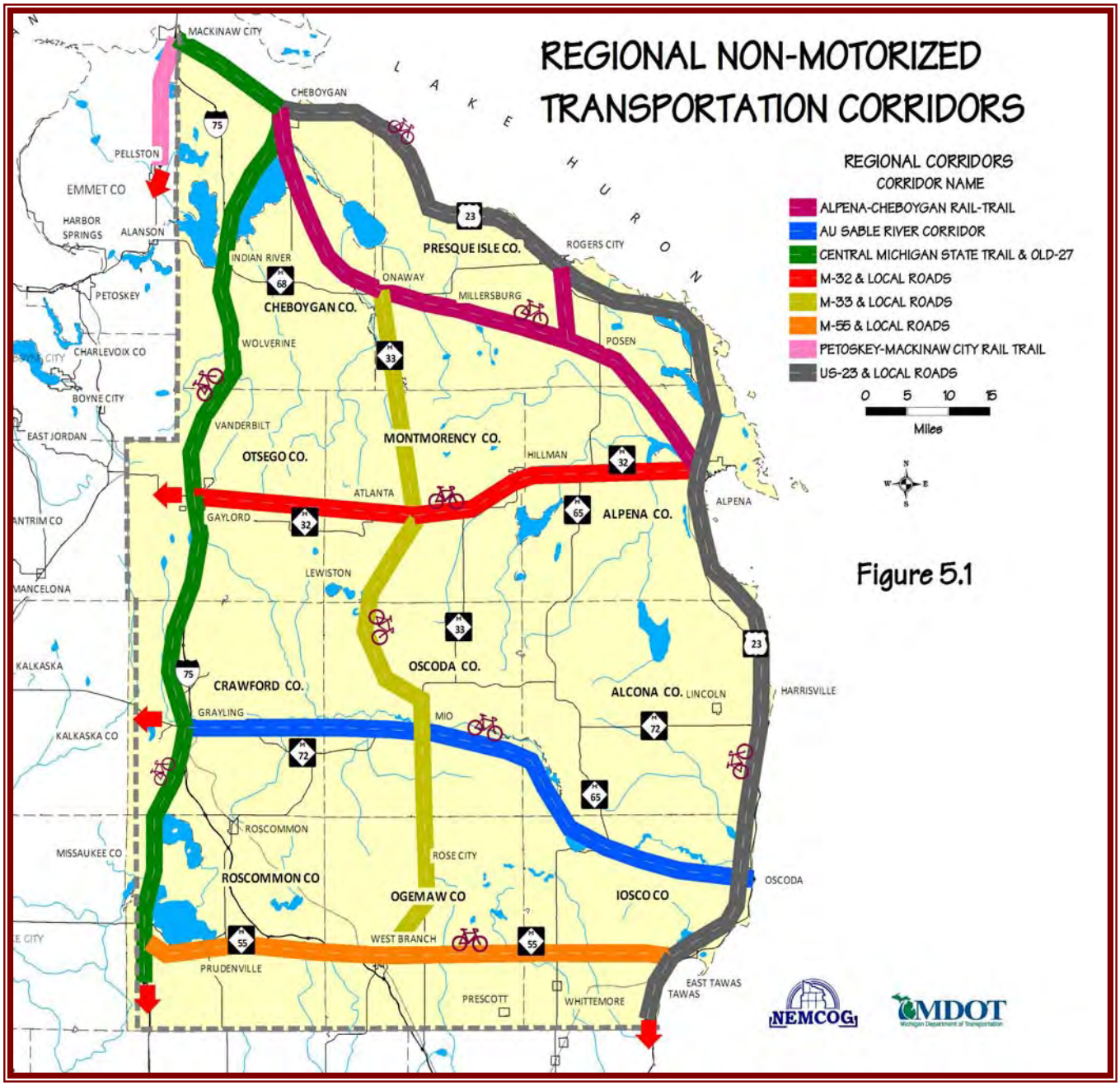
Priority Regional Corridors

As this project unfolded and input was gathered from county to county, several regional non-motorized corridors emerged. Regional corridors function as community connectors and major connectors to parks and wildlands. The regional corridors extend beyond the planning area boundaries to connect to communities west and south of the planning area. Major corridors in northeastern Michigan include: US-23, Old 27/North Central State Trail, Petoskey to Mackinaw Rail-Trail, Cheboygan to Alpena Rail-Trail, and Au Sable River Corridor. Minor corridors center around M-32/Hillman to Alpena Rail-Trail, M-33 and M-55 and include a combination of local and state roads, see **Figure 5.1**.

<u>Rail-Trails</u>

Rail-Trail Corridors provide the foundation of a non-motorized dedicated trail system in the region. Corridors include: North Central State Trail (Gaylord to Mackinaw City Rail-Trail), Cheboygan to Alpena Rail-Trail, Alpena to Hillman Rail-Trail, Rogers City Spur and Petoskey to Mackinaw City Rail-Trail (mostly outside the planning area). The North Central State Trail was surfaced with crushed and compacted limestone in the fall of 2007. Already it has stimulated great interest

[1] Michigan Department of Transportation; State Long Range Transportation Plan 2005-2030; Non-Motorized Transportation Technical Report; March 2007



with communities along the corridor. Residents and tourists are using the trail in great numbers. Less than one year old, the facility has proven to be a significant community asset and is expected to have a positive impact on the local economy. The Top of Michigan Trails Council is working with the DNR, MDOT and local communities to obtain funding to surface the Cheboygan to Alpena Rail-Trail with a similar crushed limestone surface. The major advantage of using this type of surface is the ability for year-round use with snowmobiles in the winter and biking/walking in the spring, summer and fall.

- Improvements and surfacing of the Alpena to Cheboygan Rail-Trail to allow for expanded year-round non-motorized transportation. This would mirror the North Central State Trail, which still supports snowmobile usage during months with adequate snow cover.
- Improvements and surfacing of the Alpena to Hillman Rail-Trail to allow for expanded year round non-motorized transportation. This would mirror the North Central State Trail, which still supports snowmobile usage during months with adequate snow cover.
- Extension of the trail into Rogers City combined with improvements and surfacing of the Rail-Trail to allow for expanded year round non-motorized transportation. This would mirror the North Central State Trail, which still supports snowmobile usage during months with adequate snow cover.
- Improvements and surfacing of the Petoskey to Mackinaw Rail-Trail to allow for expanded year round non-motorized transportation. This would mirror the North Central State Trail, which still supports snowmobile usage during months with adequate snow cover.

Roadways and Dedicated Trails

US-23 Coastal Highway: Communities along the US-23 Corridor are working together to package tourism draws along this Coastal Highway. The Huron Greenways, US-23 Heritage Route, Sweetwater Trail and Huron Shores Blueways are helping to bring attention to the many natural and manmade features along this route. Several non-motorized projects have been developed along this corridor from Mackinaw City to Tawas. The Alabaster Trail, part of the proposed Bi-County River to River Non-motorized Trail; Huron Sunrise Trail from Rogers City to 40 Mile Point; Bi-Path in the City of Alpena; North Central State Trail; Mackinaw City Historic Trail; and the proposed Harrisville to Sturgeon Point Trail all center on the US-23 Corridor. Interest in developing more trails along the corridor is growing. MDOT should explore using four feet paved shoulders to supplement dedicated trails in communities and enhance the non-motorized corridor.

- Continue to expand non-motorized transportation along the US-23 Corridor to connect existing trails, on-road facilities and communities. The approach will combine on-road facilities (both US-23 and local roads), side paths and off-road multi-use trails.

Old 27 Corridor: The Old-27 Corridor links a number of communities and parks from Houghton Lake, Gaylord and continues to Cheboygan following the North Central State Trail. The Grayling Area Paved Pathway System (Grayling Bicycle Turnpike), an existing grade separated trail from Grayling to Hartwick Pines State Park, provides another link in this north-south corridor. An

active rail line from south of Frederick to Gaylord offers some potential for non-motorized trail development. Other segments from Frederick to Grayling and from Grayling to Houghton Lake could use a combination of dedicated trails and wide paved shoulders.

- Continue to expand non-motorized transportation along the Old-27 Corridor to connect existing trails, on-road facilities and communities. The approach will combine on-road facilities, side paths and off-road multi-use trails.

Au Sable River Corridor: A popular canoe route, the potential for combining water and riding sports exists. The Black Bear Bicycle Tour associated with the AuSable Canoe Marathon has brought attention to the AuSable River Corridor as a bicycling route. The communities of Grayling, Luzerne, Mio, McKinley, Glennie and Oscoda are located within the corridor. Along with amenities in the communities, there are many campgrounds along the AuSable River Corridor to provide overnight camping options. Numerous routes and loops offer riders a variety of ride trips and ride challenges. It is envisioned the non-motorized facility would utilize existing roads, shared use facilities and wide paved shoulders.

- The Au Sable River Corridor follows local roads and state highways from Graying to Mio, Glennie and Oscoda to Lake Huron. Establish non-motorized routes along Au Sable River by identifying bike routes within the Corridor; mapping and inventorying segments to evaluate needed non-motorized facility improvements (On-road facilities)

Connector between North Central State Trail and Petoskey-Mackinaw City Rail-Trail: The North Central State Trail and the Petoskey-Mackinaw City Rail-Trail are two regional north-south trails. The newly surfaced North Central State Trail has received considerable attention and usage during its first year of completion. The Top of Michigan Trails Council and Michigan Department of Natural Resources are working towards upgrading the Petoskey-Mackinaw Rail-Trail with a hardened surface. East-west connections between the two trails would provide opportunities for riding loops and further achieve Connecting Michigan goals of linking communities together and linking communities to points of interest such as parks and waterways. One corridor route would be from Indian River to Alanson following M-68. The other possibility would be from Topinabee to Brutus along the north side of Burt Lake.

- Develop a non-motorized route and trail from Topinabee (North Central State Trail) to Brutus (Petoskey to Mackinaw City Rail-Trail) around the north end of Burt Lake.
- Define a route for non-motorized transportation from Indian River (North Central State Trail) to Alanson (Petoskey to Mackinaw City Rail-Trail). The route would use on-road facilities, side paths and off-road multi-use trails.

M-32 Corridor: The M-32 corridor provides a mid-way east-west connection between communities and points of interest in the 11-county planning area. This project did not define a route between Gaylord and Atlanta. It is anticipated the route would be primarily an on-road facility utilizing M-32 and local roads. Paved shoulders and shared use facilities on low volume county roads would form the backbone of the corridor. The potential of upgrading the Alpena to Hillman Rail-Trail to a hardened surface would provide a segment of the corridor with a dedicated trail.

- Define a route for non-motorized transportation from the Jordan River to Gaylord, Atlanta, Hillman and Alpena. The route would use on-road facilities, side paths and off-road multi-use trails.
- Improvements and surfacing of the Alpena to Hillman Rail-Trail to allow for expanded year round non-motorized transportation. This would mirror the North Central State Trail, which still supports snowmobile usage during months with adequate snow cover.

M-33 Corridor: The M-33 corridor provides a midway north-south connection between communities and points of interest in the 11-county planning area. This project did not define an exact route, however, it is anticipated the route would be primarily an on-road facility utilizing M-33 and local roads. Paved shoulders and shared use facilities on low volume county roads would form the backbone of the corridor.

M-55 Corridor: The M-55 corridor provides a southern east-west connection between communities and points of interest in the 11-county planning area. This project did not define an exact route, however, it is anticipated the route would be primarily an on-road facility utilizing M-55 and local roads. Paved shoulders and shared use facilities on low volume county roads would form the backbone of the corridor.

Other Regional Projects

Input received at the county meetings during the development of the plan uncovered an interest in developing bicycle ride maps for the region. These ride maps would build upon the Northeast Michigan Ride and Trail Bicycling Map and incorporate existing trails and on-road facilities to create routes for bicycling enthusiasts. Information such as ride difficulty; distances; points of interest such as historic and cultural sites, parks, museums, ecological features, and natural areas; campgrounds, restaurants, and lodging would be included on maps. Businesses and organizations could advertise on the maps to help offset costs of printing maps. Funding would be needed to conduct local meetings, identify routes, survey routes, and develop maps.

Over the last ten years, several projects and programs have been developed along the Lake Huron Coast. These include Huron Greenways, Sweetwater Trail, Circle Lake Huron Tour, US-23

Heritage Route and Huron Shores Blueways. The Northeast Michigan Non-motorized Transportation Plan adds value to these existing programs. At some point it would be advisable to bring all of these efforts under one marketing strategy to deliver the many coastal attractions as a package.

There are opportunities within developed areas to designate on-road bicycle facilities. Routes can be identified to improve connections between neighborhoods, schools, community facilities, parks, trails, shopping and employment areas within each community. On-road facilities may include wide paved shoulders wider than normal travel lane, striped bicycle lanes, shared facilities and the provision of dedicated left-turn lanes for bicyclists. This plan recommends working with cities, villages and more densely populated areas in townships to identify bike routes and determine types of facilities best suited for each route. This would require additional funding to support such a project.

County Projects

There are a number of local non-motorized planning and development efforts. Project level, community and countywide plans have been developed. Information from existing plans has been incorporated into this plan. Note, it is not the intention of this regional plan to supersede community plans, but to complement community programs. Based on extensive efforts for community input, the following is a summary of identified future non-motorized transportation facilities in the 11-county planning area.

In an effort to guide investments, NEMCOG developed a list of 12 criteria for prioritization of projects identified in the planning process. The 12 criteria were applied to each project. By adding up the number of criteria that were present, a facility was given a score of 1-12. Scores were grouped into low (1-4), medium (5-8) and high (9-12). Note the prioritization is non-binding; is not intended to compare projects from one municipality to another; and should only be used to help guide the implementation. **See Appendix A** for individual county project prioritization tables. Further analysis involved the identification of gaps.

Prioritization Criteria

- Connects communities
- Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites
- Connects to State Parks, state forest lands or federal forest lands
- Connects to regional trail systems
- Connects to designated heritage routes
- Improves access to Michigan's Great Lakes shoreline
- Fills gaps in trail systems
- Located in regional corridor
- Located on rail-to-trail or existing right-of-way
- Enhances tourism and economic development
- Addresses safety concerns
- Serves population centers

Alcona County

The US-23 Heritage Route Alcona County Committee has been working towards development of a trail system from the Harrisville State Park north through Harrisville to Sturgeon Point Lighthouse. The Regional Non-Motorized Transportation Plan supports and concurs with projects and priorities of the Heritage Route Committee. An extension of this route entails connecting Sturgeon Point Lighthouse to Black River and then onto Negwegon State Park, eventually connecting to Alpena. This route would become part of the long term vision of a network of trails and routes along the Huron Greenways. A significant side trail would be connecting Harrisville to the LAMP trail in Lincoln and further west to Barton City and Hoist Lake Area. The Shore to Shore is an important equestrian and foot trail that follows the Au Sable River Corridor.

ALCONA COUNTY PROJECTS	FACILITY TYPE	PRIORITY
Connection from Harrisville State Park to Harrisville and onto Sturgeon Point Lighthouse	Off-road paths and on-road facilities	HIGH
Connection from Sturgeon Point Lighthouse to Black River and onto Negwagon State Park	On-road facilities and off-road paths	MEDIUM
Connection from Harrisville to LAMP Trail in Lincoln	Off-road paths and on-road facilities	HIGH
South Connection to proposed trails in Iosco County	Side paths and on-road facilities	HIGH
Loop around Hubbard Lake connecting residential development around Hubbard Lake to the Communities of Hubbard Lake, Backus Beach, Spruce and Black River	On-road facilities and side paths	HIGH
Connection from Lincoln to Barton City, Jewell Lake Campground, Reid Lake Foot Travel Area and Hoist Lake Area	On-road facilities connecting to existing off-road shared use paths	MEDIUM
North-South Connections: Hubbard Lake, Spruce, Barton City, Lost Lake Woods and Lincoln	On-road facilities and side paths	MEDIUM
Au Sable River Corridor Connecting Grayling to Oscoda follows local roads and state highways	On-road facilities	MEDIUM
Community Connections for Mikado, Curtisville, Glennie, and Curran	On-road facilities	MEDIUM
Safe Routes to School for the Alcona Community Schools	On-road facilities and side paths	LOW

Gap Analysis

- *There is not a well developed system at this time, therefore significant gaps exist.*
- *Priority projects connect Harrisville State Park to Harrisville to Sturgeon Point Lighthouse and onto Negwegon State Park*
- *Connect Harrisville to Lincoln LAMP Trail.*
- *Connect Harrisville south to Oscoda*
- *Loop around Hubbard Lake*

Alpena County

The City of Alpena has developed a bicycle-pedestrian facility called the Bi-Path. The Bi-Path connects neighborhoods to parks, waterfront, downtown, schools and commercial areas. Proposed expansions of the network include new trails north along Wilson Road and identification of on-road facilities. An enhancement project from Bagley Street west along M-32 has developed bicycle-pedestrian trails that connect commercial development in Alpena Township to the City Bi-Path. The Michigan Department of Natural Resources and Top of Michigan Trails Council are working with MDOT and local communities to upgrade the Alpena to Cheboygan Rail Trail into a hardened surface year-round multi-use trail.

ALPENA COUNTY PROJECTS	FACILITY TYPE	PRIORITY
Upgrade Alpena to Cheboygan Rail-Trail to hardened surface	Shared use off-road facility	HIGH
Upgrade Alpena to Hillman Rail-Trail to hardened surface such as crushed-compacted limestone	Shared use off-road facility	HIGH
Construct a non-motorized bridge over Thunder Bay River along Bagley Street in conjunction with the Bi-Path expansion to complete outer loop	Side path	HIGH
Expand Bi-Path trails to provide direct access to Alpena Community College, Jesse Besser Museum and development along Wilson Street.	Side path	HIGH
Long Rapids Road wide paved shoulders from City westward to county roads	On-road facilities	HIGH
Connections from City of Alpena, through Alpena Township north to Rockport and onto Presque Isle Township	On-road facilities and side paths	HIGH
Wide paved shoulders along US-23 south of City with connections to Ossineke and Negwagon State Park	On-road facilities and side paths	HIGH
Connection from City of Alpena to Alpena Township Nature preserve	On-road facilities and side paths	MEDIUM
Bicycle routes using county roads that connect communities of Cathro, Bolton, Long Rapids, Lachine, Herron, Hubbard Lake and Ossineke; and connect Beaver Lake County Park, Sunken Lake County Park, Long Lake County Park and Thunder Bay River Campground	On-road facilities	MEDIUM
Trails in Wilson Township	Shared use off-road facility and on-road facilities	MEDIUM
Connect Norway Ridge Pathway, Wah-Wah-Tas-See pathway and Devils Lakes Trails to residential areas of Alpena Township and City of Alpena	Shared use off-road facility	MEDIUM

Gap Analysis

- *Bagley Street Bridge is a safety concern since the pedestrian walk is too narrow to allow for two-way pedestrian and bicycle usage.*
- *Long Rapids Road experiences higher traffic volumes and lacks shoulders for safe bicycle use. The segment from City of Alpena Bi-Path west to Bolton Road provides bicycling access to lower traffic volume county roads that are popular bike riding routes.*
- *Alpena to Hillman Rail-Trail hard surface with crushed limestone*
- *Alpena to Cheboygan Rail-Trail hard surface with crushed limestone*

Cheboygan County

With the crushed and compacted limestone surfacing of the North Central State Trail (Mackinac to Gaylord Rail-Trail), a significant feature has been added to Cheboygan County's non-motorized network. The North Central State Trail has stimulated great interest with communities along the corridor. Less than one year old, the facility has proven to be a significant community asset and a positive impact on the local economy. Subsequent efforts are focusing on trailheads and connections into communities. The community of Indian River is working to develop a non-motorized pathway connecting residential and commercial areas to the Burt Lake State Park, Inland Lakes School and community parks. The Michigan Department of Natural Resources and Top of Michigan Trails Council are working with MDOT and local communities to upgrade the Alpena to Cheboygan Rail-Trail to a hardened surface year-round multi-use trail. The trail connects numerous small communities from Cheboygan to Alpena. With the completion of both rail-trails and improvements to local roads, a Mullet Lake loop route will be available. The Shore to Shore Midland-Mackinac Trail and High Country Pathway are shared use off-road trails. The Pigeon River Country is located in the southwestern portion of Cheboygan County and hosts numerous trails, campgrounds and parks...

Gap Analysis

- *Segment along M-33 connecting the local road route from Indian River to Aloha State Park*
- *Route from Cheboygan State Park to City of Cheboygan*
- *Route from Burt Lake State Park to Indian River and North Central State Trail*
- *Route from Topinabee to Brutus and Indian River to Alanson (connections between to two rail-trails)*
- *Local road connection between Aloha and Onaway State Parks*
- *Mackinaw City to Headlands*

CHEBOYGAN COUNTY PROJECTS	FACILITY TYPE	PRIORITY
Upgrade Alpena to Cheboygan Rail-Trail to hardened surface	Shared use off-road facility	HIGH
North Central State Trail connections into communities along route and development of trailheads	On-road facilities & side paths	HIGH
Connections west to Petoskey-Mackinaw rail-trail from Indian River to Alanson following M-68	On-road facilities & side paths	MEDIUM
Connections west to Petoskey-Mackinaw rail-trail from Topinabee to Brutus through Burt Lake Township The Trail would connect to University of Michigan Biological Station Trails, Colonial Point Trail, and Maple Bay Campground	On-road facilities & side paths	HIGH
Connect Indian River to Aloha State Park following local roads and M-33 the along east side of Mullet Lake	On-road facilities & side paths	MEDIUM
Non-motorized pathway in the community of Indian River connecting residential and commercial areas to the Burt Lake State Park, Inland Lakes School and community parks.	Sidewalks and side paths	HIGH
Connect Onaway State Park to Aloha State Park using local roads	On-road facilities & side paths	MEDIUM
Connect Cheboygan to Aloha State Park using the Rail Trail	Shared use off-road facility	HIGH
Connect City of Cheboygan to Cheboygan State Park	On-road facilities & side paths	HIGH
Connect Mackinaw City trail system to Headlands	On-road facilities & side paths	MEDIUM

Crawford County

There are two major corridors in Crawford County, the Old-27 corridor and the Au Sable River Corridor. Water trails are synonymous with Crawford County given the main branch of Au Sable River flows through the county and the Au Sable River Canoe Marathon begins in the City of Grayling. The Black Bear Bicycle Tour coincides with the canoe marathon and meanders back and forth across the river valley following local roads and state highways. The Black Bear Tour highlights the potential of the Au Sable River Corridor for bike riding on local roads and M-72. There a number of routes and loops limited only by road quality and lack of on-road facilities, such as paved shoulders, that would improve rider experience. A co-marketing of peddle and paddle recreational adventures is an increasing tourism draw to the area. The Grayling Area Paved Pathway System (Grayling Bicycle Turnpike) is over 11 mile long with six miles of extended shoulder from Grayling to the Hansen Hills Recreation Area. A grade separated paved pathway runs from Grayling Township north to Hartwick Pines State Park. The City of Grayling have implemented marked and designated bike lane system consisting of striped lanes and shared use facilities. This network connects residential areas to commercial areas and the Grayling Area Paved Pathway System. There are many hiking/skiing trails in the county. The Crawford Parks and Recreation Commission developed a countywide trails and pathways plan

called, "A Vision for Crawford County, Trails and Pathways." The Regional Non-Motorized Transportation Plan supports and concurs with projects and priorities in this plan.

CRAWFORD COUNTY PROJECTS	FACILITY TYPE	PRIORITY
Connect Rayburn Property to City of Grayling	On-road facilities & side paths	MEDIUM
Link Grayling Bicycle Turnpike to North Higgins Lake State Park	On-road facilities & side paths	HIGH
Construct a pedestrian crossing under the bridge in downtown Grayling	Side paths	MEDIUM
Develop river walkway from Downtown Grayling to Fish Hatchery	Off-road paths	MEDIUM
Establish non-motorized routes along Au Sable River from Graying to Mio, Glennie and Oscoda to Lake Huron. Identify bike routes along the Au Sable River Corridor; map and inventory segments to evaluate needed non-motorized facility improvements	On-road facilities	HIGH
Bike loop : Hartwick Pines State Park to Frederick	On-road facilities	HIGH
Bike loop: M-72 west to M-93 to Military Road to North Higgins Lake State Park	On-road facilities	HIGH
Bike loop: M-72 west to Manistee River Road to 612 and east to Frederick	On-road facilities	MEDIUM
Extend Grayling Bicycle Turnpike to Waters)	On-road facilities & side paths	HIGH
Connect Grayling with Old Dam Road	On-road facilities	LOW
Extend shoulders on M-72 east to Wakley Lake and Mason Tract	On-road facilities	MEDIUM
County Road 612 east to F97 south to North Downriver Road	On-road facilities	MEDIUM
Sherman Road north to Marlette Road west into Waters	On-road facilities	MEDIUM

Gap Analysis
Grayling Bicycle Turnpike to North Higgins Lake State Park
Grayling Bicycle Turnpike to Waters
Rayburn Property to City of Grayling
River walkway from Downtown Grayling to Fish Hatchery

Iosco County

Coastal communities in Iosco and Arenac Counties, through the US-23 Heritage Route, have joined together to develop a bike-pedestrian path along US-23 and adjacent county roads. The plan is to develop the Bi-County River to River Non-Motorized Trail along US-23 Heritage Route, from The Au Sable River to the Rifle River. To date, a 3.8 mile trail has been constructed in Alabaster Township. The other communities have funded preliminary engineering studies to

determine location and design. Oscoda Township received a grant from the MDEQ Coastal Management Program to develop a non-motorized pathway plan.

The Au Sable River flows through the northern part of the County. Several impoundments provide a variety of water recreational opportunities. The Shore-to-Shore Trail traverses the county, following the Au Sable River Corridor. This is a popular horseback riding tail during the spring, summer and fall. The Corsair Trails, managed by the US Forest Service, draws people from around the region for X-country skiing and hiking. The River Road Scenic Byway, the only such designation in the eleven county planning area, runs from US-23 through the Au Sable River Corridor to M-65. The designation provides access to special federally funded programs.

Heritage Route Committee

In 2007, the Iosco County Heritage Route Committee's (ICHRC) adopted as it's major project the completion of the Iosco County portion of the Bi-County River to River Trail. The trail as designed in 1994 was to originate in AuGres near the AuGres River and terminate in Oscoda near the Au Sable River. As adopted the Iosco County portion was defined as the southern county line and near the northern county line at Oscoda's Sunrise Park. County Board of Commissioners and Iosco County Parks and Recreation Board are in support of the Heritage Route Trail system. The Regional Non-Motorized Transportation Plan supports and concurs with projects and priorities in this multi-community trails project.

The priorities of action were established as:

1. Completion of the north-south route along the US-23 corridor to follow the Heritage Route, to connect the coastal communities, and to provide near-by trail access to +/- 80% of counties population. (Trail passes within 1 mile of +/- 80% of the counties year-around and seasonal population.)

2. Development and completion of lateral trails from the "trunk" trail along the corridor.

To accomplish these objectives the development of a working coalition of participating communities, neighboring communities and other corridor communities was defined as essential and was undertaken.

Oscoda Township:

Oscoda is working on a recreational plan that includes a trail plan and has designed and is seeking funding for a lateral trail along the Au Sable River. A portion of the north-south trail can run on streets, avoiding the downtown segment along US-23. Connecting the existing segment at Sunrise Park with the downtown segment will be more difficult because of the high number of driveways.

Au Sable Township:

Au Sable has hired The Spicer Group to conduct the required preliminary engineering study. This study phase will select a route and provide the basis for good cost estimates. Perhaps the most difficult portion of Au Sable trail is complete. The US-23 Au Sable River Bridge has been widened for pedestrians and non-motorized travel. Sidewalks connect the crossing to Oscoda. Trail design will connect to Oscoda on the north and Baldwin on the south. Au Sable will work from north to south as funds are available. Matching funds are being sought, but have not been found or allocated.

Baldwin Township:
Baldwin Township has also employed The Spicer Group for preliminary engineering. The trail design will connect to Au Sable on the north and East Tawas on the south. A portion of the trail runs through the DDA's area of responsibility. Match has not been allocated, but is viewed with some confidence.

East Tawas:
Spicer is working on preliminary engineering to connect (+/- .8 miles) the Baldwin segment to the existing trail at Tawas Point Road. The existing trail runs from the Tawas City line to near the Tawas Point State Park. Part of this segment is in Baldwin Township. Match has not been allocated, but is viewed with some confidence.

Tawas City:
The Tawas City segment exists as a sidewalk adjacent to US-23. No plans have been made at this time to upgrade this segment, but the City has been an active participant on the Committee and is not competing for these funds until the un-built segments are done. The Tawas City Segment connects East Tawas to Tawas Township. On the trail, a Gateway Park renovation, a new city hall and a residential/retail development are planned.

Tawas Township:
The Tawas Township segment of the main north-south trunk trail is complete and runs approximately 2/10 of a mile. No additional work is planned on this short segment. The Tawas Township segment connects Tawas City to Alabaster Township.

Alabaster Township:
A 3.8 mile trail segment connecting to Tawas Township was completed last fall. The trail is frequently used and was kept open (plowed) for the winter. The Spicer Group is doing preliminary engineering on a segment to connect to Whitney Township on the south. The trail has spawned many volunteer activities. These activities include snow plowing, clean-up, safety patrol, and interpretative sign development. Match has not been allocated, but is viewed with some confidence.

Whitney Township, Arenac County:
Whitney Township is working on a trail segment connecting to Alabaster Township and the new Whitney Township Park. The planned segment would run south for 2 miles (crossing US-23) and then running west to the new park. This westward jog would move the trail so that it could run along the county road network to AuGres. Match has not been allocated, but is viewed with some confidence.

AuGres, Arenac County:
AuGres is working on a lateral segment to connect downtown with the park where the AuGres River flows into Lake Huron. In addition, a rail-to-trail segment connecting AuGres with Omer, to the south, has been designed and funding is being sought.

Summary:

- Connect corridor communities
- Connect corridor population
- Connect main trail with other points of interest using laterals
- Connect with communities and groups by way coalitions and cooperative actions
- 5 Iosco and 2 Arenac County communities are actively working on the trail
- 2 communities are done

Charter Township of Oscoda

Oscoda Township is developing a non-motorized pathway plan with funding from the Coastal Management Program of the Department of Environmental Quality. The Township has retained the services of Spicer Group to assist in the development of the plan. A draft of the plan has been completed and information incorporated into this regional plan. Pathways identified in the plan routes along River Road Scenic Byway, Rea Road, County Road F-41, Cedar Lake Road and Perimeter Road. The Regional Non-Motorized Transportation Plan supports and concurs with projects and priorities in the plan.

IOSCO COUNTY PROJECTS	*FACILITY TYPE*	*PRIORITY*
Au Sable Township – South to Baldwin Township connect to River Road. Part of the Bi-County River to River Trail.	Side paths	HIGH
Baldwin Township - From Au Sable Township south to East Tawas. Part of the Bi-County River to River Trail.	Side paths	HIGH
E. Tawas – Tawas Beach Road to Baldwin, may use railroad corridor that was purchased Tawas City Townline 2/10 mile connects to Alabaster Pathway. Part of the Bi-County River to River Trail.	Side paths	HIGH
Tawas City – Upgraded existing trail that connects East Tawas to Tawas Township	Side Path	LOW
Alabaster Township extend trail south from Alabaster Road to County Line. Pathway is an opportunity to display historic and cultural features. Part of the Bi-County River to River Trail.	Side paths	HIGH
Whitney Township, Arenac County – Follow county roads (Noble Road) with a trailhead at the proposed Township Park. Would include a spur along the Whitney Drain to River and DNR Park. Part of the Bi-County River to River Trail.	Side paths & on-road facilities	HIGH
Simms Township - Part of the Bi-County River to River Trail.	Side paths	MEDIUM
AuGres – River walk to mouth of Rifle River, follow Saginaw water line ROW. Part of the Bi-County River to River Trail.	Off-road path	HIGH
Oscoda Township – Study River Road bridge for non-motorized crossing over Au Sable River, use	On-road facilities & side paths	HIGH

shared streets within town, and implement the Coastal Management funded non-motorized pathway plan. Part of the Bi-County River to River Trail.		
Au Sable River Corridor Bike Routes connecting Grayling, Mio, Curtisville and Oscoda; and campgrounds and parks.	On-road facilities	HIGH
River Road Scenic By-Way is federal designation that offers access to special funds for trail development. Develop a bicycle-pedestrian facility following River Road Scenic By-way to West Gate. The route has been identified in the Oscoda Township Non-Motorized Pathway Plan.	On-road facilities & side paths	HIGH
There is a network of county roads used by bicyclers and identified on the county map. The routes consist of on-road facilities with shared use and in some instances where higher traffic volumes and sight issues, wide paved shoulders should be constructed.	On-road facilities	MEDIUM
There is a need to make connections to westerly townships utilizing local roads and on-road facilities.	On-road facilities	MEDIUM
Shoulder improvements on M-65 from Glennie to Hale.	On-road facilities	MEDIUM
Develop a multi-use trailhead on north side of M-65 Bridge over Au Sable	Multi-Use	MEDIUM
There are several identified east-west routes connecting communities in Roscommon, Ogemaw and Iosco Counties that follow primarily local roads. These routes will need to be studied in greater detail to determine types on non-motorized facilities needed, such as shared use, wide paved shoulders and side paths.	On-road facilities & side paths	MEDIUM

Gap Analysis

- *Bi-County River to River Trail connecting communities in Iosco and Arenac COunties*
- *River Road Scenic By-Way and River Road bridge for non-motorized crossing over Au Sable River*

Montmorency County

Montmorency County offers a variety of mountain biking, hiking, and horseback riding opportunities. The High Country Trail and the Shore-to-Shore Trail traverse the western parts of the County. County roads and trails provide numerous loop possibilities for mountain biking. The M-32 regional corridor bisects the County connecting Vienna, Atlanta and Hillman. Wide paved shoulders on M-32 and M-33 will provide non-motorized transportation facilities.

Upgrading the Alpena to Hillman Rail-Trail will enable year round use of the trail and provide a key regional facility.

MONTMORENCY COUNTY PROJECTS	FACILITY TYPE	PRIORITY
M-33 paved shoulder from Atlanta to Onaway then onto Onaway State Park. The segment provides connections to Clear Lake State Park, Canada Creek Ranch, and the Cheboygan to Alpena Rail-Trail	On-road facilities	HIGH
M-32 paved shoulder from Atlanta to Hillman	On-road facilities	MEDIUM
Connection between Atlanta and Hillman using M-32 and Pleasant Valley Road	On-road facilities	MEDIUM
Northern route between Hillman and Atlanta using Co. Rd. 624 and 459 and M-33	On-road facilities	MEDIUM
Non-motorized facilities around Twin Lakes and connected to Lewiston	On-road facilities	MEDIUM
Non-motorized facility from Lewiston to Buttles Road Pathway	On-road facilities	MEDIUM
Connect Lewiston to the Shore to Shore Trail	On-road facilities	MEDIUM
Bike-pedestrian trail from Hillman to Hillman Schools	Side paths	MEDIUM
Bike-pedestrian trail from west of Atlanta to downtown and to Atlanta Community Schools	Side paths	MEDIUM
Dedicated sled dog trails in Clear Lake State Park using ski trails and two tracks	Shared use off-road facility	LOW
Connect Lewiston to Garland using local roads	On-road facilities	MEDIUM
Mountain bike routes Lewiston/Avery Lake/Atlanta and Black River/Pigeon River	On-road facilities	LOW
Theme routes for mountain biking such as elk viewing	On-road facilities	LOW
Hard surface crushed limestone to accommodate year round use Rail-Trail from Hillman to Alpena	Shared use off-road facility	HIGH

Gap Analysis

- *Lewiston to Buttles Road Pathway*
- *Atlanta to Onaway*
- *Hillman to Hillman Schools*
- *Atlanta to Atlanta Community Schools*
- *Garland to Lewiston*
- *Hillman to Alpena Rail-Trail*

Ogemaw County

A countywide plan, the Ogemaw Trails Master Plan, was developed for the communities in 2003 by Gove Associates, Inc. The Regional Non-Motorized Transportation Plan supports and concurs with projects and priorities in the Ogemaw Trails Master Plan. The City of West Branch, West Branch Township and Ogemaw Township are developing a plan to construct paved multi-use trails through the City and connecting commercial and residential areas in the townships. Trails will follow Business I-75 and railroad ROW. West Branch is planning to extend their River Walk trails to connect to proposed bike trails. With the exception of a bike path connecting Rose City to the Rifle River Recreation Area, other non-motorized facilities identified in the County were on-road facilities. There are opportunities for connecting communities to parks and recreation areas and connecting communities to other communities in adjacent counties. The Ogemaw County Historical Society and the Ogemaw Trails are developing a historic tour route in the northwest part of the county called Ghost Towns and Legends. This route could also be marketed as a bike tour002E

OGEMAW COUNTY PROJECTS	FACILITY TYPE	PRIORITY
Paved multi-use trail along Business I-75 from exit 212 to exit 215 that serves the City of West Branch, West Branch Township, and Ogemaw Township.	Side path	HIGH
Multi-use trail in West Branch along the railroad ROW	Shared use off-road facility	HIGH
Extension of River Walk Trail system in West Branch	Shared use off-road facility	HIGH
Paved multi-use trial linking Rose City to Rifle River Recreation Area	Side path	MEDIUM
Bike routes connecting West Branch to Rose City, paved shoulders and shared use	On-road facilities & side paths	MEDIUM
There are several identified east-west routes connecting communities in Roscommon, Ogemaw and Iosco Counties that follow primarily local roads. These routes will need to be studied in greater detail to determine types of non-motorized facilities needed, such as shared use, wide paved shoulders, side paths or spot treatments utilizing multiple types	On-road facilities	MEDIUM

Gap Analysis

- *Rose City to Rifle River Recreation*
- *Paved multi-use trail along Business I-75 from exit 212 to exit 215 that serves the City of West Branch, West Branch Township, and Ogemaw Township.*
- *Multi-use trail in West Branch along the railroad ROW*

Oscoda County

Oscoda County is known for its major water trail, the Au Sable River. This corridor is a major recreation draw for canoeing, kayaking, fishing and camping. The Black Bear Bicycle Tour, in conjunction with the Au Sable Canoe Marathon, meanders back and forth along the river valley following local roads and state highways. The Shore to Shore Trail is extremely popular for equestrian usage. Michigan Trail Riders have made trail improvements such as building boardwalks across wetlands. There are no hard surfaced off road or side path non-motorized trail in Oscoda County. The EDAOC Board and Recreation subcommittee completed an Oscoda Area Trails Study in 2006. The plan identified existing trails and proposed projects to improve the network and access to communities. The Regional Non-Motorized Transportation Plan supports and concurs with projects and priorities in the OATS.

OSCODA COUNTY PROJECTS	***FACILITY TYPE***	***PRIORITY***
Improvements to Shore to Shore Trail	Shared use off-road facility	HIGH
Improvements Luzerne Trail Camp and McKinley Trail Camp	Shared use off-road facility	HIGH
Bike route along Red Oak Road to use as connector from Garland Resort to Lewiston and Shore to Shore Trail. Paved shoulder is needed for safety.	On-road facilities	MEDIUM
Bike and pedestrian trail from Mio to McKinley, creating a loop on both sides of the Au Sable, presents the possibility of riding and paddling.	On-road facilities & side paths	HIGH
Mio to McKinley to Fairview using local roads and trails.	On-road facilities	MEDIUM
Cherry Creek Road - Red Oak Road – M-72 and Mio Loop	On-road facilities	MEDIUM
Fairview to Comins to Smith Lake to Mio local roads and State highways.	On-road facilities	MEDIUM
Au Sable Corridor Bike Routes connecting Grayling, Mio, Curtisville and Oscoda; and campgrounds and parks.	On-road facilities	HIGH

Gap Analysis

- *Improvements to Shore to Shore Trail*
- *Connection from Shore to Shore Trail to Luzerne and Mio*
- *Complete loop from Mio to McKinley*

Otsego County

The North Central State Trail, which runs from Gaylord to Mackinaw City via Cheboygan, has stimulated great interest with communities along the corridor. Less than one year old, the facility has proven to be a community asset and a positive impact on the local economy. Subsequent efforts are focusing on trailheads and connections into communities. The City of Gaylord has been developing a non-motorized trail system. Segments serve northern and southern portions of the City. Gaylord is working towards expansion of its non-motorized trails to connect the residential areas to commercial and industrial development west of I-75. Primary corridors are McCoy/Milbocker Road and M-32 west. There is considerable interest in developing a non-motorized trail from Gaylord to Grayling, following Old 27 and the active railroad. The route corresponds to the regional corridor identified as part of this planning effort. A north-south trail from Mackinaw to Houghton Lake would connect many communities; residential, commercial and employment areas; parks and campgrounds; other non-motorized trail systems. The Pigeon River Country provides opportunities for hiking, equestrian, and mountain biking.

The Gaylord Community Pathway Plan was developed in 2000 by local communities with the assistance of consultants. The plan provided information on organizational structure, proposed routes and priorities, pathway design and management and funding strategies. The Regional Non-Motorized Transportation Plan supports and concurs with projects and priorities in the Gaylord Pathway Plan.

OTSEGO COUNTY PROJECTS	FACILITY TYPE	PRIORITY
Extend North Central State Trail south through Gaylord and onto Waters, Frederick and Grayling. The segment would connect many communities and parks. There appears to be sufficient ROW between the rail line and Old 27 to locate a non-motorized side path. It may be necessary to erect a fence to deter people from crossing the tracks as well it may be necessary to use wide paved shoulders where the ROW is too narrow.	On-road facilities & side paths	HIGH
Develop bicycle-pedestrian facility along M-32 corridor west of the I-75 interchange to connect commercial-retail development and residential development. The City has acquired much of the right-of-way to the Meijer Shopping Center. A disjointed pedestrian facility, lack of paved shoulders/bike lanes and high traffic volumes creates unsafe conditions for non-motorized transportation.	Side Paths	HIGH
Develop a non-motorized facility from Business I—75/South Otsego Street east along McCoy/Milbocker Road to connect Gaylord residential areas to employment and shopping areas.	Side paths	HIGH
Pedestrian/Bike facility on Dickerson Road to	Side paths	HIGH

McCoy/Millbocker route and west along Millbocker Road		
Extend non-motorized facility west along Milbocker Road past the Industrial Park to connect to the MDNR Pine Barren Pathway.	On-road facilities & side paths	MEDIUM
Continue to expand the non-motorized network in Gaylord to improve connections from residential areas to institutional, business and employment areas.	On-road facilities & side paths	MEDIUM
Riding loop around Otsego Lake and connecting to Gaylord, Pine Barren Pathway and Michaywe.	On-road facilities & side paths	MEDIUM
Local road connections and loops connecting communities and parks to Shore to Shore Trail, High Country Trail and North Central State Trail and community trails	On-road facilities	MEDIUM
M-32 corridor east and west using a combination of local roads and M-32. The purpose is to connect Gaylord to Johannesburg, Vienna and Atlanta to the east and Elmira and Jordan River Valley to the west.	On-road facilities	MEDIUM
Connect Elmira to mountain biking opportunities to north.	On-road facilities	MEDIUM
Connect residential development in west of Gaylord to the North Central State Trail	On-road facilities	MEDIUM
Connect Gaylord to Otsego Club and Sylvan Resort	On-road facilities and side paths	MEDIUM
Trailhead on north side of Gaylord (fairgrounds) to serve the North Central State Trail	Shared use off-road facility	HIGH
Pedestrian/bike facility connecting Aspen Trail system to schools and ball fields	Off-road facility	MEDIUM
Connect Vanderbilt/Rail-Trail to Pigeon River and High Country Trail	On-road facilities	MEDIUM

Gap Analysis

- *Extension of the North Central Trail through Gaylord south to Waters and onto Grayling using the existing ROW of the Railroad and Old-27.*
- *M-32 west connecting Gaylord to commercial and residential development out to Townline Road.*
- *Connections of Gaylord to business and employment centers west of I-75*
- *Pedestrian/bike facility connecting Aspen Trail system to schools and ball fields*

Presque Isle County

Rogers City developed the first segments of the Huron Sunrise Trail by constructing a paved bicycle-pedestrian trail that connected several of its waterfront parks. The trail was extended north into Rogers Township following the coastline to P. H. Hoeft State Park. Planning has been

completed on the next phase to extend the trail to Forty Mile Point Lighthouse. Presque Isle Township has the Annishamabe Bike Path that runs from Presque Isle Harbor south to Kauffman Bay on Grand Lake. This trail is an on-road facility consisting of a 4 feet wide paved shoulder on each side of the road. The Michigan Department of Natural Resources and Top of Michigan Trails Council are working with MDOT and local communities to upgrade the Alpena to Cheboygan Rail Trail into a hardened surface year-round multi-use trail. The trail connects Onaway, Millersburg and Posen along with communities in Alpena and Cheboygan Counties. A gap in the current network is the connection to Rogers City, both for non-motorized and snowmobile trails. The Black Mountain Forest Recreation Area has year round trail for hiking, mountain biking skiing and snowmobiling. The High Country Pathway traverses the southwest corner of the County and connects several campgrounds within the County and many features outside the County. A popular weekend bike tour, with the League Michigan of Bicyclists, focuses on riding county roads in the County.

PRESQUE ISLE COUNTY PROJECTS	***FACILITY TYPE***	***PRIORITY***
Upgrade Alpena to Cheboygan Rail-Trail to hardened surface	Shared use off-road facility	HIGH
Develop trailheads and community connections along the Alpena to Cheboygan Rail-Trail	Shared use off-road facility	HIGH
Develop a non-motorized trail to connect Rogers City to the Alpena to Cheboygan Rail-Trail. Use portions of the Rogers City Spur Rail-Trail in combination with ROW acquisition and on-road non-motorized facilities.	Shared use off-road facility and on-road facility	HIGH
Extend non-motorized facilities along US-23 using a combination of side paths and on-road facilities	On-road facilities & side paths	HIGH
Develop a west route from Rogers City to connect snowmobile trails with potential for mountain biking and hiking in the summer.	Shared use off-road facility and on-road facility	HIGH
Form a county trails group		HIGH
Develop a hardened surface trail from Ocqueoc to Millersburg utilizing existing two tracks and snowmobile trails	Shared use off-road facility	LOW
Develop bike trip maps of the county using trails and low volume paved county roads.	On-road facilities & side paths	HIGH
Complete an analysis to identify segments needing paved shoulders and side paths to address safety concerns.	On-road facilities & side paths	MEDIUM
Develop a connection from US-23 to Presque Isle Harbor and Thompson's Harbor State Park. Loop around Grand Lake.	On-road facilities & side paths	HIGH
Connection from Presque Isle Township through Rockport and onto Alpena Township and City of Alpena. This concept was first identified in the Huron Greenways.	On-road facilities & side paths	MEDIUM

Gap analysis
Alpena to Cheboygan Rail Trail
Rogers City connection south to rail-trail
Rogers City connection west to snowmobile trail
Connection 40 Mile Point to Black Mountain and to Cheboygan
Loop around Grand Lake that connects residential development, harbor, historic sites and Thompson's Harbor State Park

Roscommon County

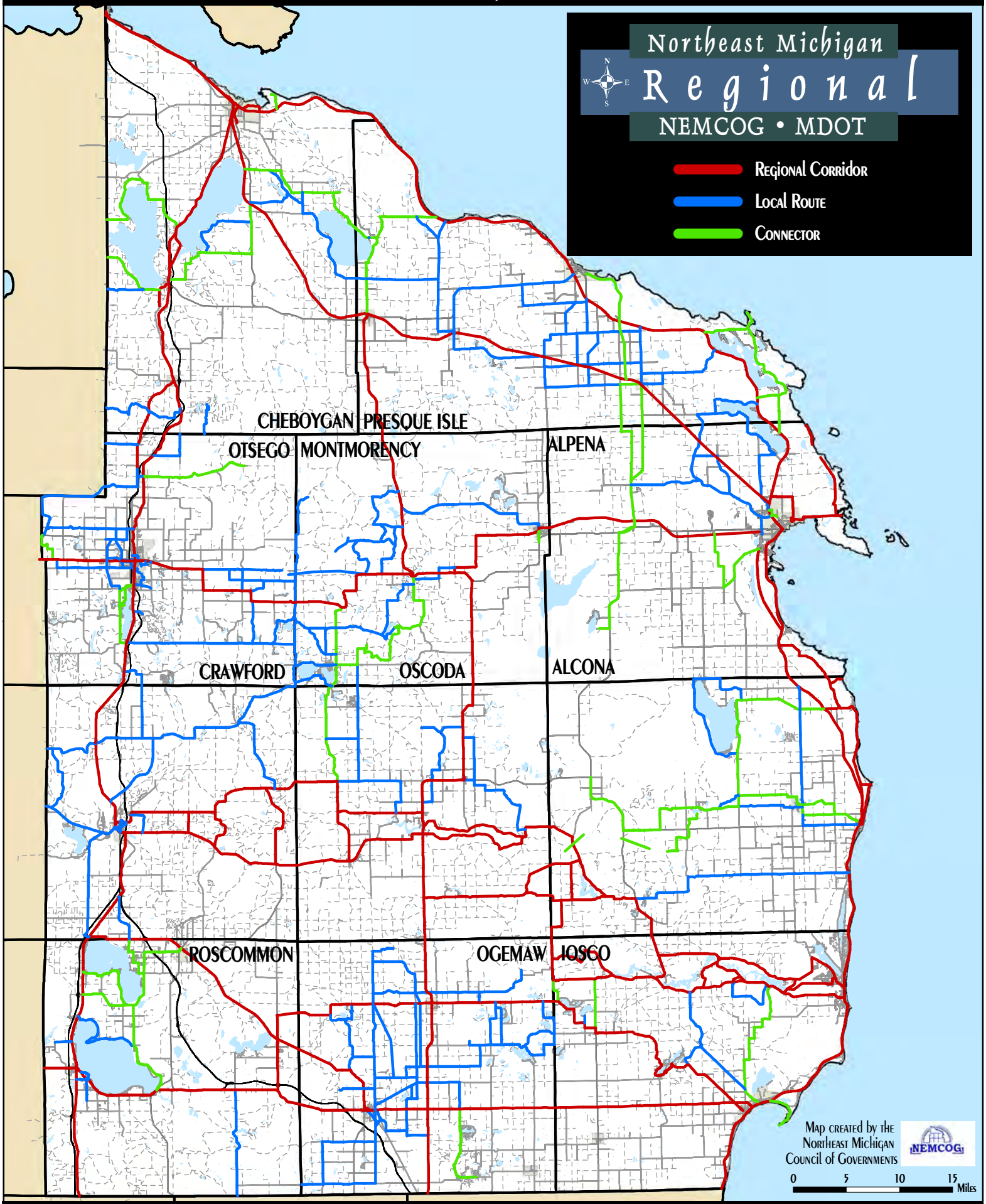
Residential-Resort related development surrounding major lakes is the defining feature of Roscommon County. Residential, commercial and recreational development is grouped around Houghton Lake, Higgins Lake and to a lesser extent, Lake Saint Helen. Community interest in non-motorized transportation tends to focus around the two major lakes. There is a bike trail along M-55 from the US-127 interchange east to Gladwin Road. The Roscommon County Road Commission is adding paved shoulders in conjunction with road improvements. The Old-27 Regional Non-motorized Transportation Corridor traverses the west side of Roscommon County. There is a multi-community and multi-agency interest in developing this corridor to connect communities and parks from Houghton Lake to Mackinaw City.

ROSCOMMON COUNTY PROJECTS	FACILITY TYPE	PRIORITY
Non-motorized facilities primarily paved shoulders, creating riding loops around Houghton and Higgins lakes.	On-road facilities & side paths	HIGH
The Roscommon County Road Commission should continue the paved shoulder program as a part of their road improvements programs. Opportunities for additional funding exist if paved shoulders meet MDOT criteria.	On-road facilities & side paths	HIGH
To improve biking experience, trails and paved shoulders should be routinely swept.	On-road facilities & side paths	HIGH
Create a biking route that loops from Prudenville to Saint Helen to Roscommon to Sharps Corners following M-55 to Old -55 Saint Helen Road to Old M-76 to Sunset Drive to N. Higgins Lake Road to Cut Road and Markey Road	On-road facilities & side paths	MEDIUM
Develop non-motorized connections from Roscommon to North Higgins Lake State Park and South Higgins Lake State Park	On-road facilities & side paths	HIGH
Old-27 trails/paved shoulder connecting state parks and north to Grayling and Hartwick Pines State Park and points beyond.	On-road facilities & side paths	HIGH
Connect State Parks and community parks to residential areas and commercial areas.	On-road facilities & side paths	MEDIUM
There are several identified east-west routes connecting communities in Roscommon, Ogemaw and Iosco Counties that follow primarily	On-road facilities & side paths	MEDIUM

local roads. These routes will need to be studied in greater detail to determine types on non-motorized facilities needed, such as shared use, wide paved shoulders and side paths.		

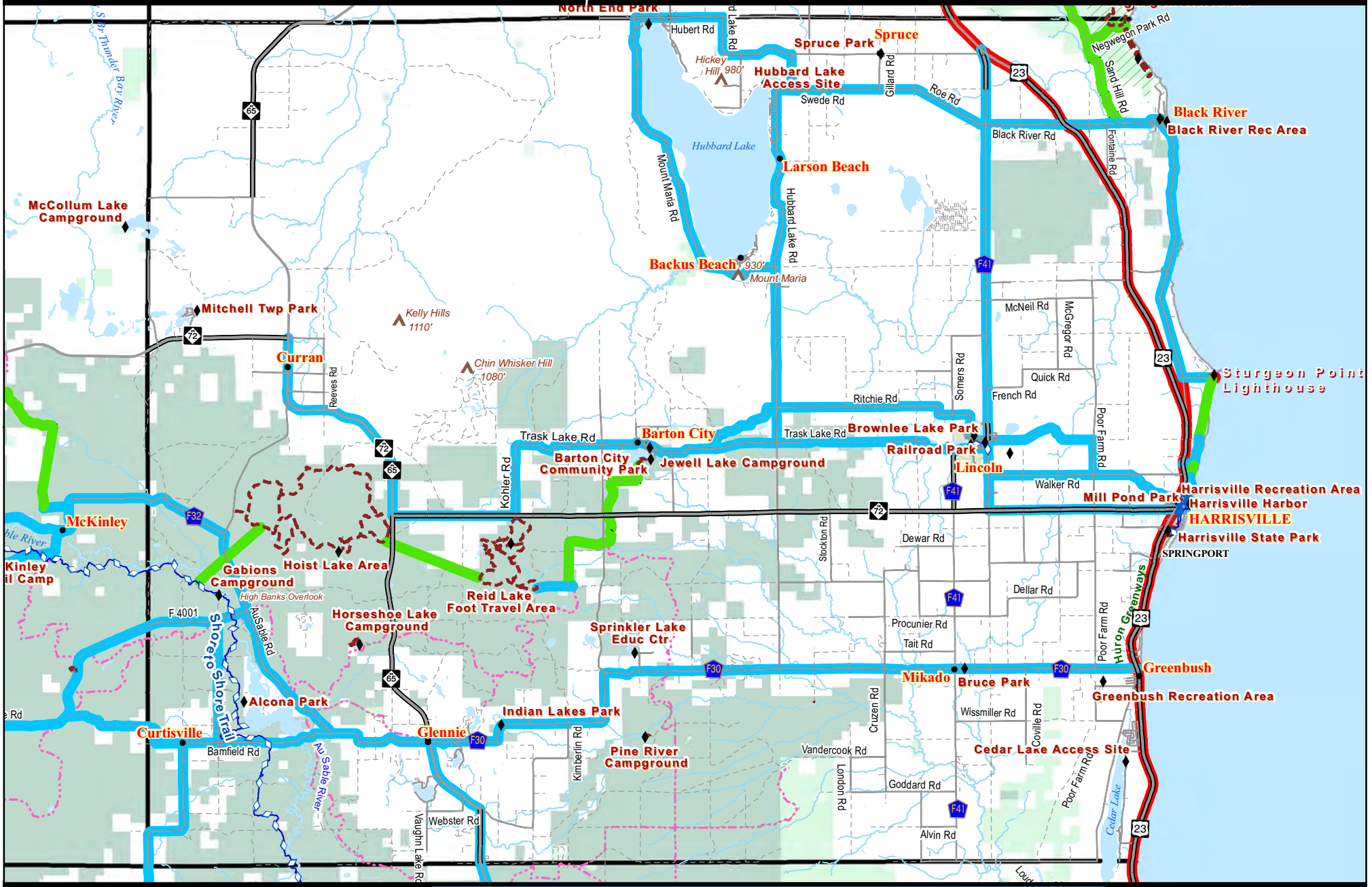
<u>Gap Analysis</u>
Houghton Lake Drive/M-55
Connections to Roscommon from Higgins Lake
Connections from Prudenville to Saint Helen
Connections from Roscommon to Saint Helen
Wider paved shoulders and missing segments of paved shoulders along Old-27
Short pathway from South Higgins Lake State Park to County Road 200.
Connections from Higgins Lake State Park to Grayling and Hartwick Pines State Park
Missing segments of paved shoulders around Higgins Lake that would serve residential areas, resorts and campgrounds.
Missing segments of paved shoulders around Houghton Lake that would serve residential areas, commercial areas, resorts and campgrounds.

Non-Motorized Transportation Plan 2009



Regional Corridors • Local Routes • Connectors

Non-Motorized Transportation Plan 2009



Northeast Michigan

Alcona County

NEMCOG • MDOT

IDENTIFIED TRAILS
- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS
- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

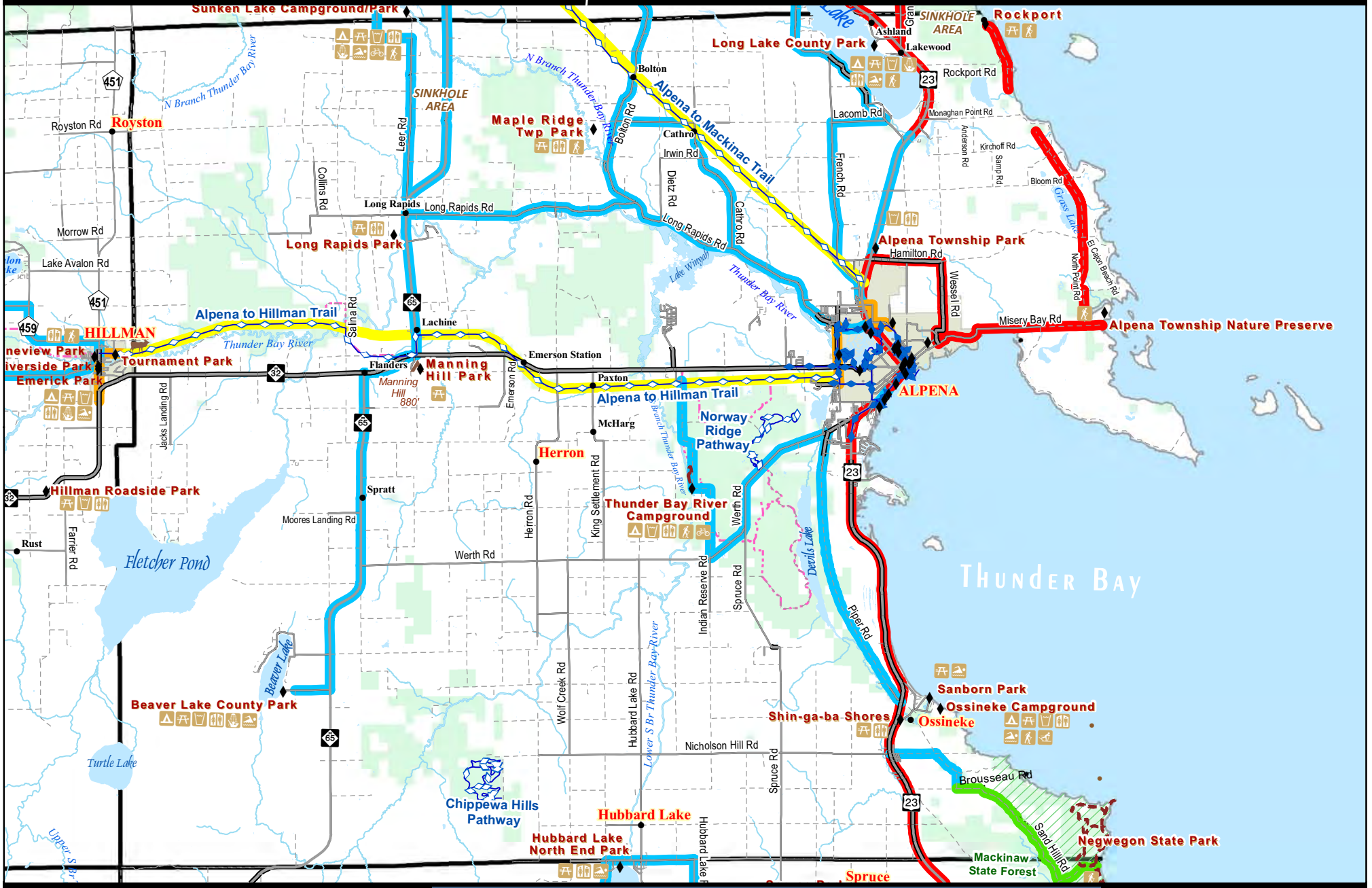
ROADS & PUBLIC LANDS
- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- Huron National Forest
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

Map created by the Northeast Michigan Council of Governments

NEMCOG

Non-Motorized Transportation Plan 2009



Northeast Michigan Alpena County

NEMCOG • MDOT

IDENTIFIED TRAILS

- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS

- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

ROADS & PUBLIC LANDS

- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

Map created by the Northeast Michigan Council of Governments

NEMCOG

Non-Motorized Transportation Plan 2009

Northeast Michigan
Cheboygan County
NEMCOG • MDOT

IDENTIFIED TRAILS
- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS
- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

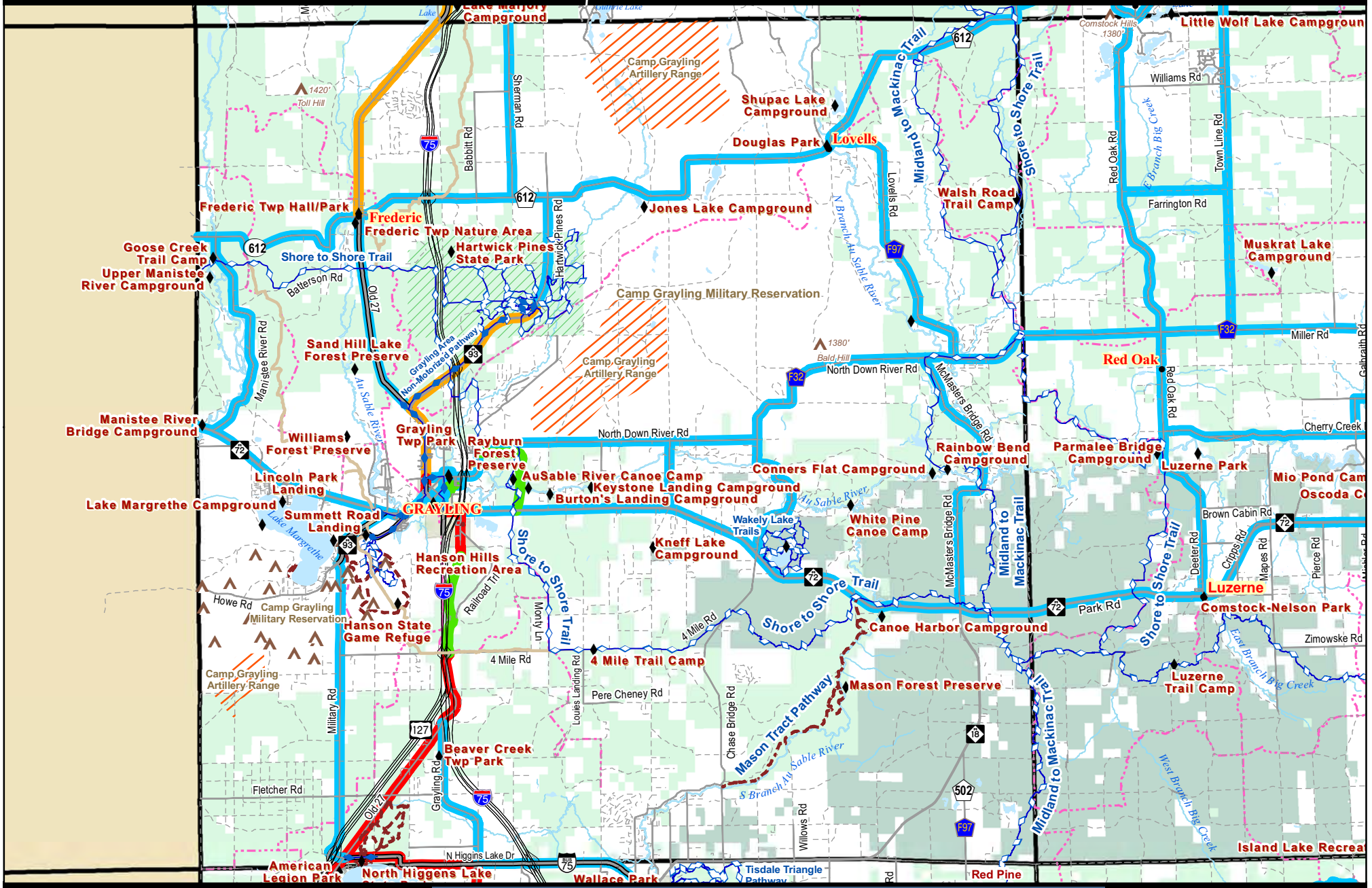
ROADS & PUBLIC LANDS
- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

Map created by the Northeast Michigan Council of Governments

NEMCOG

Non-Motorized Transportation Plan 2009



Northeast Michigan

Crawford County

NEMCOG • MDOT

IDENTIFIED TRAILS

- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS

- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail
- Horse Trail

ROADS & PUBLIC LANDS

- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- Huron National Forest
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

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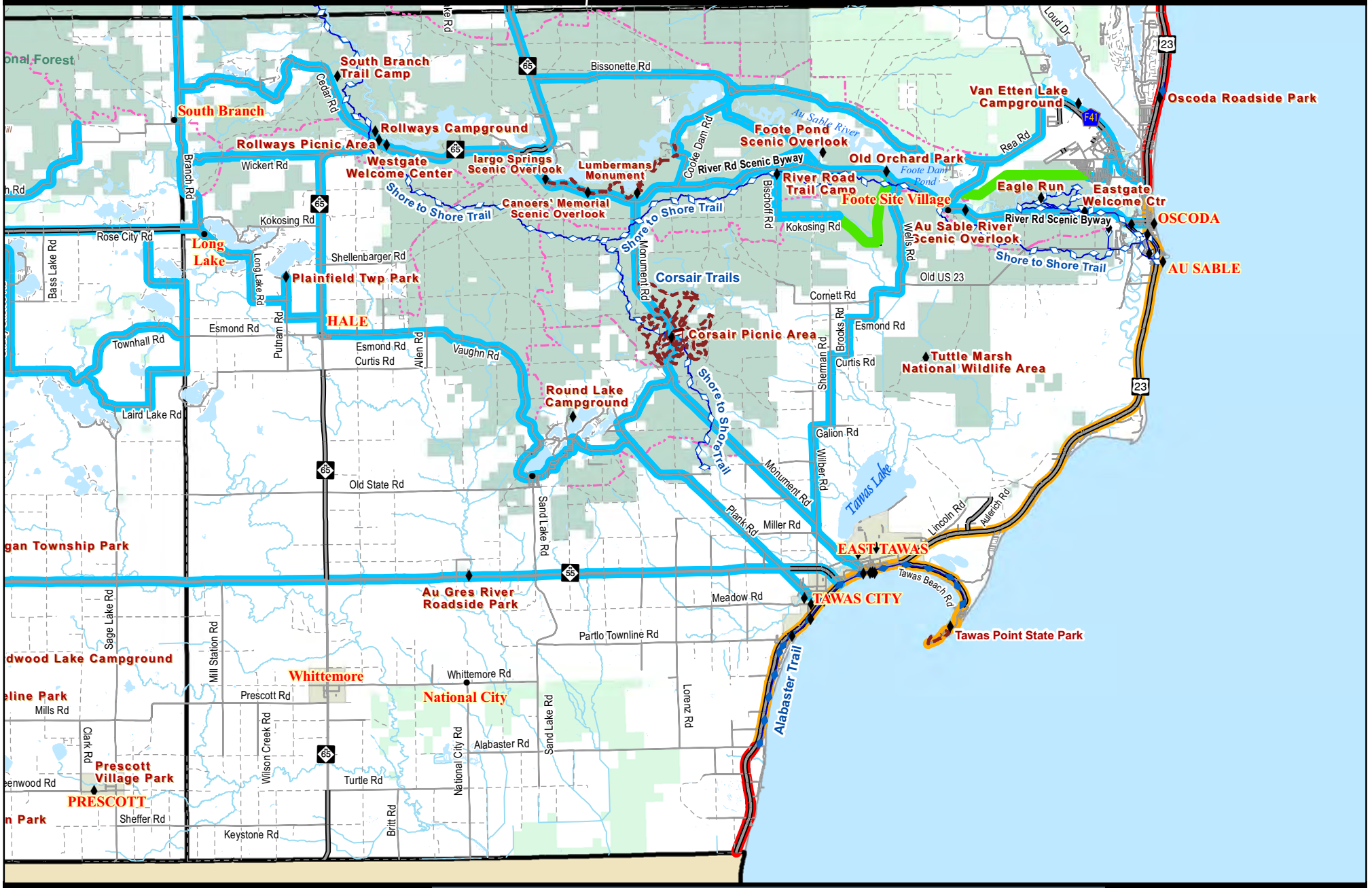
NEMCOG

Non-Motorized Transportation Plan 2009



Northeast Michigan

Iosco County

NEMCOG • MDOT

IDENTIFIED TRAILS
- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS
- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

ROADS & PUBLIC LANDS
- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- Huron National Forest
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

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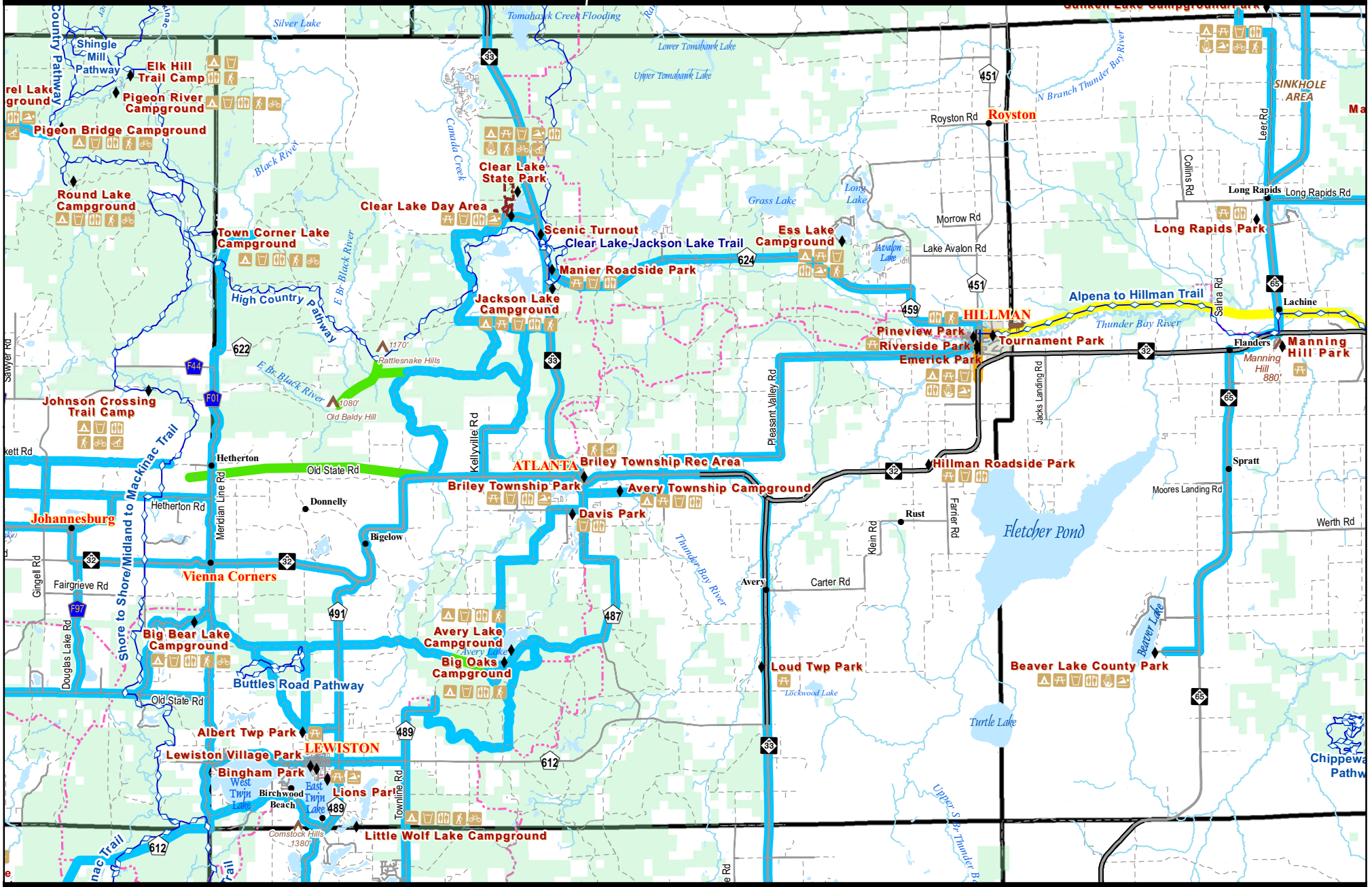
NEMCOG

Non-Motorized Transportation Plan 2009



Northeast Michigan
Montmorency County
NEMCOG • MDOT

IDENTIFIED TRAILS
- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS
- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

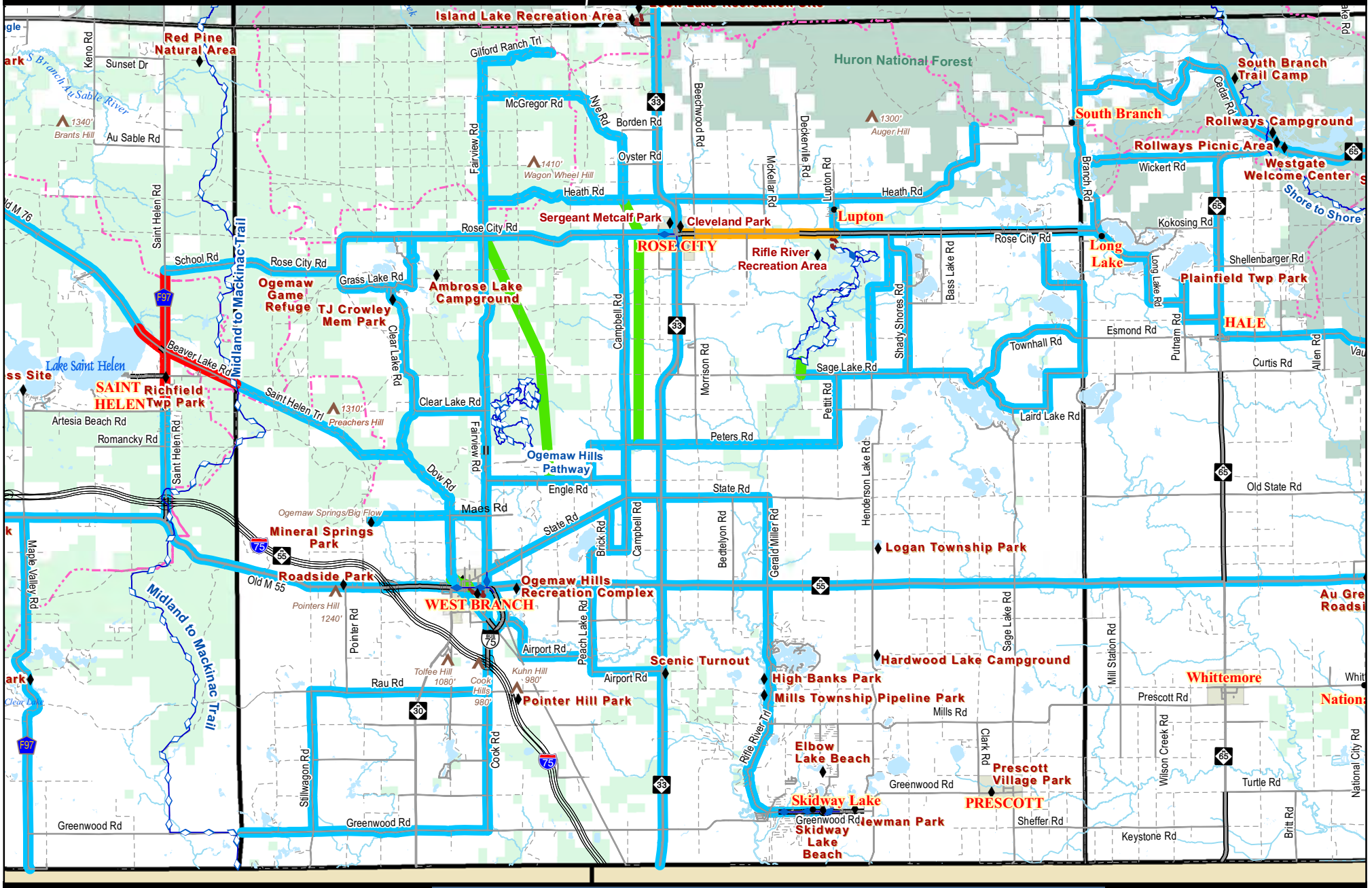
ROADS & PUBLIC LANDS
- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

Map created by the Northeast Michigan Council of Governments

NEMCOG

Non-Motorized Transportation Plan 2009



Northeast Michigan Ogemaw County

NEMCOG • MDOT

IDENTIFIED TRAILS

- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS

- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

ROADS & PUBLIC LANDS

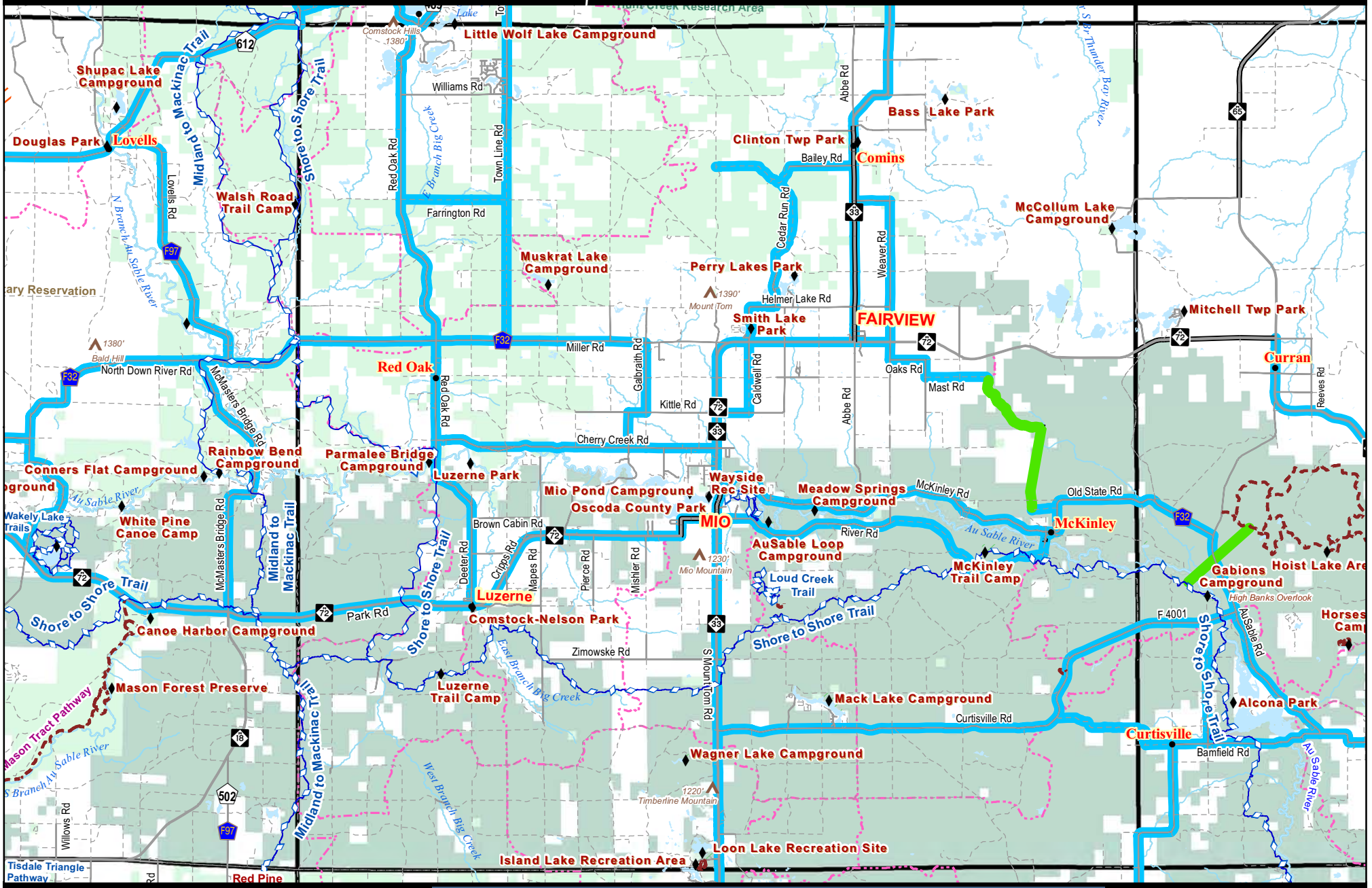
- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- Huron National Forest
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

Map created by the Northeast Michigan Council of Governments

NEMCOG

Non-Motorized Transportation Plan 2009



Northeast Michigan Oscoda County

NEMCOG • MDOT

IDENTIFIED TRAILS
- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS
- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

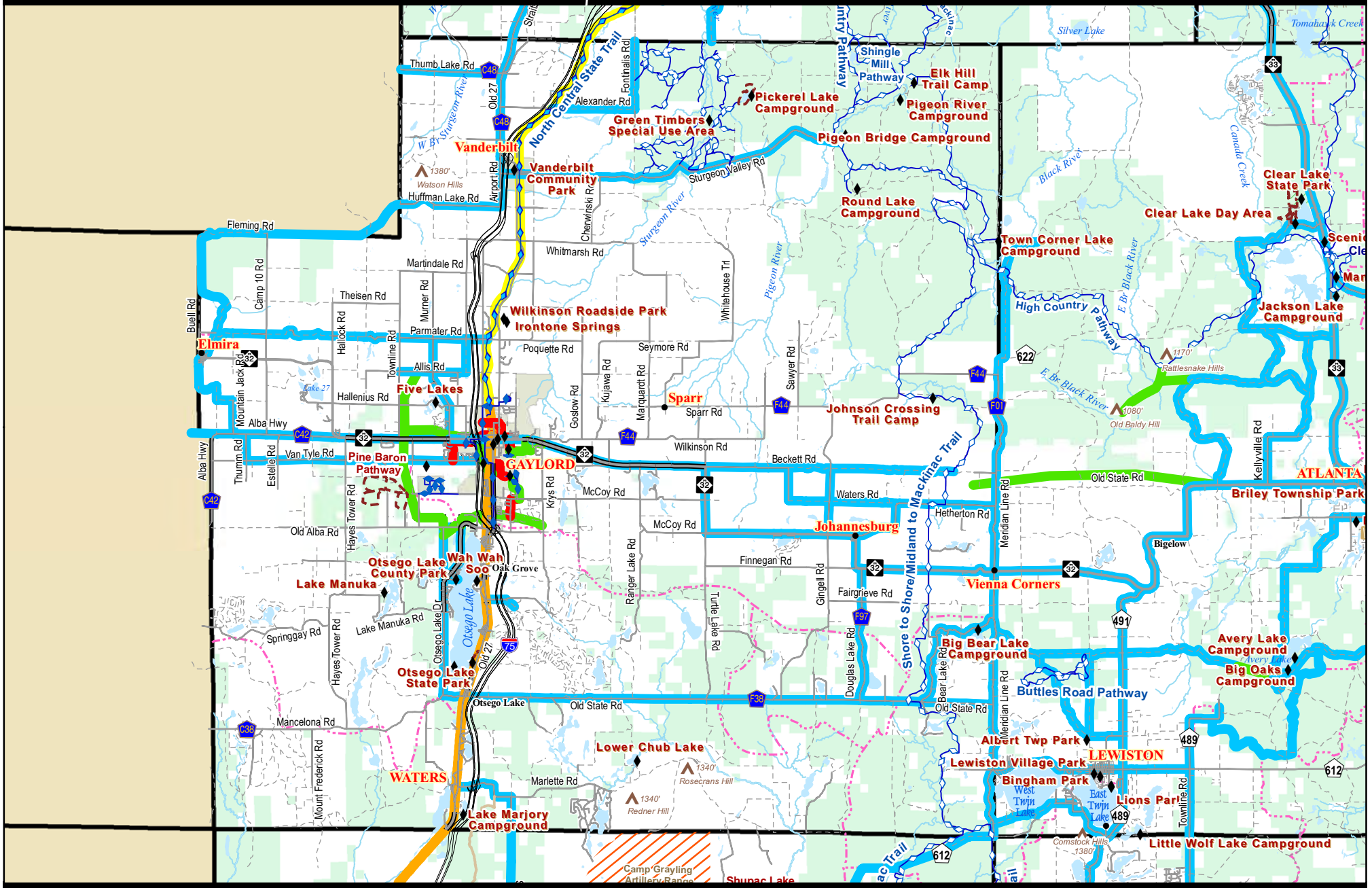
ROADS & PUBLIC LANDS
- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- Huron National Forest
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

Map created by the Northeast Michigan Council of Governments

NEMCOG

Non-Motorized Transportation Plan 2009



Northeast Michigan Otsego County

NEMCOG • MDOT

IDENTIFIED TRAILS

- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS

- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

ROADS & PUBLIC LANDS

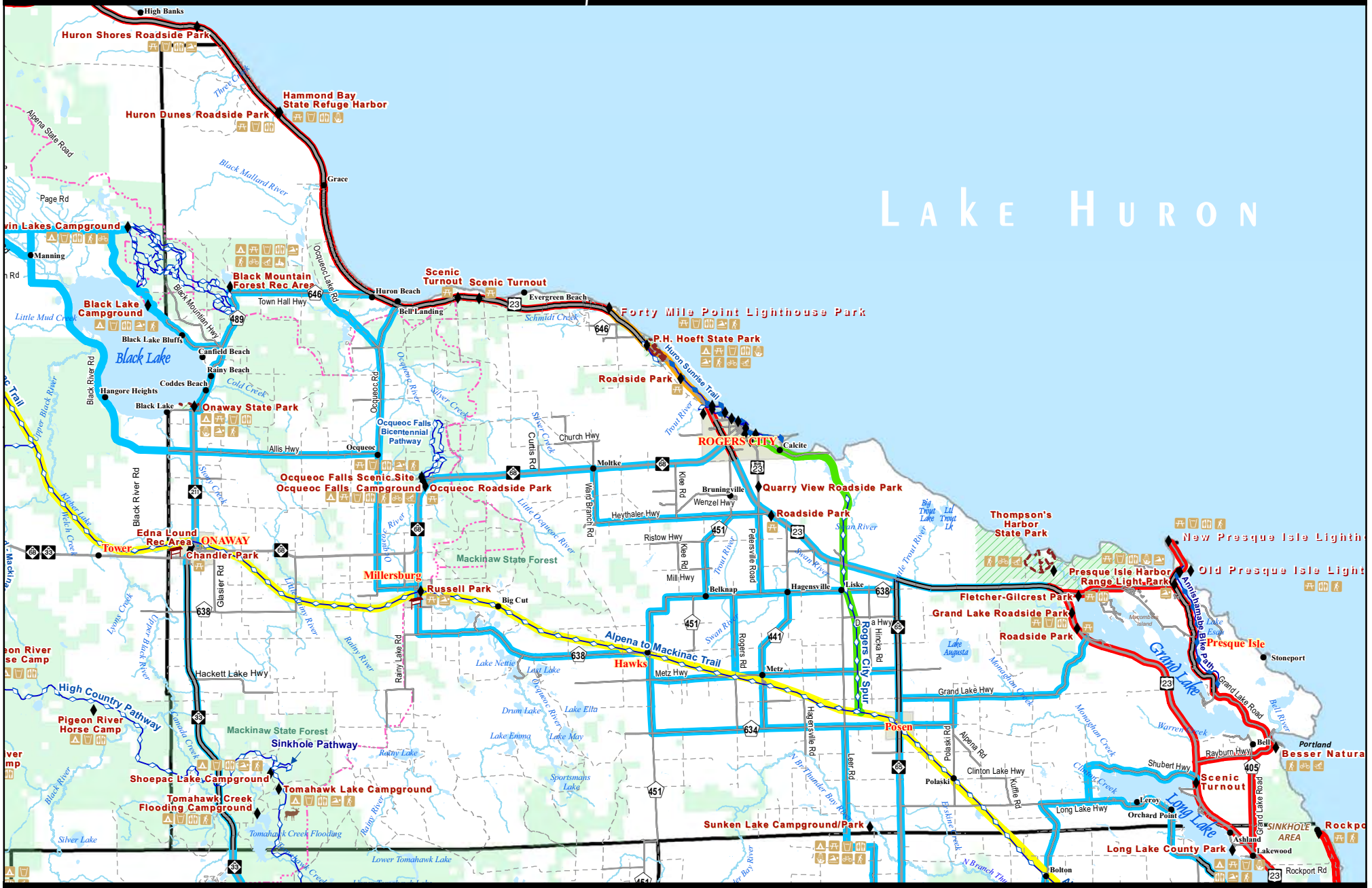
- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

Map created by the Northeast Michigan Council of Governments

NEMCOG

Non-Motorized Transportation Plan 2009



Northeast Michigan
Presque Isle County
NEMCOG • MDOT

IDENTIFIED TRAILS
- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS
- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

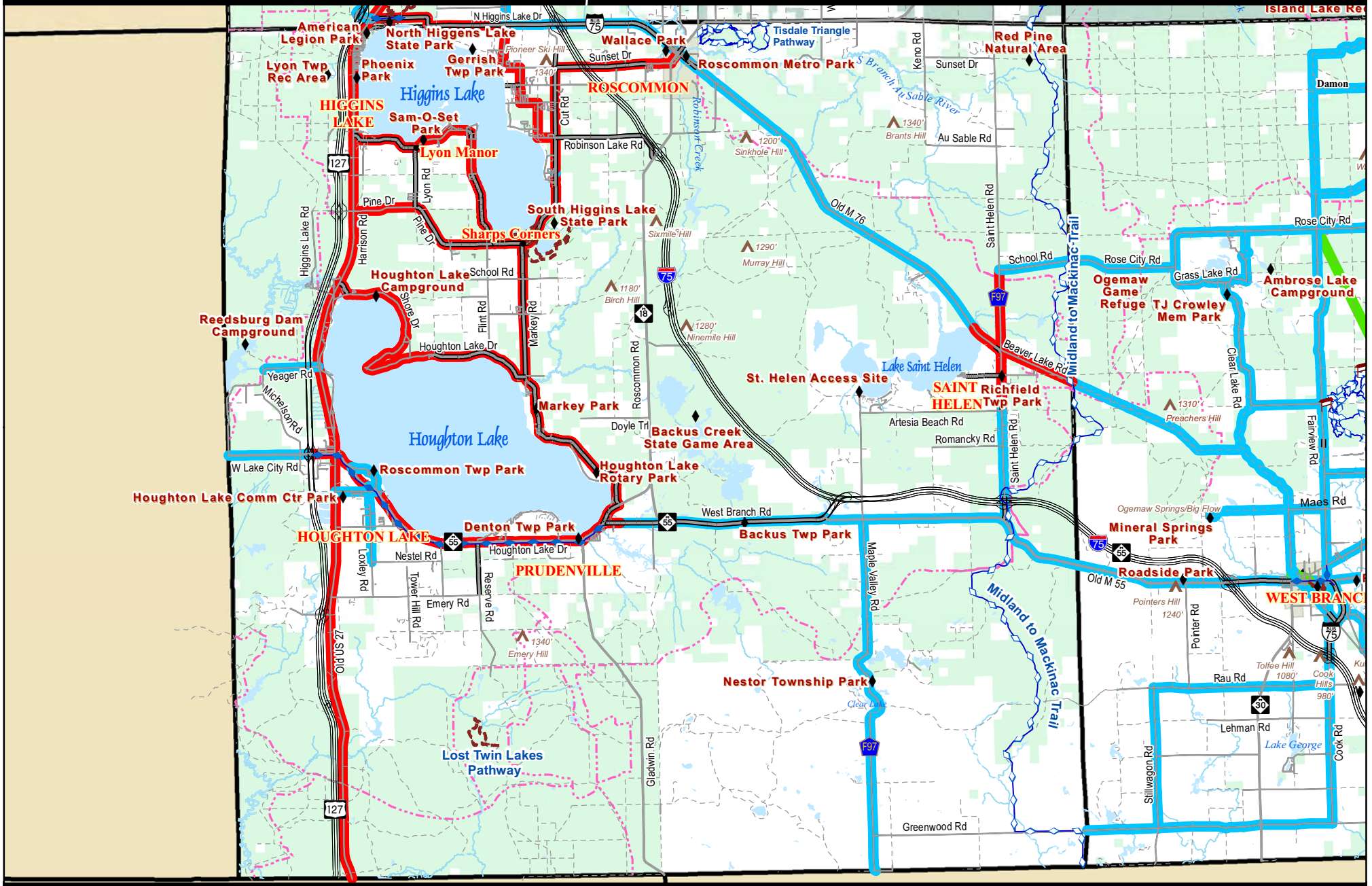
ROADS & PUBLIC LANDS
- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

Map created by the Northeast Michigan Council of Governments

NEMCOG

Non-Motorized Transportation Plan 2009



Northeast Michigan

Roscommon County

NEMCOG • MDOT

IDENTIFIED TRAILS
- Combination On-Road & Off-Road
- Off-Road
- On-Road
- Rail Trail
- Side Path

EXISTING TRAILS
- Paved Trail
- Crushed Limestone Trail
- Natural Surface Trail
- Foot Trail
- Snowmobile Trail

ROADS & PUBLIC LANDS
- Paved Roads with a 4' Paved Shoulder
- Paved Roads
- Unpaved Roads
- Huron National Forest
- State Forest/State Park/State Protected Land

0 1 2 4 6 Miles

Map created by the Northeast Michigan Council of Governments

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IMPLEMENTATION AND INVESTMENT STRATEGIES

The last section of the plan provides information on implementation and investment strategies for proposed non-motorized transportation facilities.

Implementation

The following suggestions will assist in furthering implementation efforts of an interconnected trail system in Michigan:

- Local communities should incorporate relevant elements of the Northeast Michigan Non-Motorized Transportation Plan when they update their planning documents, which include master plans, parks and recreation plans, strategic plans and transportation plans.
- Where appropriate, communities should require local developers to incorporate non-motorized connections into their site design. The intention is to link these smaller trail systems to larger regional system, or at least have the potential to connect. Connectivity within the development, as well as with adjacent land uses, required.
- Collaboration is vital to the success of a regional non-motorized transportation system. Coordination at the local, regional, and statewide level helps to ensure the development of non-motorized facilities that will be utilized and built in a cost- effective manner. Every effort should be made to collaborate and coordinate non-motorized facility development with neighboring communities, regional commissions, local road commissions, MDOT, MDNR USFS, associations, Top of Michigan Trails Council, and other interested stakeholders.
- This non-motorized transportation plan should be reviewed and updated at least every 5 years. The trail database should be updated on a regular basis and made available to all trail planning bodies.
- Communities should explore opportunities for grant funding early in the process. Understanding criteria for grant funding enables communities to plan facilities accordingly, in addition to minimizing unrealistic expectations.
- Facility design, construction and maintenance should be top considerations as systems are being developed. Properly designed and constructed facilities enhance safety, increase longevity and equate to less long term maintenance costs. Maintenance plans should be developed and whether or not required for grant funding.
- Consider forming county and multi-county non-motorized transportation committees. Committees can help promote inter-local cooperation and lead trail planning efforts. Committees may decide to evolve into more formal associations after facilities are developed. Ongoing functions would be to perform activities such as trail promotion, public events, trail maintenance, clean-up projects, attendance at public meetings and lobbying for trail improvements.
- The 11 county planning area has nearly 3,500 miles of paved roads with Average Daily Traffic (ADT) counts of less 2,500 vehicles per day. This provides bicyclists with many miles of biking opportunities in a shared use configuration. Shared use of roadways raises safety concerns and may result in bicycle and motor vehicle mishaps. Bicyclists

and motorists would benefit from educational tools and messages that teach them the rules, rights, and responsibilities of various modes of travel. Education programs can change behavior and improve safety skills.

- Coordination of user groups on multi-use trails is important to minimize user conflict, to maximize the efficiency of investments and to ensure user safety. There are three primary user groups of non- motorized shared- use paths, those on wheels, those on foot and those on horseback. To alleviate concerns between the three user groups, agencies and organizations responsible for managing a trail system should maintain an open dialogue groups. When necessary agencies should convene user group meeting to discuss management and usage activities.
- Look for opportunities to incorporate non-motorized facilities within road projects scheduled along the preferred corridors. Apply for additional funding for non-motorized facilities. Coordination with road projects will make facility development more efficient.

Proposed Road Projects and Opportunities for Non-Motorized Facilities

Timing and coordinating the development of non-motorized transportation with road maintenance and reconstruction projects can be a cost savings and would potentially lessen disruption to motorists and the public. Non-motorized transportation projects identified by communities during plan development have been compared with local transportation agencies' three year plan and MDOT's five year plan projects. The intention was to ascertain if road projects are planned for sections where non-motorized facilities are needed. For example, if a section of a highway is going to be redone and wide paved shoulders or striping would provide for safer bicycle usage, the road agency could apply for funds to construct wider shoulders. **Table 6.1** shows the comparative analysis of road and non-motorized transportation projects.

Non-Motorized Facilities Design Considerations

Design considerations for non-motorized facilities, whether on-road, multi-use pathways, single treadway corridors or dual treadway corridors have been developed by many different entities. Design considerations are intended to serve as an aid to engineers, designers, planners, and organizations in accommodating non-motorized users.

The following information titled "A Primer for Designing Facilities" was obtained from:

bicyclinginfo.org
Pedestrian and Bicycle Information Center

Primer on Designing Facilities

When considering, planning, or constructing a bike facility, the first step is to identify the project scope. As more detailed information becomes available on site limitations, construction cost, and funding project impacts, the scope will be refined through the design development process. Basic considerations in defining the scope are facility type (on street, off street, equipment), paving, drainage, structures, and design guidelines used to identify dimensions such as width of paths. The following text provides some basics in identifying the project scope.

Table 6.1
Comparative Analysis
Proposed Non-Motorized Transportation Projects and Road Projects

County	MDOT Projects	County Projects
Alcona County	No project opportunities	Alcona County Road project of Black River Rd from US 23 to Lakeshore Drive could have added Side Paths if not moved up to 2009 for stimulus project.
Alpena County	No project opportunities	Long Rapids Road (Woodview Rd. to Bolton Rd.). This project coincides with identified safety issues and the need to add wide paved shoulders from City westward to several county roads. It also supports plan goals to use country roads to connect communities like Cathro, Bolton, Long Rapids, Lachine Herron, Hubbard Lake and Ossineke.
Cheboygan County	US-23 – from east county line to Cordwood Rd. This is part of a priority Regional Corridor to expand non-motorized transportation along the US-23 Corridor to connect existing trails, on-road facilities and communities. MDOT should explore using six feet paved shoulders to supplement dedicated trails and enhance the non-motorized corridor.	No project opportunities
Crawford County	No project opportunities	No project opportunities
Iosco County	US-23 (Au Sable River Bridge to F41).	River Road from Grass Lake Rd to Rea Rd (2011). Part of Oscoda Township River Road Scenic Byway plan for bike-pedestrian plan
Montmorency County	No project opportunities	CR 624 from M-33 to Steven's Spring Road and then to Rush Lake Road. This project connects Hillman to Atlanta using CR 459 to CR 624 to M-33

Table 6.1 Continued		
Ogemaw County	Resurface BL I-75 to Woodland Drive in 2012. This project is part of paved multi-use trail from exit 212 to exit 215	No project opportunities
Oscoda County	No project opportunities	CR 489 from Miller Road to the North County Line (2012). Opportunity for wide paved shoulders along to create a bike route from Lewiston to Shore Trail via CR 489 or Red Oak Rd
Otsego County	No project opportunities	No project opportunities
Presque Isle County	No project opportunities	E. Grand Lake/Rayborn from US-23 to Stoneport Rd. (2011). Wide paved shoulders would improve or side paths would improve safety and non-motorized use. This would be part of plan to connect US-23 to Presque Isle Harbor and Thompson's' Harbor State Park
Roscommon County	No project opportunities	Old 76 from F-97 to Airport (2010). This is part of a proposed non-motorized route from Prudenville to St. Helen to Roscommon to Sharps Corners. Old 27 (2010, 2012, 2013) – all parts to be redone on Old 27 are part of proposed bike paths
Source: Local transportation agency three year plan and MDOT five year plan projects.		

When developing the cost of on-street bicycle facilities and shared use paths, the user will need to know how to select construction materials, recommend dimensions, and decide on a path surface. The following is a primer for design consideration of bicycle facilities. Pavement design focuses primarily on shared use paths and other off street facilities. Bicycle facilities on roadways are considered to be a minor part of the structural design of the roadway and are therefore not included as part of the primer. This primer should be used in conjunction with the 1999 AASHTO Guide for the Development of Bicycle Facilities.

On Street Facility

On street facilities consist primarily of paved shoulders, wide curb lanes, and bike lanes. All are part of the roadway surface that is also used by motor vehicles. Structural requirements of the road bed including pavement depth are dictated by motor vehicles.

Paved shoulders

Critical dimensions:

- *Less than 4 feet (1.2m): any additional width of paved shoulder is preferred than no facility at all, but below 4 feet a shoulder should not be designated or marked as a bicycle facility.*
- *4 feet (1.2m): minimum width to accommodate bicycle travel measurement must be of useable width and should NOT include the gutter pan or any area treated with rumble strips*
- *5 feet (1.5m) or more: minimum width recommended from the face of a guardrail, curb or other barrier*

Widths should be increased with higher bicycle use, motor vehicle speeds above 50mi/hr, higher percentage of truck and bus traffic.

Wide Outside Lanes

Critical dimensions:

- *14 feet (4.2m): recommended width for wide outside lane width must be useable and measurement should be from the edge line or joint of the gutter pan to the lane line*
- *15 feet (4.5m): preferred where extra space required for maneuvering (e.g. on steep grades) or to keep clear of on-street parking or other obstacles.*

Continuous stretches of lane 15 feet (4.5m) or wider may encourage the undesirable operation of two motor vehicles in one lane. Where this much width is available, it is recommended to more seriously consider striping bike lanes or shoulders.

Bicycle Lanes

Critical dimensions:

Bicycle lane width:

- *4 feet (1.2m): minimum width of bike lane on roadways with no curb and gutter,*
- *5 feet (1.5m): minimum width of bike lane when adjacent to parking, from the face of the curb or guardrail,*
- *11 feet (3.3m): shared bike lane and parking area, no curb face,*
- *12 feet (3.6m): shared bike lane and parking area with a curb face.*

Bicycle lane stripe width:

- *6-inch (150mm): solid white line separating bike lane from motor vehicle lane (maybe raised to 8-inches (200mm) for emphasis,*

- *4-inch (100mm): optional solid white line separating the bike lane from parking spaces.*

Off Street Facility (typically shared use paths)

Standards recommend the width be 10 feet or 3 meters for a two-way, shared use path on a separate right of way. Other critical measurements include:

- *8 feet (2.4m) may be used where bicycle traffic is expected to be low at all times, pedestrian use is only occasional, sightlines are good, passing opportunities are provided, and maintenance vehicles will not destroy the edge of the trail,*
- *12 feet is recommended where substantial use by bicycles, joggers, skaters, and pedestrians is expected, and where grades are steep (see later),*
- *2 feet of graded area should be maintained adjacent to both sides of the path,*
- *3 feet of clear distance should be maintained between the edge of the trail and trees, poles, walls, fences, guardrails or other lateral obstructions,*
- *8 feet of vertical clearance to obstructions should be maintained; rising to 10 feet in tunnels and where maintenance and emergency vehicles must operate.*

Drainage

The AASHTO Guide recommends a cross slope of 2%. Other considerations to ensure adequate drainage include:

- *slope the trail in one direction rather than having a crown in the middle of the trail,*
- *ensure a smooth surface to prevent ponding and ice formation,*
- *place a ditch on the upside of a trail constructed on the side of a hill,*
- *place drainage grates, utility covers etc out of the travel path of bicyclists,*
- *preserve natural ground cover adjacent to the trail to inhibit erosion,*
- *seeding, mulching, and sodding of slopes, swales and other erodible areas should be included in the cost.*

Proper drainage is one of the most important factors affecting pavement performance. Proper drainage entails efficient removal of excess water from the trail. Surface water runoff should be handled using swales, ditches, and sheet flow. Catch basins, drain inlets, culverts and underground piping may also be necessary. These structures should be located off of the pavement structure.

Structures

An overpass, underpass, small bridge, drainage facility or facility on a highway bridge may be necessary to provide continuity to a bicycle path.

The critical dimensions to use in designing underpasses, overpasses, bridges and tunnels, include:

- *the minimum width of the trail (usually 10 feet) should be maintained through the structure*
- *the clear distance of two feet on either side of the trail surface should also be maintained through the structure - otherwise, riders will tend to ride in the center of the trail to stay away from the wall or railing of the structure,*
- *an overhead clearance of 10 feet (8 feet with good horizontal and vertical clearance, good sightlines etc) should be maintained through an underpass or tunnel,*
- *railings, fences or barriers on both sides of a path on a structure should be at least 42 inches (1.1m) high, and where they are higher than this a rub rail should be provided at the approximate handlebar height of 42 inches,*
- *clearances should allow for maintenance and emergency vehicles, as should the strength of the bridge (live loading).*

Where it is necessary to retrofit a bicycle path onto an existing highway bridge, several alternatives should be considered in light of what the geometrics of the bridge will allow.

- *Bicycle path across the bridge on one side. This should be done where (1) the bridge facility will connect to a bicycle path at both ends; (2) sufficient width exists on that side of the bridge or can be obtained by widening or restriping lanes; and (3) provisions are made to physically separate bicycle traffic from motor vehicle traffic as discussed above.*
- *Wide curb lanes or bicycle lanes over the bridge. This may be advisable where (1) the bicycle path transitions into bicycle lanes at one end of the bridge; and (2) sufficient width exists or can be obtained by widening or restriping.*
- *Use existing sidewalks as one-way or two-way facilities. This may be advisable where (1) conflicts between bicyclists and pedestrians will not exceed tolerable limits; and (2) the existing sidewalks are adequately wide. Under certain conditions, the bicyclist may be required to dismount and cross the structure as a pedestrian.*

Because of the large number of variables involved in retrofitting bicycle facilities onto existing bridges, compromises in desirable design criteria are often inevitable. Therefore, the width to be provided is best determined by the designer, on a case-by-case basis, after thoroughly considering all the variables.

Lighting

Shared use paths in urban and suburban areas often serve travel needs both day and night, for example commuter routes and trails accessing college campuses. Fixed source lighting improves visibility along trails and at intersections, and is critical for lighting tunnels and underpasses. The AASHTO guide recommends using average maintained illumination levels of between 5 and 22 lux, and the Florida DOT recommends 25 as the average initial lux.

Signing and Marking

Adequate signing and marking are essential on shared use paths, just as they are on streets and highways. Trail users need to know about potential conflicts, regulatory information, destinations, cross streets etc. The Manual on Uniform Traffic Control Devices (MUTCD) provides some minimum traffic control measures that should be applied.

Striping: a yellow center line stripe is recommended where trails are busy, where sight distances are restricted, and on unlighted trails where night time riding is expected. The line should be dashed when adequate passing sight distance exists, and solid when no passing is recommended.
A solid white line may be used to separate pedestrians from bicycle/blading traffic, and solid white edge stripes may also be useful where nighttime riding is expected.

Warning signs: a range of warning signs can be used to inform users that recommended design criteria cannot be met, for example curve radii or grades.

Informational signs: trail users need to know where they are, where they are going, what cross streets they are crossing, how far destinations are away, and what services are available close to the trail. The MUTCD has information on the appropriate signs to use in these instances. Although not in the MUTCD, many trails post signs encouraging uniform trail user etiquette (e.g. give audible signal when passing).

Intersection markings and signs: pavement marking and signs at intersections should channel users to cross at clearly defined locations and indicate that crossing traffic is to be expected. Similar devices to those used on roadways (i.e. stop and yield signs, stop bars) should be used on trails as appropriate.

The AASHTO Guide notes that in addition to traditional warning signs in advance of intersections, motorists can be alerted to the presence of a trail crossing through flashing warning lights, zebra-style or colored pavement crosswalks, raised crosswalks, signals, and neck-downs/curb-bulbs.

Path Surfaces

The type of surface that will be provided is an important consideration in design. A hard surface, such as cement or asphalt, will generally see cyclists operating at a faster speed than a soft surface, is more expensive to install. A soft surface trail will discourage or prevent in-line skating but may enable horse-back riders to share the trail and is less expensive to install. Factors such as weather conditions and soil types can affect the choice of asphalt, concrete, or crushed rock.

Other considerations of surface material include, terrain, climate, design life, maintenance, cost, and availability. Soft surface materials include earth, grass, bark and wood decking. Hard surface materials include stone, brick, concrete and asphalt. Hard surface materials are preferred for multi-use trails with high bicycle use.

Each surface material type has advantages and disadvantages. Soft surface materials are low cost, but require substantial maintenance and are not suitable for many of the recreational activities today's trails and paths are used for. Hard surface materials, specifically concrete and asphalt, provide years of service with low maintenance.

The key to designing quality pavement surfaces, particularly asphalt surfaces, depends on the following criteria.

- *Design to meet the needs of the anticipated users.*

- *Follow guidelines in AASHTO Guide for the Development of Bicycle Facilities for path width, sight distances, clearance, grade, signage, etc.*
- *Determine pavement loading.*
- *Determine load carrying characteristics of native soil*
- *Design pavement section to meet soil loading and environmental conditions.*
- *Provide good drainage.*
- *Design asphalt mixture to meet loading conditions.*
- *Properly compact asphalt pavement.*
- *Plan preventive maintenance.*

Under most circumstances, a 2-3 inch (50-75 mm) thick asphalt concrete top course placed on a 6 inch (150 mm) thick aggregate subbase is suitable for a bikeway pavement structure. While loads on bicycle paths will be substantially less than highway loads, paths should be designed to sustain without damage wheel loads of maintenance vehicles that are expected to use or cross the path. Path width of 12 ft allows service vehicles to travel on the path without encroaching and therefore potentially damaging the edge of pavement and the subbase.

In areas where climates are extreme, the effects of freeze-thaw cycles should be anticipated in the design phase. At driveway crossings of bicycle paths, the highway or driveway should be paved a minimum of 10 feet on each side of the crossing to reduce the amount of gravel being scattered along the path by motor vehicles.

Development of pavement section recommendations assumes a properly prepared sub-grade. The subgrade should be cleared of vegetation and compacted. The subgrade or compacted area should extend at least two feet beyond the edge of pavement.

Bike paths and trails should be constructed to match the existing topography as closely as possible, however, longitudinal slopes should not exceed five percent and a cross slope of two percent is desirable to provide adequate drainage away from the pavement surface.

Trail Surface Comparison (NJDOT)

Surface Material	***Advantages***	***Disadvantages***
Soil Cement	*Uses natural materials, more durable than native soils, smoother surface, low cost.*	*Surface wears unevenly, not a stable all-weather surface, erodes, difficult to achieve correct mix.*
Granular Stone	*Soft but firm surface, natural material, moderate costs, smooth surface, accommodates multiple use.*	*Surface can rut or erode with heavy rainfall, regular maintenance to keep consistent surface, replenishing stones may be a long-term expense, not for steep slopes.*
Asphalt	*Hard surface, supports most types of use, all weather, does not erode, accommodates most users*	*High installation cost, costly to repair, not a natural surface, freeze/thaw can crack surface, heavy construction vehicles need*

	simultaneously, low maintenance.	*access.*
Concrete	*Hardest surface, easy to form to site conditions, supports multiple use, lowest maintenance, resists freeze/thaw, best cold weather surface.*	*High installation cost, costly to repair, not a natural looking surface, construction vehicles will need access to the trail corridor.*
Native Soil	*Natural material, lowest cost, low maintenance, can be altered for future improvements, easiest for volunteers to build and maintain.*	*Dusty, ruts when wet, not an all-weather surface, can be uneven and bumpy, limited use, not accessible.*
Woodchips	*Soft, spongy surface - good for walking, moderate cost, natural material.*	*Decomposes under high temperatrue and moisture, requires constant replenishment not typically accessible, limited availability.*
Recycled Materials	*Good use of recyclable materials, surface can vary depending on materials.*	*High purchase and installation cost, life expectancy unknown.*

Maintenance

Properly constructed asphalt pavement using an appropriate mix design requires minimal maintenance. Providing proper drainage is also a key to reducing maintenance costs.

Maintenance is generally divided into two categories, preventative maintenance and corrective maintenance. Preventive maintenance is performed on a regularly scheduled basis to improve the life of the pavement and decrease the rate of deterioration. Corrective maintenance is performed to correct a specific pavement failure or distress area.

Normal periodic maintenance, depending on path location, drainage and climate, should include sweeping the trail of debris.

This document is compiled from the following publications:

- *Pedestrian and Bicycle Information Center Website, section on Facility Design (http://www.bicyclinginfo.org/de/index.htm)*
- *Bicycle Compatible roadways and Bikeways: Planning and Design Guidelines, New Jersey Department of Transportation, May 1999.*
- *Eric West, PE. A Guideline for the Design and Construction of Asphalt Pavements for Colorado Trails and Paths, WesTest Inc and the Colorado Asphalt Pavement Association, 2002.*

Appendix B has design consideration sections from the Genesee County Regional Trail Plan, Superior Region Non-Motorized Investment Strategy, and Iowa Department of Transportation - Trails Plan 2000.

Recommended sources for **design standards** are Michigan Department of Transportation, Michigan Department of Natural Resources and The American Association of State Highway and Transportation Officials (AASHTO) advocates transportation-related policies and provides technical services to support states in their efforts to efficiently and safely move people and goods. Its primary goal is to foster the development, operation, and maintenance of an integrated national transportation system. AASHTO functions in a leadership role in the development of transportation standards and other technical services.

Non-Motorized Facilities Estimated Construction Costs

Costs for construction of non-motorized facilities vary greatly depending upon ROW acquisition, condition of subbase, current cost of materials, topographic site features, environmental issues, land clearing, bridge and culvert work, etc. Estimated costs in this section do not account for the above variables. For a side path and an off-road trail the approximate cost is the same, all should meet AASHTO standards, 10' wide with two foot shoulders. Where there is a standard subbase like on a two track road or railroad, the cost usually goes down versus creating an entirely new trail subbase through natural vegetation.

Paved Trail with asphalt: $150,000 per mile
Crushed limestone trail: $80,000 per mile
Boardwalk trail: $1,584,000 per mile
Paved 6' shoulder: $65,000 per mile (if doing separate from a road project)
Paved shoulder as part of a road project increases the project cost by less than 5%

In addition, a Cost-Demands-Benefits Bike tool that provides regularly-updated estimates construction cost, projected demand and related benefits for most types of bicycle facilities, whether in metro areas, cities, suburbs, or small town/rural settings. The tool can be found at the web site http://www.bicyclinginfo.org/bikecost/index.cfm The following information was taken from the "Trails for the 21st Century" published by Rails-To-Trails Conservancy, 2001:

Table 6.2
Estimated Cost per Mile for Non- Motorized Development

Surface Material	Cost per Mile	Longevity
Wood Chips	$65 - $85K	1-3 years
Granular Stone	$60 – 100K	7-10 years
Resin Stabilized	Varies based on application	7-15 years
Asphalt	$200-300K	7-15 years
Concrete	$300-500K	20+ years
Boardwalk	$1.5 – 2 Million	7-15 years
Recycled Material	Varies	Varies

Source: Rails-To-Trails Conservancy, 2001

Facility Maintenance

Facility maintenance should be considered during the planning phase of trail development. Implementation of a good maintenance strategy will sustain a safer trail environment and build

a sense of community pride. **Table 6.4** provides estimates for yearly maintenance costs. Whether or not a grant program requires a detailed trail maintenance plan be in place for funding eligibility, governmental units are encouraged to make written agreements with each other to maintain different trail segments. If communities do not have sufficient staff or the proper equipment to perform trail maintenance activities, they may need to contract for services from public or private entities. Another option would be to establish an Adopt-a-Trail program. This program works on a volunteer basis, with common participants being neighborhood organizations, businesses, service clubs, churches or even families. Usually a formal agreement is reached between trail owner and the volunteer organization. This program is comparable to the Adopt-a-Highway program. Volunteers usually perform enhancement projects such as fundraising and landscaping. See **Appendix C** for a sample maintenance agreement.

Table 6.3
Cost Estimates for Retrofitting
Existing Road Sections for Bike Paths

Facility Type	Estimated Cost
Paved Shoulder Per Mile (4 feet each side)	$70,000
Bike Lanes Per Mile (5 feet each side w/curb & gutter)	$281,000
Wide Curb Lane Per Mile (2 feet each side)	$50,000
Source: Rails-To-Trails Conservancy, 2001	

Table 6.4
Typical Yearly Maintenance Costs for One-Mile Paved Trail

Drainage and storm channel maintenance	$500
sweeping/blowing debris off trail	$1,200
Pickup and removal of trash	$1,200
Weed control and vegetation management	$1,000
Mowing of grass shoulder	$1,200
Minor repair to trail furniture/safety features	$500
Maintenance supplies for work crews	$300
Equipment fuel and repairs	$600
Total Estimated Cost Per Mile	$6,500
Source: Rails-To-Trails Conservancy, 2001	

Federal Funding Sources

The **Intermodal Surface Transportation Efficiency Act of 1991** (Public Law 102-240; **ISTEA**, pronounced *Ice-Tea*) is the United States federal law that posed a major change to transportation planning and policy. It was the first U.S. federal legislation on the subject in the post-Interstate Highway System era and presented an overall inter-modal approach to highway and transit funding. It had collaborative planning requirements, giving significant additional powers to metropolitan planning organizations. Signed into law on December 18, 1991, it expired in 1997. It was preceded by the Surface Transportation and Uniform Relocation

Assistance Act of 1987 and followed by the Transportation Equity Act for the 21st Century (TEA-21) and most recently in 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). More information on these laws can be viewed at http://www.fhwa.dot.gov/safetealu/factsheets.htm.

These federal authorization statutes established funding eligibility for non-motorized facilities in virtually every federal road, bridge and safety funding program. They also require:

- Consideration for non-motorized travel in designing road construction/reconstruction projects
- States must include a non-motorized plan element in their long range transportation plans
- States must set aside 10% of their Surface Transportation Program (STP) funding for allocation for the Transportation Enhancement Activity Program.

Surface Transportation Program

STP is used by state and local jurisdictions for road and transit projects. Local projects are eligible for funding from the annual allocation of STP Funds to the Metropolitan Planning Organization (MPO). Road projects must be located on roads functionally classified as a rural major collector or higher. Ten percent of the STP fund is set aside for the Transportation Enhancement fund and ten percent is set aside for the Safety program. The remaining funds are used statewide or distributed to the MPO for use in the urbanized areas (STPU), rural areas (STPR), and small cities in rural areas with a population of 5,000 to 50,000 (STPC).

Transportation Enhancement Funds

Enhancement funding is awarded to local road agencies through a competitive process managed by MDOT. From fiscal year 1998-2004 TEA-21 apportioned approximately $173 million for enhancement improvements. The State of Michigan received approximately $27 million in fiscal year 2005 to be spent on Enhancement projects. Estimates of apportionments for 2006-2009 have not been determined. A rolling application period allows agencies to submit projects at any time and awards are made up to three times per year. This funding also requires a minimum twenty percent match with over-matching given additional consideration.

The Enhancement Program funds projects in 12 activities under four major categories that enhance the road system in ways other than motorized vehicle capacity or safety improvements. Three of the activities are specifically associated with the category of non-motorized transportation:

- Provision of facilities for pedestrians and bicycles
- Provision of safety and educational activities for pedestrian and bicyclists
- Preservation of abandoned railway corridors (including their conversion and use for pedestrian or bicycle trails)
- Streetscape and landscape improvements

Other categories that can be funded through this program include improving aesthetics, historic preservation, and water quality and wildlife.

The MDOT Transportation Enhancement Program has given $85.5 million in grants to non-motorized trail projects. Almost 33% of all non-motorized applications submitted were funded.

Highway Bridge Replacement and Rehabilitation
A federal program to replace and rehabilitate deficient highway bridges and to seismically retrofit bridges located on any public road. Pedestrian walkways and bicycle transportation facilities are eligible. If a highway bridge deck is replaced or rehabilitated, and bicycles are permitted at each end, then the bridge project must include safe bicycle accommodations (within a reasonable cost).

Highway Safety Improvement Program
This is a program to achieve a significant reduction in traffic fatalities and serious injuries on public roads. Eligible activities include improvements for pedestrian or bicyclist safety, construction and/or signage at crossings and in school zones, identification of and correction of hazardous locations, and safety improvements on publicly owned bicycle or pedestrian pathways or trails.

Land and Water Conservation Fund
The National Park Service operates the Land and Water Conservation Funds, which administers federal funding to state and local governments for acquisition and development of public outdoor recreation areas and facilities. Grant applications are available through the MDNR and require a 50% local funding match. To be eligible, this grant requires an approved community recreation plan filed prior to application deadline date. For more information please contact the Michigan DNR, Grants Program at (517) 373-9125 or visit www.michigan.gov/dnr.

Safe Routes to School
The most recent federal transportation legislation passed in August 2005, (Safe Accountable Flexible Efficient Transportation Equity Act a Legacy for Users -SAFETEA-LU) made Safe Routes to School funding available. Michigan is expected to receive approximately 19 million dollars during fiscal years 2006 - 2009. The process for awarding these funds has not been determined at this time. Funding is for 100% of the cost and there is no local match required. More information on Safe Routes to school funding can be found at www.SR2S.org. Residents and communities should consult this process in bringing an improvement forward.

Recreational Trails Fund
This program is comprised of federal gas taxes that MDOT receives from the Federal Highway Administration and passes on to the DNR for administration and distribution. These funds are for the maintenance and development of recreational trails and related facilities. Eligible categories are trail maintenance and rehabilitation, trailside or trailhead facilities, construction and maintenance equipment, trail construction, trail assessments, and trail safety and environmental protection education. Annual appropriation by the Michigan Legislature varies, Fiscal Year 2005 Appropriation was $1,800,000 – approximately $1,500,000 available for grants.

Congestion Mitigation and Air Quality Improvement Program (CMAQ)
This 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, or non-construction projects such as maps, brochures, and public service announcements related to safe bicycle use. Funds are available to counties designated as non-attainment areas for air quality, based on federal standards.

National Scenic Byways Program (NSBP)
This is a discretionary program; all projects are selected by the US Secretary of Transportation. Eight specific activities for roads designated as National Scenic Byways, All-American Roads, State scenic byways, or Indian tribe scenic byways. Eligible activities include construction along a scenic byway of a facility for pedestrians and bicyclists and improvements to a scenic byway that will enhance access to an area for the purpose of recreation.

State Funding Sources

Michigan Natural Resources Trust Fund
Since 1976, the MNRTF has been providing financial assistance to local governments and the Department of Natural Resources (DNR) to purchase land (or rights in land) for public recreation or protection because of its environmental importance or its scenic beauty. Amounts ranging from $15,000 to $500,000 are available.

Any person, organization, or unit of government can submit a land acquisition proposal; however, development proposals are only accepted from state and local governments. State and local units of governments applying for these grants must include a minimum local match of 25% of the total project cost. A DNR approved community recreation plan must be on file prior to application deadline to be eligible. For more information contact the Michigan Department of Natural Resources, Grants Program at (517) 373-9125 or visit www.michigan.gov/dnr.

Recreation Improvement Fund
This program is for the operation, maintenance, and development of recreation trails, restoration of lands damaged by off-road vehicles, and inland lake cleanup. These funds are utilized by the DNR for projects related to the state trail system.

ORV and Snowmobile Trail Funds
These programs provide grants for the acquisition, development, and maintenance of the state's motorized off-road trail system.

Community Development Block Grants
The primary objective of the CDBG program is to develop viable urban communities by providing decent housing, a suitable living environment and expanded economic opportunities for people of low and moderate income. CDBG funds can also be used as local match funds for federal and state grants such as enhancement grants. All activities carried out under the CDBG program must meet one of the three national objectives:

- Benefiting low to moderate income persons
- Aids in the elimination or prevention of slum or blight
- Addressing an urgent community need.

Michigan Cool Cities Initiative
The Michigan Cool Cities Initiative is designed to revitalize cities and attract workers and jobs. This initiative is focused around creating places with a mix of residential and commercial uses, mixed income housing, and a pedestrian-friendly environment. Local governments, non-profit organizations and quasi-governmental entities are all welcome to apply. In addition, that community must either be a Core Community, Michigan Main Street Program community, MEDC

Blue Prints Program community and/or one of the 267 "invited" cities identified by the Governor and set letters in September, 2003. For more information please visit www.coolcities.com.

Economic Development Fund
Category A – Economic Development Road projects. The goal is to promote increased economic potential and improve the quality of life through support of job creation and retention in Michigan. Eligible projects are those that address transportation need (condition, safety, or accessibility) that is critical to an economic development project. Must create or retain permanent jobs.

Category D – Secondary All-Season Roads. This program purpose is o provide funding for transportation projections which: complement the existing state trunkline system with improvements on connecting local routes that have high commercial traffic and minimize disruptions that result from seasonal load restrictions. Construction projects only.

Category F – City in Rural Counties. The goal of this program is to provide continuity within Michigan's system of all season roads. Must be a federal aid road.

Local Funding Sources

Michigan Transportation Fund (Act 51)
Revenues from the Michigan Transportation fund are generated from state gas and value taxes. The funding is divided among the Michigan Department of Transportation, road commissions, cities and villages. Each Act 51 agency is required by law to spend at a minimum 1% of their Act 51 dollars on non-motorized improvements. A recent change in State legislation eliminated the ability to use this money for paving gravel roads and maintenance such as street sweeping in an effort to increase the number of improvements constructed. This funding may be used to provide the match for federal funds.

Millage
A millage is a tax on property owners based on the value of their home. Millages are use specific and approved by vote of the residents.

Special Assessment
A special assessment is a special kind of tax on a subset of a community. Special assessments are placed on those adjacent land owners who will receive the greatest benefit from a project to be funded using a special assessment.

General Funds
A community or road agency's general fund dollars have no restriction placed on them preventing them from being used for non-motorized improvements. The improvements do, however, need to be approved by a community's governing body such as a board of commissioners or City Council.

Foundations and Organized Trails Groups have the ability to raise capital and generate local support for trail acquisition and development projects. Private foundations serve the interests of the foundation, defined by a family or corporation. Community foundations work to improve, within their geographic area, the quality of life for residents.

Private
Private funds such as those from private developments or private donations are eligible to be spent on non-motorized improvements.

Businesses
Local businesses are frequent partners in the promotion of trail projects in their area. Public-spirited companies understand that the popularity of recreational trails improves the quality of life in their community – an important aspect of economic growth. They can provide meeting rooms, provide small grants, donate copying or printing services on company equipment, or free or reduced-fee use of the company's special services.

Friends Groups and Other Organizations
The long-term success of many trail projects has been due to "friends" groups and advocacy organizations that support a project from inception to implementation. In addition to local fund raising, friends groups can also provide a number of services including physical labor as through "Adopt-a-Trail" maintenance or construction activities, fundraising, user education, promotion, and actual surveillance of the facility. Civic groups and school groups can also play an important role in support of projects through advocacy, promotion, and hosting events. These organizations are often the best source for identifying local priorities.

Trail license fees, like those for fishing and hunting, can be considered. People (trail users) don't mind paying a fee to support their sport. In Lower Michigan, the Kal-Haven Trailway collects user fees via an annual pass. Surveyed users were okay with the fee as long as the trails were well maintained.

Pay Boxes on Trails, each trail gets its own dollars but there is the maintenance of the boxes and lightly used trails may not collect enough funds. There is also a potential for vandalism of the boxes.

Appendix A
Project Prioritization Tables

Alcona County Prioritization Table	
Project: Connection from Harrisville State Park to Harrisville and onto Sturgeon Point Lighthouse (Off-road paths and on-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Alcona County Prioritization Table	
Project: Connection from Sturgeon Point Lighthouse to Black River and onto Negwegon State Park. (On-road facilities and off-road paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	7

Alcona County Prioritization Table	
Project: Connection from Harrisville to LAMP Trail in Lincoln (Off-road paths and on-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Alcona County Prioritization Table	
Project: South connection to proposed trails in Iosco County (Side paths and on-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	10

Alcona County Prioritization Table	
Project: Hubbard Lake loop connecting residential developments around Hubbard Lake to Hubbard Lake, Backus Beach, Spruce and Black River. (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Alcona County Prioritization Table	
Project: Connect Lincoln to Barton City, Jewell Lake Campground, Reid Lake Foot Travel Area and Hoist Lake area. (On-road facilities connecting to existing off-road shared use paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	7

Alcona County Prioritization Table	
Project: North-South Connections of Hubbard Lake, Spruce, Barton City, Lost Lake Woods Club and Lincoln. (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Alcona County Prioritization Table	
Project: AuSable River Corridor connecting Grayling to Oscoda follows local roads and state highways. (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	8

Alcona County Prioritization Table	
Project: Community Connections for Mikado, Curtisville, Glennie and Curran. (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	7

Alcona County Prioritization Table	
Project: Safe Routes to School for the Alcona Community Schools. (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	
Addresses safety concerns	X
Serves population centers	X
TOTAL	4

Alpena County Prioritization Table	
Project: Upgrade Alpena to Cheboygan Rail-Trail to hardened surface (share use off-road facility)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	11

Alpena County Prioritization Table	
Project: Upgrade Alpena to Hillman Rail-Trail to hardened surface such as crushed-compacted limestone. (Shared use of off-road facility)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	10

Alpena County Prioritization Table	
Project: Create bridge over Thunder Bay River along Bagley Street along with Bi-Path Expansion. (Side Path)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	10

Alpena County Prioritization Table	
Project: Expand Bi-Path trails to provide direct access to ACC, Jesse Besser Museum and long Wilson St. (Side Paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Alpena County Prioritization Table	
Project: Long Rapids Road wide paved shoulders from City westward to county roads (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Alpena County Prioritization Table	
Project: Connect City of Alpena via Alpena Township north to Rockport and onto Presque Isle Twp. (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Alpena County Prioritization Table	
Project: Wide-paved shoulders along US-23 South of City with connections to Ossineke and Negwagon SP. (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	11

Alpena County Prioritization Table	
Project: Connection from City of Alpena to Alpena Township Nature preserve. (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	8

Alpena County Prioritization Table	
Project: Bicycle routes connecting Cathro, Bolton, Long Rapids, Lachine, Herron, Hubbard Lake and Ossineke. (On road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	6

Alpena County Prioritization Table

Project: Bicycle routes connecting Beaver Lake County Park, Sunken Lake County Park, Long Lake County Park and Thunder Bay River (On-road facilities)

Criteria to Consider	Present
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	5

Alpena County Prioritization Table

Project: Trails in Wilson Township (shared use off-road facility and on-road facilities)

Criteria to Consider	Present
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	5

Alpena County Prioritization Table

Project: Connect Norway Ridge Pathway, Wah-Wah-Tas-See pathway and Devils Lake Trails to residential areas of Alpena Township and City of Alpena. (Shared use off-road facility)

Criteria to Consider	Present
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	7

Cheboygan County Prioritization Table	
Project: Upgrade Alpena to Cheboygan Rail-Trail to hardened surface (Shared off-road facility)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Cheboygan County Prioritization Table	
Project: North Central State Trail connections into communities along route and development of trailheads (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Cheboygan County Prioritization Table	
Project: Connections west to Petoskey-Mackinaw Rail-Trail from Indian River to Alanson following M-68 (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	8

Cheboygan County Prioritization Table	
Project: Connections west to Petoskey-Mackinaw Rail-Trail from Topinabee to Brutus through Burt Lake Township. The trail would connect to University of Michigan Biological Station Trails, Colonial Point Trail and Maple Bay Campground (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Cheboygan County Prioritization Table	
Project: Connect Indian River to Aloha State Park following local roads and M-33 along the east side of Mullet Lake (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	5

Cheboygan County Prioritization Table	
Project: Non-motorized pathway in Indian River connecting residential and commercial areas to Burt Lake State Park, Inland Lakes School and community parks(Sidewalks and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Cheboygan County Prioritization Table	
Project: Connect Onaway State Park to Aloha State Park Using the Rail-Trail (Shared use off-road facility)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	5

Cheboygan County Prioritization Table	
Project: Connect Cheboygan to Aloha State Park using Rail-Trail (Shared off-road facility	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Cheboygan County Prioritization Table	
Project: Connect Cheboygan to Cheboygan State Park (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Cheboygan County Prioritization Table	
Project: Connect Mackinaw City trail system to Headlands (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Crawford County Prioritization Table	
Project: Connect Rayburn Property to City of Grayling (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	7

Crawford County Prioritization Table	
Project: Link Grayling Bicycle Turnpike to North Higgins Lake State Park (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Crawford County Prioritization Table	
Project: Construct a pedestrian crossing under the bridge in downtown Grayling (Side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	6

Crawford County Prioritization Table	
Project: Develop river walkway from Downtown Grayling to Fish Hatchery (Off-road paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	5

Crawford County Prioritization Table	
Project: Establish non-motorized routes along Au Sable River from Grayling to Mio, Glennie, Oscoda to Lake Huron. Identify bike routes along Au Sable River Corridor, map and inventory segments to evaluate needed non-motorized facility improvements (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Crawford County Prioritization Table	
Project: Bike loop: Hartwick Pines State Park to Frederick (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Crawford County Prioritization Table	
Project: M-72 west to M-93 to Military Road to North Higgins Lake State Park (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Crawford County Prioritization Table	
Project: Bike loop: M-72 west to Manistee River Road to CR 612 and east to Frederick (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	7

Crawford County Prioritization Table	
Project: Extend Grayling Bicycle Turnpike to Waters (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Crawford County Prioritization Table	
Project: Connect Grayling with Old Dam Road (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	4

Crawford County Prioritization Table	
Project: Extend shoulders on M-72 east to Wakley Lake and Mason Tract (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	
Addresses safety concerns	X
Serves population centers	X
TOTAL	6

Crawford County Prioritization Table	
Project: County Road 612 east to F97 south to North Downriver Road (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Crawford County Prioritization Table	
Project: Sherman Road north to Marlett Road west into Waters (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Iosco County Prioritization Table	
Project: Au Sable Township – South to Baldwin Township connect to River Road. Part of the Bi-County River to River Trail. (Side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Iosco County Prioritization Table	
Project: Baldwin Township - From Au Sable Township south to East Tawas. Part of the Bi-County River to River Trail. (Side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Iosco County Prioritization Table	
Project: E. Tawas – Tawas Beach Road to Baldwin, may use railroad corridor that was purchased Tawas City Townline 2/10 mile connects to Alabaster Pathway. Part of the Bi-County River to River Trail. (Side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Iosco County Prioritization Table	
Project: Tawas City – Upgraded existing trail that connects East Tawas to Tawas Township (Side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	
Addresses safety concerns	
Serves population centers	
TOTAL	

Iosco County Prioritization Table	
Project: Alabaster Township extend trail south from Alabaster Road to County Line. Pathway is an opportunity to display historic and cultural features. Part of the Bi-County River to River Trail. (Side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Iosco County Prioritization Table	
Project: Whitney Township, Arenac County – Follow county roads (Noble Road) with a trailhead at the proposed Township Park. Would include a spur along the Whitney Drain to River and DNR Park. Part of the Bi-County River to River Trail. (Side paths & on-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Iosco County Prioritization Table	
Project: AuGres – River walk to mouth of Rifle River, follow Saginaw water line ROW. Part of the Bi-County River to River Trail. (Off-road path)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Iosco County Prioritization Table	
Project: Oscoda Township – Study River Road bridge for non-motorized crossing over Au Sable River, use shared streets within town, and implement the Coastal Management funded non-motorized pathway plan. Part of the Bi-County River to River Trail. (On-road facilities & side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Iosco County Prioritization Table	
Project: Au Sable River Corridor Bike Routes connecting Grayling, Mio, Curtisville and Oscoda; and campgrounds and parks. (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Iosco County Prioritization Table	
Project: River Road Scenic By-Way - develop a bicycle-pedestrian facility following River Road Scenic By-way to West Gate. The route has been identified in the Oscoda Township Non-Motorized Pathway Plan. (On-road facilities & side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	12

Iosco County Prioritization Table	
Project: There is a network of county roads used by bicyclers. (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	5

Iosco County Prioritization Table	
Project: There is a need to make connections to westerly townships utilizing local roads and on-road facilities. (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	7

Iosco County Prioritization Table	
Project: Shoulder improvements on M-65 from Glennie to Hale. (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	6

Iosco County Prioritization Table	
Project: There are several identified east-west routes connecting communities in Roscommon, Ogemaw and Iosco Counties that follow primarily local roads. (On-road facilities & side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	7

Montmorency County Prioritization Table	
Project: M-33 paved shoulder from Atlanta to Onaway then to Onaway State Park, also connecting Clear Lake State Park, Canada Creek Ranch and the Cheboygan to Alpena Rail-Trail (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Montmorency County Prioritization Table	
Project: M-32 paved shoulder between Atlanta and Hillman (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	8

Montmorency County Prioritization Table	
Project: Northern route between Hillman and Atlanta following C.R. 459 to CR 624 to M-33 (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Montmorency County Prioritization Table	
Project: Non-motorized facilities around Twin Lakes and connected to Lewiston (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Montmorency County Prioritization Table	
Project: Non-motorized facility from Lewiston to Buttles Road Pathway (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	5

Montmorency County Prioritization Table	
Project: Connect Lewiston to the Shore to Shore Trail (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Montmorency County Prioritization Table	
Project: Bike-pedestrian trail from Hillman to Hillman Schools (side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	7

Montmorency County Prioritization Table	
Project: Bike-pedestrian trail from Atlanta to Atlanta Community Schools (Side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	8

Montmorency County Prioritization Table	
Project: Dedicated dog sled trails in Clear Lake State Park using ski trails and two tracks (Shared use off-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	2

Montmorency County Prioritization Table	
Project: Connect Lewiston to Garland Resort using local roads (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	5

Montmorency County Prioritization Table	
Project: Mountain bike routes from Lewiston to CR 489 to Atlanta (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	5

Montmorency County Prioritization Table	
Project: Mountain bike routes from Black River to Pigeon River	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	4

Montmorency County Prioritization Table	
Project: Theme routes for mountain biking such as elk viewing (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	4

Montmorency County Prioritization Table	
Project: Crushed limestone surface on Hillman – Alpena Rail Trail	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	10

Ogemaw County Prioritization Table	
Project: Multi-use trail in West Branch along Business I-75	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Ogemaw County Prioritization Table	
Project: Multi-use trail in West Branch along railroad ROW	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Ogemaw County Prioritization Table	
Project: Extension of River Walk Trail System in West Branch	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Ogemaw County Prioritization Table	
Project: Paved multi-use trail connecting Rose City to Rifle River Recreation Area	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	7

Ogemaw County Prioritization Table	
Project: Bike routes connecting West Branch to Rose City	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	8

Ogemaw County Prioritization Table	
Project: Identified east-west routes connecting communities in Roscommon, Ogemaw and Iosco Counties that follow primarily local roads (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	8

Oscoda County Prioritization Table	
Project: Improvements to Shore to Shore Trail (boardwalks) (Shared use off-road facility)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	9

Oscoda County Prioritization Table	
Project: Improvements to Luzerne Trail Camp and McKinley Trail Camp (Shared use off-road facility)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	2

Oscoda County Prioritization Table	
Project: Bike route along Red Oak Road to use as connector from Garland Resort to Lewiston and Shore to Shore Trail. Paved shoulder is needed for safety (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	6

Oscoda County Prioritization Table	
Project: Bike and pedestrian trail from Mio to McKinley, creating a loop on both sides of the AuSable, presents the possibility of riding and paddling. (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Oscoda County Prioritization Table	
Project: Bike routes from Mio to McKinley to Fairview using local roads and trails (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Oscoda County Prioritization Table	
Project: Biking routes from Cherry Creek Road to Red Oak Road to M-72 and Mio loop (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Oscoda County Prioritization Table	
Project: Biking route from Fairview to Comins to Smith Lake to Mio using local roads and State highways (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Oscoda County Prioritization Table	
Project: Au Sable Corridor bike routes connecting Grayling, Mio, Curtisville and Oscoda and parks (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Otsego County Prioritization Table

Project: Connect Gaylord westward across I-75 barrier

1. Build bicycle-pedestrian facility along M-32 corridor west of the I-75 interchange to connect commercial-retail development and residential development. Lack of paved shoulders and high traffic volumes creates unsafe conditions for non-motorized transportation(Side paths)
2. Develop non-motorized facility from Business I-75/South Otsego Street east along McCoy/Milbocker Road to connect Gaylord residential areas to employment and shopping areas (Side paths)
3. Pedestrian/bike facility on Dickerson Road to McCoy/Milbocker route and west along Milbocker Road (Side Paths)
4. Extend non-motorized facility west along Milbocker Road past the Industrial Park to connect to the MDNR Pine Barren Pathway (On-road facilities and side paths)

Criteria to Consider	Present
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X

Otsego County Prioritization Table

Project: Continue to expand non-motorized network in Gaylord to improve connections from residential areas to institutional, business and employment areas. (On-road facilities and side paths)

Criteria to Consider	Present
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	7
TOTAL	9

Otsego County Prioritization Table	
Project: Riding loop around Otsego Lake and connecting to Gaylord, Pine Barren Pathway and Michaywe (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Otsego County Prioritization Table	
Project: Local road connections and loops connecting communities and parks to Shore to Shore Trail, High Country Trail, North Central State Trail and community trails (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	8

Otsego County Prioritization Table	
Project: M-32 corridor east and west using a combination of local roads and M-32 connecting Gaylord to Johannesburg, Vienna and Atlanta to the east and Elmira and Jordan River Valley to the west. (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Otsego County Prioritization Table	
Project: Connect Elmira to mountain biking opportunities to north (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	5

Otsego County Prioritization Table	
Project: Connect Gaylord to Otsego Club and Slyvan Resort (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	5

Otsego County Prioritization Table	
Project: Add trailhead on north side of Gaylord (fairgrounds) to serve the North Central State Trail (Shared us off-road facility)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Otsego County Prioritization Table	
Project: Pedestrian/bike facility connecting Aspen Trail system to schools and ball fields (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	
Addresses safety concerns	X
Serves population centers	X
TOTAL	5

Otsego County Prioritization Table	
Project: Connect Vanderbilt Rail-Trail to Pigeon River and High County Trail (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	6

Otsego County Prioritization Table	
Project: Extend North Central State Trail south through Gaylord and onto Waters, Frederick and Grayling. The segment would connect many communities and parks. There appears to be sufficient ROW between the rail line and Old 27 to locate a non-motorized side path. It may be necessary to erect a fence to deter people from crossing the tracks as well it may be necessary to use wide paved shoulders where the ROW is too narrow.	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	10

Presque Isle County Prioritization Table	
Project: Upgrade Alpena to Cheboygan Rail-Trail to hardened surface (Shared use off-road facility)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	10

Presque Isle County Prioritization Table	
Project: Develop trailheads and community connections along the Alpena to Cheboygan Rail-Trail (Shared use off-road facility)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	10

Presque Isle County Prioritization Table	
Project: Develop a non-motorized trail to connect Rogers City to the Alpena to Cheboygan Rail-Trail. Use portions of the Rogers City Spur Rail-Trail in combinations with ROW acquisition and on-road non-motorized facilities (Shared use off-road facility and on-road facility)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	10

Presque Isle County Prioritization Table	
Project: Extend non-motorized facilities along US-23 using a combination of side paths and on-road facilities (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	10

Presque Isle County Prioritization Table	
Project: Develop a route west of Rogers City to connect snowmobile trails with potential for mountain biking and hiking in summer	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	9

Presque Isle County Prioritization Table	
Project: Form a county trails group	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	
Addresses safety concerns	
Serves population centers	
TOTAL	

Presque Isle County Prioritization Table	
Project: Develop a hardened surface trail from Ocqueoc to Millersburg utilizing existing two tracks and snowmobile trails (Shared use off-road facility)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	4

Presque Isle County Prioritization Table	
Project: Develop bike trip maps of the county using trails and low volume paved county roads (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	9

Presque Isle County Prioritization Table	
Project: Complete an analysis to identify segments needing paved shoulders and side paths to address safety concerns (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	
Addresses safety concerns	
Serves population centers	
TOTAL	

Presque Isle County Prioritization Table	
Project: Develop a connection from US-23 to Presque Isle Harbor and Thompson's Harbor State Park (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	X
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	
TOTAL	11

Presque Isle County Prioritization Table	
Project: Connection from Presque Isle Township through Rockport and onto Alpena Township and City of Alpena (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	X
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	
TOTAL	8

Roscommon County Prioritization Table	
Project: Non-motorized facilities primarily paved shoulder, creating riding loops around the lakes and connecting lakes (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Roscommon County Prioritization Table	
Project: The Roscommon County Road Commission should continue the paved shoulders program as a part of their road improvements programs (On-road facilities)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	10

Roscommon County Prioritization Table	
Project: Trails and paved shoulders should be routinely swept (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	10

Roscommon County Prioritization Table	
Project: Create a biking route that loops from Prudenville to Saint Helen to Roscommon to Sharps Corners following M-55 to Old -55 Saint Helen Road to Old M-76 to Sunset Drive to N. Higgins Lake Road to Cut Road and Markey Road (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	7

Roscommon County Prioritization Table	
Project: Develop non-motorized connections from Roscommon to North Higgins Lake State Park and South Higgins Lake State Park (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	X
Serves population centers	X
TOTAL	9

Roscommon County Prioritization Table	
Project: Old-27 trails/paved shoulder connecting state parks and north to Grayling and Hartwick Pines State Park and points beyond (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	9

Roscommon County Prioritization Table	
Project: Connect State parks and community parks to residential areas and commercial areas (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	X
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	X
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	8

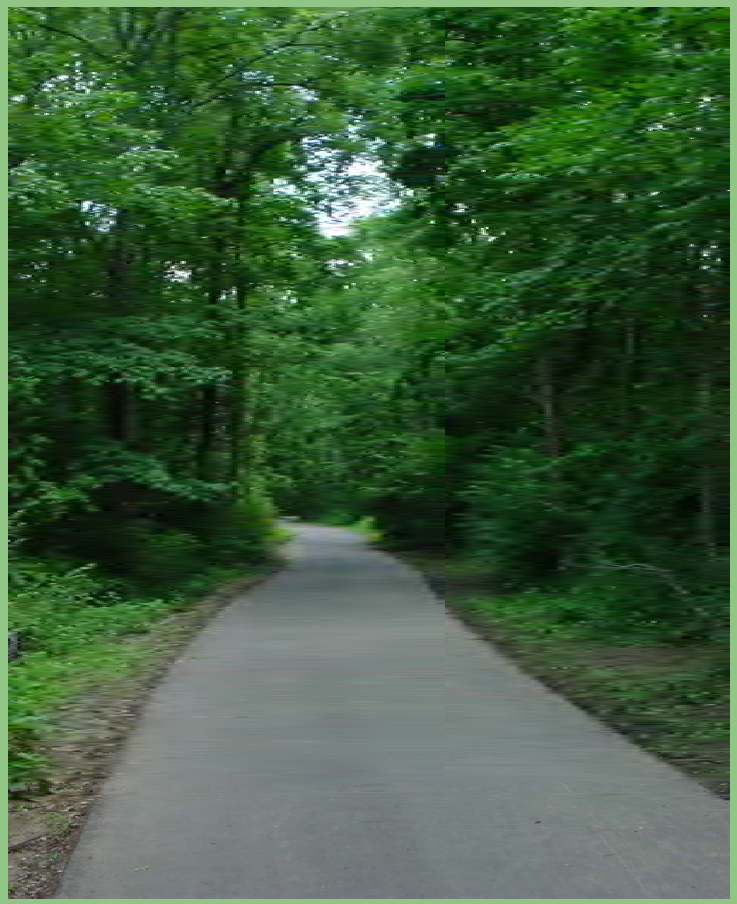
Roscommon County Prioritization Table	
Project: Determine types of non-motorized facilities(shared use, wide paved shoulders and side paths) needed running east-west connecting communities in Roscommon, Ogemaw and Iosco Counties (On-road facilities and side paths)	
Criteria to Consider	**Present**
Connects communities	X
Connects residential, employment, shopping, schools, parks, recreation, cultural, or historic sites	
Connects to State Parks, state forest lands or federal forest lands	X
Connects to regional trail systems	X
Connects to designated heritage routes	
Improves access to Michigan's Great Lakes shoreline	
Fills gaps in trail systems	
Located in regional corridor	X
Located on rail-to-trail or existing ROW	X
Enhances tourism and economic development	X
Addresses safety concerns	
Serves population centers	X
TOTAL	7

Appendix B
Design Considerations

Genesee County Regional Trail Plan
Superior Region Non-Motorized Investment Strategy
Iowa Department of Transportation - Trails Plan 2000

6

Design Considerations



Flushing Area Trailway

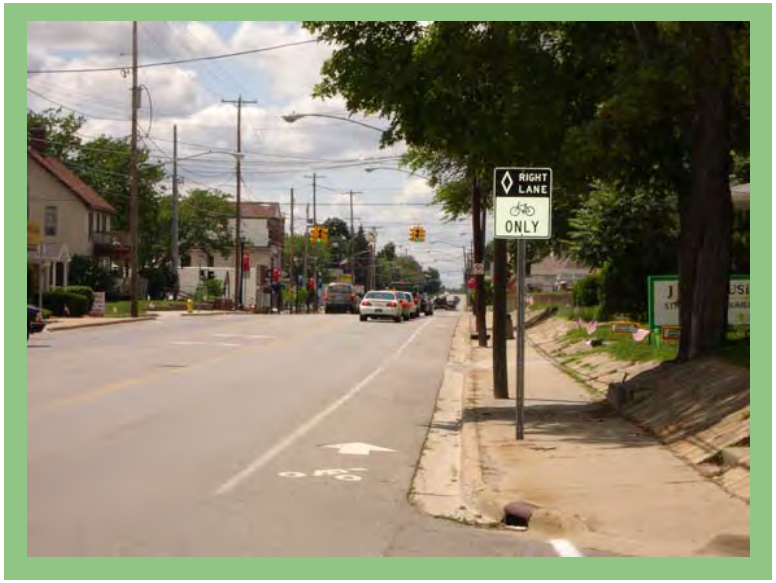
Developing a trail system means bringing people together. A successful system not only accommodates multiple modes of non-motorized transportation, but also accommodates multiple types of people including those of all ages as well as people with disabilities. In order to effectively accommodate all possible users of the trail system, all users should be involved in the planning and design of that system; from the beginning. This will help ensure that the resulting trail system proves accessible to all those who desire to use it. With the vast majority of routes in Genesee County likely being multi-use, it is important to realize all possible user types. Users of multi-purpose routes may include pedestrians, bicyclists, in-line skaters, cross-country skiers, as well as those in wheelchairs.

Working through the development stages of a trail system can become very complicated. There are many different agencies that must reach consensus prior to action. Local governments, citizen advocacy groups, local businesses, and possible users should all be allowed to share their thoughts to effectively resolve any differences of opinions. This section will provide guidelines for these stakeholders to use when planning and designing their non-motorized routes. It is important to understand that these are only guidelines, often adapted from the Association of State Highway and Transportation Officials (AASHTO) among other agencies, and should be tailored to the specific situations occurring throughout Genesee County.

General Design Guidelines

The advantage of a set of guidelines is that they are flexible and accommodating. The following guidelines set forth in this plan are meant to "guide" decision making and are not by any means an exhaustive list. Although communities and agencies using this plan are encouraged to use innovative approaches to best fit their individual conditions, they are also expected to follow any mandated standards, named separate from this document, that are required for construction.

Although there are many different types of trails and non-motorized paths, this plan only references those types one would generally find located in the Genesee County region. Those pathways include on-road bike lanes, systems separate from the roadway, but still located within the right-of-way, and shared-use paths.



Bike Lanes

Bike lanes offer the most convenient type of pathway for communities to create within their area. This is due to the presence of the roadway, which requires no land acquisition or clearing. Often times, the roadway may be wide enough to simply draw in an on-road bike lane. This practice is called re-striping. Communities planning the restoration of old roadways or the construction of new roadways should attempt to include bike lanes wherever possible. Both lane restriping and shoulder paving are common approaches for producing on-road bike routes.

Paved Shoulders

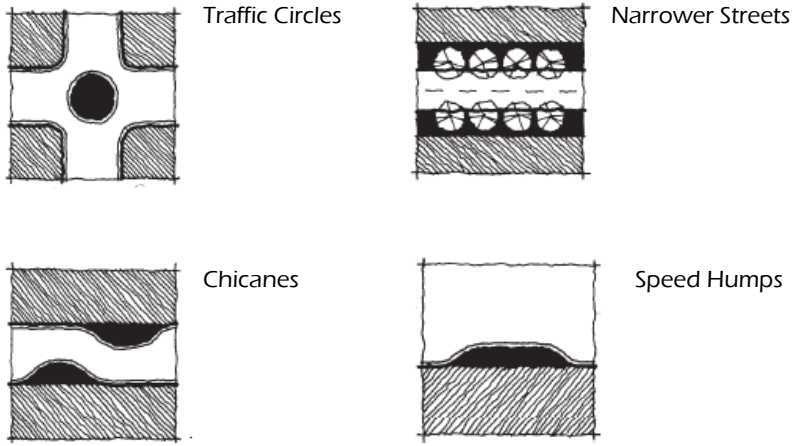
Paved road shoulders offer a suitable way to provide non-motorized routes to bikers. While paving of the shoulder provides bikers with a smooth path to travel upon, this increased road width also preserves the edges of the pavement.

Lane Restriping

The marking of bike lanes by restriping can offer a safe location for bikers to travel. Not only does this offer an inexpensive method of establishing routes, but also, by designating a path adjoined to car lanes, it provides a separation between automobiles and bicycles, ultimately creating a safer environment for both types of travelers.

Traffic Calming

Wherever trails and roadways intersect, there is a potential safety hazard. Slower speeds produce better reaction times and a safer environment. The practice of traffic calming utilizes innovative design methods to slow traffic in certain areas. The Institute of Traffic Engineers has defined traffic calming as, "the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users." Traffic circles, chicanes, narrowed streets, and speed humps are only a few of the methods used to calm traffic, and provide a safer more enjoyable experience for non-motorized travelers.



Source: Georgia DOT Pedestrian and Streetscape Guide

Path in Right-of-Way

Aside from providing routes within roadways, paths are often found adjacent to the roadway, yet still in the right-of-way. Communities are often inclined to construct this type of path because land acquisition is not usually necessary and there are many destinations already located on the route. This brand of pathway can safely support most types of trail user however; it still presents possible vulnerabilities and should be designed to prevent safety hazards. The AASHTO Guide for the Development of Bicycle Facilities offers plenty of suggestions:

- Paths adjacent to a roadway should utilize wide buffers separating the path and the roadway to show a distinct separation between the two.
- When wide buffers cannot be utilized, a physical barrier, such as a fence or railing, should be constructed.
- Give drivers and trail users alike ample sight distances, especially near intersections of pathways and roads.

Recommended Dimensions For Non-Motorized Trails and Paths

Trail/Pathway Element	Recommended Dimensions	Comments
RECREATION TRAILS		
Paved Pedestrian-Only Trail Width	5 ft minimum 6 ft desirable	These trails are for exclusive use by pedestrians
Unpaved Pedestrian-Only Trail Width	2 ft minimum 4-6 ft desirable	Best as limited purpose facility in rural or semi-primitive areas; can provide interim solution (see Figure 35); minimum width should only be used in constrained areas.
Unpaved Shared Use Trail Width	6 ft minimum 8-10 ft desirable	Only suggested as an interim solution and not appropriate for high use trails; best in rural or semi-primitive areas.
Vertical Clearance	8 ft minimum 10 ft desirable	Additional clearance improves visibility. Ten feet is minimum when equestrian use is expected.
SHARED USE PATHS NON MOTORIZED SYSTEM		
Shared Use Path Width	10 ft minimum 12 ft desirable 14 ft optimum	Minimum width should only be used where volumes are low and sight distances are good; width should be based on relative speed of users; higher speed users (bicyclists and skaters) require greater widths.
Roadway Separation	5 ft minimum	Minimum separation for parallel, adjacent path; a physical barrier should be installed where minimum separation cannot be met.
Shoulders	1 ft minimum (peds. only) 2 ft minimum (shared use)	Shoulders provide pull-off/ resting and passing space; should be graded to the same slope as the path; minimum shoulder width of 1 ft should only be used in constrained areas.
Clear Zones	1 ft minimum* 2 ft desirable*	Clear zones are additional lateral clearance on each side of the path beyond the shoulders. All obstructions (e.g. trees, signs, etc.) should lie outside of the clear zones.
Vertical Clearance	8 ft minimum 10 ft desirable	Additional clearance improves visibility.

** If less than 1.2 m (4 ft) total lateral clearance is provided (including shoulder) between the edge of trail, and there is a vertical grade drop greater than 0.8 m (30 in), steeper than 2:1, railing may be required.*

Source: Georgia Department of Transportation Pedestrian and Streetscape Guide

DESIGN CONSIDERATIONS

These design considerations are intended to serve as an aid to engineers, designers, planners, and others in accommodating bicycle traffic in different riding environments, and to encourage predictable bicycling behavior. The design guidance is not meant to act as design standards, but rather as a list of acceptable bicycle facilities and the situations in which they are acceptable.

Use the following criteria to determine if a bicycle facility will be effective and desirable. The network will include whether the facility is an existing or proposed bicycle facility.

- Accessibility—Residential areas and high priority destinations (schools, shopping areas, business centers, parks, etc.) should all have reasonable safe access by bicycle.
- Directness—Studies have shown most bicyclists will not use even the best bicycle facility if it greatly increases the travel distance or trip time over that provided by less-desirable alternatives.
- Continuity—the network should have few missing links.
- Route Attractiveness—Low perceived threat to personal safety and high visual aesthetics.
- Low Conflict—Few conflicts between bicyclists and motor vehicles.
- Cost—Costs should be reasonable to implement.
- Ease of Implementation—Room to place facility; does not unduly impact traffic operations.

Designing for the Rider

Advanced riders—experienced riders who can operate under most traffic conditions, they comprise the majority of current users of collector and arterial streets and are served by the following:

- Direct access to destinations usually via the existing street and roadway system.
- The opportunity to operate at maximum speed with minimum delays.
- Sufficient operating space on the roadway or shoulder to reduce the need for either the bicyclist or the motor vehicle operator to change position when passing.

Types of facilities on which to focus—arterial and collector roadway improvements including bicycle lanes and wide curb lanes.

Basic riders—these are casual or new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles. Some will develop greater skills and progress to the advanced level, but there will always be many millions of basic bicyclists. They prefer:

- Comfortable and safe access to destinations, preferably by a direct route; either low-speed, low-traffic-volume streets, or designated bicycle facilities.

- Well-defined separation of bicycles and motor vehicles on arterial and collector streets (bike lanes and shoulders), or on separate paths.

Types of facilities on which to focus—bicycle trails, collector bicycle lanes, and residential street routes to specified attractions or sidepaths, and sidewalks where no other option is available.

Child riders—pre-teen riders whose roadway use is initially monitored by parents. Eventually they are accorded independent access to the system. They and their parents prefer the following:

- Access to key destinations surrounding residential areas, including schools, recreation facilities, convenience shopping, or other residential areas.
- Residential streets with low motor vehicle speed limits and volumes.
- Well-defined separation of bicycles and motor vehicles on arterial and collector streets—or on separate bicycle paths.

Types of facilities on which to focus—bicycle trails, residential street routes to specified attractions, and sidepaths where no other option is available.

6.2 Bicycle Compatibility Levels

Using the following system the streets can then be rated Levels A-F designating the streets for compatibility between motorists and non-motorists, where:

- Levels A–C = Recommended street for all levels of bicyclists (except maybe children).
- Level D = Recommended for moderately experienced bicycle riders.
- Level E = Recommended for only experienced bicycle riders.
- Level F = Not recommended for any level of bicycle rider.
- NA = Roadways and interstate that, by law, prohibit bicycles.

Selected bicycle riders will bicycle all preliminarily rated streets. The riders review the routes to either concur on the preliminary rating or change the rating based upon the following criteria. With the maps provided, the bicyclists ride each route and determine if the preliminary rating is accurate or should be upgraded or downgraded.

Factors for riders to consider when rating:

Curb lane condition

- If good condition, leave at same level.
- If poor condition, lower one level.
- If condition makes it difficult to ride, lower two levels.

Turning traffic and driveways

- If there is very little turning traffic, leave at same level.
- If there is significant turning traffic, lower one level.

Curb Lane Width

- If 15 feet or greater, raise one level (includes parking lane).
- If 13 to 15 feet, leave at same level. Less than 13 feet, lower one level (feels like riding in same lane as traffic).

Types of Bicycle Facilities

Bike Lanes are feasible when:

- A portion of the roadway has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.
- The minimum width for a bike lane is 5 feet, at least 4 feet of which should lay to the left of the gutter pan seam.
- Possible on collectors and two-lane arterials if street is at least 44 feet wide with no continuous turn lane. With continuous turn lane, the street must be at least 52 feet in width.
- Field studies confirm bike lanes have a strong channelizing effect on motor vehicles and bicycles.
- Bike lane stripes can increase bicyclists' confidence that motorists will not stray into their path of travel if they remain in the bike lane. Likewise, with more certainty as to where bicyclists will be, passing motorists are less apt to swerve towards opposing traffic in making certain they will not hit bicyclists.

Wide curb lanes on collectors and arterials.

- Right-most through traffic lanes that measure at least 14 feet (measured from the lane stripe to the edge of the gutter pan). When traffic exceeds 10,000 Average Daily Traffic, 15-foot lanes are desirable.
- On two-lane collectors, very possible if parking lane is utilized infrequently.

  Advantages:
  - Accommodate shared bicycle/motor vehicle use without reducing roadway capacity for motor vehicle traffic.
  - Minimize both the real and perceived conflicts between bicycles and motor vehicles.
  - Increase the roadway capacity by the number of bicyclists capable of being accommodated.

Sidepath links

- Where no other alternatives exist and continuity of the network requires a sidepath.
- On roadways where speed limits exceed 45 mph.

On-street signed destination routes located on collector or some residential streets.

- Update current route network to be more destination-based.
- Improve separate routes that have widecurb lanes. Shoulder bikeways (on rural section roadways)

- Smooth paved roadway shoulders provide a suitable area for bicycling, with few conflicts with faster-moving motor vehicle traffic.
- Roadway shoulders for bikeways under ideal circumstances should be 6 feet wide or greater. A minimum 4-foot shoulder may be used if there are physical width limitations.

Shared Roads as an option—when not enough room for a bike lane

The shared lane pavement marking is typically used where a bike lane is desired but cannot be implemented due to insufficient roadway width or other constraint. Use of the shared lane marking would be applicable in the following situations:

- In a wide lane (12 feet or greater) on a two-lane roadway.
- In the right lane of a four- to six-lane arterial.
- On a signed bike route where lane widths narrow (12 feet or less), or where traffic volumes and speeds are relatively high, possibly in conjunction with "Share the Road" signs.
- For route continuity between sections of roadway where a more desirable facility can't be implemented.
- Within a shared bus/bicycle lane.

The pavement marking warns the motorist of the presence of bicycles, while helping the bicyclist determine which part of the road they may use to be most visible to drivers, and to help avoid conflicts with parked cars. It can also serve to identify a link in a bicycle route network and assist in wayfinding. Periodic use of the "Share the Road" sign is recommended to accompany the shared lane marking. If "Share the Road" signs are used, they may be located immediately adjacent to the pavement marking and may include a downward arrow (45 degrees down and left) pointing directly at the symbol, making it clear what the symbol means.

6.4 Design Considerations

Which bicycle facilities should we use?

Wide curb lane versus bicycle lanes—which are better?
Excerpt from Federal Highway Administration (FHWA) 1999 Study
"The overall conclusion of this research is that both BL (bike lanes) and WCL (wide curb lane) facilities can and should be used to improve riding conditions, and this should be viewed as a positive finding for the bicycling community. The identified differences in operations and conflicts were related to the specific destination patterns of bicyclists riding through the intersection areas studied. Given the stated preferences of bicyclists for BLs in prior surveys (e.g., Rodale Press, 1992) along with increased comfort level on BLs found in developing the Bicycle Compatibility Index (Harkey et al., 1998), use of this facility is recommended where there is adequate width, in that BLs are more likely to increase the amount of bicycling than WCLs. Increased bicycling is important because in the United States there are but a few communities that have a significant share of trips made by this mode. Overall, we have not yet

reached the critical mass necessary to make motorists and pedestrians aware of the regular presence of the bicycle. When this critical level of bicycling is reached, gains in a "share the road" mentality will come much more quickly than at present. Certainly not all the problems will disappear, but the ability to develop and implement solutions will be greatly enhanced."

What are some strategies for adding some of these bicycle facilities?

Gaining Space on our Streets

Following are strategies for gaining extra space that can be redistributed for bicycle use in the roadway as wide outside lanes, striped shoulders, or bike lanes.

- On multilane roadways, travel lanes can be narrowed to 10 or 11 feet.
- On streets with raised medians, the median could be narrowed, providing more pavement width.
- Road diets can be employed, if appropriate, to eliminate one or two travel lanes or possibly the continuous left turn lane.
- If parking supply exceeds demand, parking can be consolidated and limited to one side of the street, or eliminated altogether if it is truly unnecessary.

Bicycle Routes

Generally, bicycle routes should be along collector streets that have good connectivity and somewhat slower speeds and volumes than arterial roadways. In some cases, arterial roads may be used as linkages, and in those cases sidepaths may be a better option for four-lane arterial roadways having outside lanes that are too narrow for comfortable and safe riding. The criteria for safe bicycle routes includes the following:

- Paved collector streets with good connectivity.
- Restricted or unused parking areas.
- Two-lane roadways without center turn lanes.
- Controlled intersections across arterial or other collectors (stop signs or signals).

Bicycle Parking

More than 1.5 million bicycles are reported stolen every year in the United States, and fear of bicycle theft is recognized as a significant deterrent to bicycle use. The availability of safe and convenient parking is as critical to bicyclists as it is for motorists, and yet it is frequently overlooked in the design and operation of shops, offices, schools, and other buildings. However, providing good-quality bicycle parking that is going to be used and useful is not quite as easy as leaving a "fence" or "grid" style rack out by the back fence of the shopping plaza or school yard and expecting cyclists to find and use it. Indeed, many agencies are now adopting quite specific bicycle parking design, location, and installation requirements. When installing bicycle parking facilities, the below recommendations should be followed.

1. Planning

Bicycle parking needs to be . . .

- Visible
- Accessible
- Easy to use
- Convenient
- Plentiful

Racks need to support the whole bike (not just one wheel) and enable the user to lock the frame and wheels of the bike with a cable or U-shaped lock. Parking should preferably be covered, well-lit, and in plain view without being in the way of pedestrians or motor vehicles.

2. Finding a good location

- Racks are installed within the right-of-way, usually on a wide sidewalk with 5 more feet of clear sidewalk space remaining.
- Racks are placed to avoid conflicts with pedestrians. They are usually installed near the curb and away from building entrances and crosswalks.
- Racks can be installed in bus stops or loading zones only if they do not interfere with boarding or loading patterns and there are no alternative sites.
- Bike racks should be installed in concrete, as they cannot be securely anchored in asphalt.
- Racks should be 4 feet from fire hydrants, curb ramps, building entrances, etc.

Bicycle racks that are sited poorly will not be well-used. Racks that are too close to the wall, or which don't have enough room between them, will end up sitting empty while nearby railings, trees, and light poles continue to be used by bicyclists.

3. Choosing the type of rack

The Inverted U type bike rack is the preferred bicycle parking rack, although other racks may be proposed provided that they meet certain performance requirements. Racks should:

- Support the frame of the bicycle, and not just one wheel.
- Allow the frame and one wheel to be locked to the rack when both wheels are left on the bike.
- Allow the frame and both wheels to be locked to the rack if the front wheel is removed.
- Allow the use of either a cable or U-shaped lock.
- Be securely anchored.
- Be usable by bikes with no kickstand.
- Be usable by bikes with water bottle cages.
- Be usable by a wide variety of sizes and types of bicycles.

Parking Rack Recommendations

The rack area should be located along a major building approach line and clearly visible from the approach. The rack area should be no more than a 30-second walk (120 feet) from the entrance it serves and should preferably be within 50 feet. A rack area should be as close as or closer than the nearest car parking space. A rack area should be clearly visible from the entrance it serves.

The following racks are recommended because one rack element supports two bikes and it supports the bicycle upright by its frame in two places.

4. Short-term bicycle parking

Short-term bicycle parking is usually defined as being two hours or less, such as might be necessary outside a store, or for visitors to an office building or government service center.

Racks should be within 50 feet of the main entrance to the building, or entrances that are frequently used by cyclists. Other critical factors for short-term parking are that it be:

- Well-distributed (i.e., it's likely better to have four or five racks spread out along one city block rather than a group of four or five racks mid-block).
- Visible to the cyclist.
- In areas of high pedestrian activity to discourage would-be thieves.

5. Long-term parking

Long-term parking usually suggests that the bicyclist is leaving the bike all day, or overnight, or for an even longer duration. Obviously, the level of security and protection from the elements needs to be greater, but the immediate convenience of the parking facility may not be as important. Long-term parking options include:

- Lockers—individual lockers for one or two bicycles.
- Racks in an enclosed, lockable room.
- Racks in an area that is monitored by security cameras or guards (within 100 feet).
- Racks or lockers in an area always visible to employees.

6. Covered bicycle parking

Wherever possible, bicycle parking should be covered to protect the bicycle from rain, snow, and other elements. Covered parking areas should have at least 6 or 7 feet of clearance, but not so high as to allow rain and snow to easily blow under the roof.

7. Signs and markings

Provide bicycle parking identification signs where possible.

8. Amount of parking

An increasing number of communities are adopting bicycle parking ordinances that specify a minimum level of bicycle parking for different building types and land uses. While these

usually relate to new developments, the level of provision required can be used as a guide to retrofit communities also.

APPENDIX A

REASONS FOR HIGHWAY SHOULDERS

Prepared by Michael Ronkin, Bicycle and Pedestrian Program Manager
And Members Unit of the Preliminary Design Unit
Oregon Department of Transportation

The following reasons are what AASHTO has to say about the benefits of shoulders in three important areas: safety, capacity and maintenance. Most of these benefits apply to both shoulders on rural highways and to marked, on-street bike lanes on urban roadways.

Safety – highways with paved shoulders have lower accidents rates, as paved shoulders:

- Provide space to make evasive maneuvers;
- Accommodate driver error;
- Add recover area to regain control of a vehicle, as well as lateral clearance to roadside objects such as guardrail, signs and poles (highways require a "clear zone," and paved shoulders give the best recoverable surface);
- Provide space for disabled vehicles to stop or drive slowly;
- Provide increased sight distance for through vehicles and for vehicles entering the roadway;
- Contribute to driving ease and reduced driver strain;
- Reduce passing conflicts between motor vehicles and bicyclists and pedestrians;
- Make the crossing pedestrian more visible to motorists; and
- Provide for storm water discharge farther from the travel lanes, reducing hydroplaning, splash and spray to following vehicles, pedestrians and bicyclists.

Capacity – highways with paved shoulders can carry more traffic, as paved shoulders:

- Provide more intersection and safe stopping sight distance;
- Allow for easier exiting from travel lanes to side streets and roads (also a safety benefit);
- Provide greater effective turning radius for trucks;
- Provide space for off-tracking of truck's rear wheels in curved sections;
- Provide space for disabled vehicles, mail delivery and bus stops; and
- Provide space for bicyclists to ride at their own pace.

Maintenance – highways with paved shoulders are easier to maintain, as paved shoulders:

- Provide structural support to the pavement;
- Discharge water further from travel lanes, reducing the undermining of the base and subgrade;
- Provide space for maintenance operations and snow storage;
- Provide space for portable maintenance signs;
- Facilitate painting of fog lines.

Iowa Department of Transportation

Iowa Trails 2000
CHAPTER FOUR:
DESIGN GUIDELINES

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PDF VERSION
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TRAIL DESIGN GUIDELINES: USE MODES

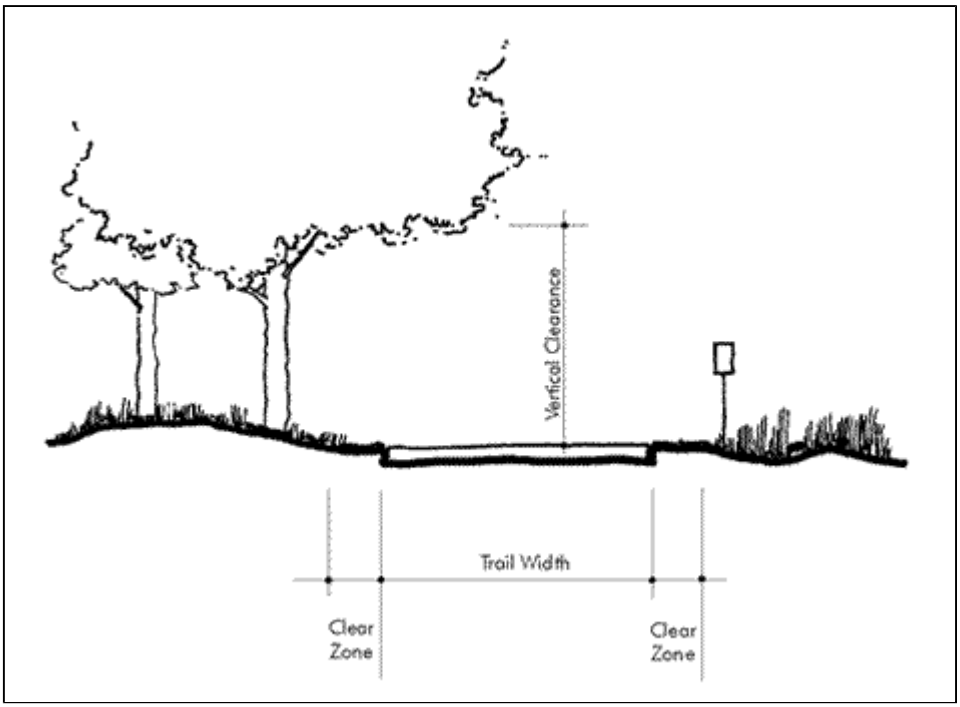
While it is most common for use modes to be combined on trails or within corridors, Iowa *Trails 2000* discusses each mode to ensure that the needs of various users are thoroughly considered. When combining use modes, the guidelines for each mode should be consulted and the most stringent should be used (see "Multi-Use Corridors"). The modes considered include hiking/walking, bicycling, in-line skating, equestrian, snowmobiling, off-highway vehicles (OHVs), and motorcycles (canoe trail designation is covered later). Each of these use modes is described below, and guidelines are set forth relating to the following design considerations.

- **Clear Trail Width** refers to the width of the traveled part of the trail that is free of protruding objects and obstacles, such as trees and overgrown vegetation (see Figure 4-5).

- **Clear Zones** refer to the area on each side of the trail between the traveled surface and any obstructions, such as trees, walls, or fences (see Figure 4-5).

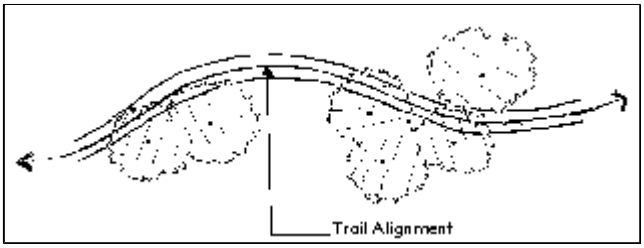
- **Vertical Clearance** refers to the height above the trail which is free from protruding objects and overhead obstructions, such as tree branches or bridges (see Figure 4-5).

FIGURE 4-5: TRAIL DIMENSIONS



- **Trail Surface** refers to the type of surface on the traveled part of the trail, such as asphalt, concrete, granular, or alternative. Surface quality is affected by tread obstacles, such as roots or rocks, and by any openings such as gaps and grates located within the trail surface.

- **Drainage** refers to techniques used to move and keep water off the trail and trail embankment.
- **Alignment** refers to the horizontal curvature of the trail.



- **Profile** refers to the vertical curvature of the trail.

- **Edge Protection** refers to any protective barrier designed to separate the trail from its surrounding environment, such as a fence or curb. As a general rule, curbs should not be less than 4 inches in height. Other types of edge protection are discussed, where appropriate, under each trail mode.

  At-grade crossings, grade-separated crossings, multi-use corridors, support services, striping, and signage will be covered in later sections.

  These design guidelines are meant as general recommendations. Many of the design considerations listed above will be impacted by local conditions, such as topography, right-of-way width, and intensity of use. Each trail project is unique, and while these guidelines should be employed wherever possible, deviations may occur.

Hiking/Walking Trails

Pedestrian facilities can take several forms. Hiking/walking trails, sidewalks, and pedestrian trails provide different user experiences for pedestrians.

Hiking/walking trails, covered in this section, are facilities used exclusively by pedestrians, and are typically found in natural areas. They offer a low-impact means of allowing pedestrians to come in contact with the natural environment. Hiking/walking trails are used by a variety of people with a broad range of abilities, skill levels, and desired experiences, and should be designed to accommodate all persons. New and reconstructed trails should be made as accessible as possible while maintaining the essential character of the resource. Furthermore, all trail amenities, such as restrooms, drinking fountains, and picnic tables should comply with the ADA accessibility guidelines. Because of their rustic nature, the guidelines for hiking/walking trails are very general, and trail design will be primarily determined by site conditions.

Clear Trail Width

- Recommended clear trail width for hiking/walking trails: 4 feet (this may be reduced based on site conditions and desired trail experience) (see Figure 4-6).
- Hiking/walking trails should include widened areas at regular intervals to allow users to pass one another. These widened areas should be at least 5 feet by 5

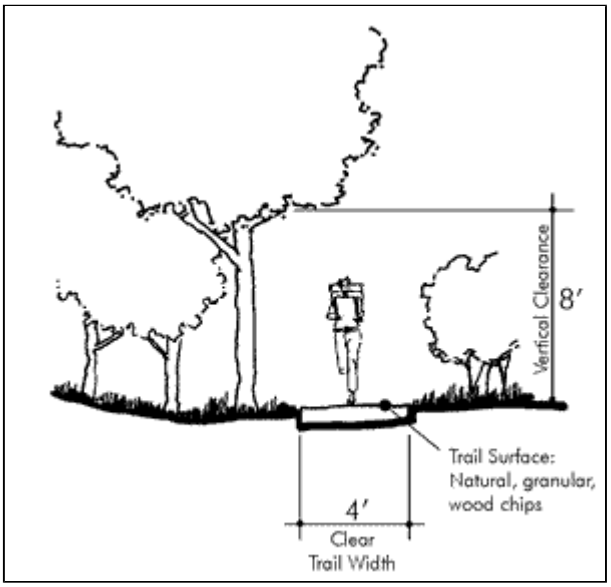
feet.

- In urban or suburban locations, hiking/walking trails should be set back at least 5 feet from any roadway curb.

Clear Zones

Hiking/walking trails do not typically require clear zones, since users are moving at relatively slow speeds. In natural areas, underbrush should be trimmed so that it does not hang over the trail edge or obstruct the traveled way.

FIGURE 4-6: TRAIL DIMENSIONS FOR HIKING/WALKING TRAILS



Vertical Clearance

- Hiking/walking trails should maintain an 8-foot minimum vertical clearance (see Figure 4-6). If the hiking/walking trail is used by cross-country skiers during the winter months, the average snow level should be added to the 8-foot minimum.

Trail Surface

- Hiking/walking trails may be surfaced with wood chips or crushed stone, or may be made of compacted earth. In any case, the surface should be firm and stable. It should be noted, however, that wood chips are not considered an accessible surface.
- In wet areas a boardwalk is recommended (see "Wetland Boardwalks").
- Any tread obstacles, such as rocks or roots, imbedded into the trail surface should be less than 2 inches.
- Any openings within the trail surface, including on bridges, should not permit passage of a 0.5-inch diameter sphere and should be perpendicular to the dominant direction of travel.

Drainage

Because users of a hiking/walking trail will come in direct contact with the trail surface, drainage is very important. Natural surface trails can become watercourses during heavy rains, causing severe erosion. The following methods effectively move water off the trail.

- In flat areas, the trail should be cross-sloped or crowned at approximately 2 percent.
- Where a trail is benched into a slope, a swale on the uphill side should be considered to catch water before it crosses the trail.
- Culverts may be necessary to move water under the trail.
- Disturbed areas should be seeded and mulched or sodded to prevent erosion.

Alignment

Users of hiking/walking trails can navigate even the tightest of turns. Alignment guidelines are not necessary for hiking/walking trails.

Profile

It is recommended that no more than one-third of the total trail length for a hiking/walking trail exceed 8.3 percent. In addition, the following guidelines should be followed:

- Trail grade may be 5 percent or less for any distance.
- Trail grade may be 8.3 percent for a maximum distance of 200 feet.
- Trail grade may be 10 percent for a maximum distance of 30 feet.
- Trail grade may be 12.5 percent for a maximum distance of 10 feet.

The trail grade between the maximum grade segments should return to 5 percent for a minimum distance of 5 feet to allow resting opportunities for people who have difficulty traveling over sloped surfaces.

If, due to local topography, the trail would be steeper than the above recommendations permit, switchbacks should be used to lessen the overall slope.

Edge Protection

Edge protection is not required on a hiking/walking trail; however, if provided it should be at least 4 inches. Pedestrians with vision impairments tend to adjust their obstacle detection to a slightly higher level on hiking/walking trails because of all the small obstacles contained within a natural trail surface. Edge protection that is at least 4 inches high is much more likely to be detected.

Pedestrian Trails

Pedestrians are typically accommodated with other trail users such as bicyclists and in-line skaters, within a multi-use corridor. In some cases, however, pedestrians may be accommodated on an exclusive trail, as a means of separating pedestrians from faster moving bicyclists and in-line skaters.

Where pedestrian use is expected, facilities should be accessible to a variety of people with a broad range of abilities, skill levels, and desired experiences, and should be designed to accommodate all persons. New and reconstructed trails should be made as accessible as possible while maintaining the essential character of the resource. Furthermore, all trail amenities, such as restrooms, drinking fountains, and picnic tables, should comply with the ADA accessibility guidelines.

Pedestrian trails, unlike hiking/walking trails, are designed for a more formalized trail experience. Whereas hiking/walking trails may be quite rugged, pedestrian trails are typically designed for more leisurely walking on finished surfaces.

Clear Trail Width

- Recommended width for pedestrian trails: 5 feet.

Clear Zones

Because of the relatively slow speed of pedestrians, clear zones are not necessary.

Vertical Clearance

- Pedestrian trails should maintain an 8-foot minimum clearance. If the hiking/walking trail is used by cross-country skiers during the winter months, the average snow level should be added to the 8-foot minimum.

Trail Surface

Pedestrian trails, as discussed above, will almost always exist in conjunction with non-motorized multi-use trails. Their surface, therefore, should be the same as that used for the adjacent multi-use trail. Where pedestrian trails occur alone, they may be asphalt, concrete, or granular. Whenever possible, the surface of a pedestrian trail should be smooth and free of tread obstacles. Any openings imbedded into the trail surface should not permit passage of a 0.5-inch diameter sphere and should be perpendicular to the dominant direction of travel.

Drainage

- Pedestrian trails should have a 2 percent cross-slope.

Alignment

Users of pedestrian trails can navigate even the tightest of turns. Alignment guidelines are not necessary for pedestrian trails.

Profile

It is recommended that no more than one-third of the total trail length for a pedestrian trail exceed 8.3 percent. In addition, the following guidelines should be followed:

- Trail grade may be 5 percent or less for any distance.
- Trail grade may be 8.3 percent for a maximum distance of 200 feet.
- Trail grade may be 10 percent for a maximum distance of 30 feet.
- Trail grade may be 12.5 percent for a maximum distance of 10 feet.

The trail grade between the maximum grade segments should return to 5 percent for a minimum distance of 5 feet to allow resting opportunities for people who have difficulty traveling over sloped surfaces.

Edge Protection

Edge protection is not required on a pedestrian trail; however, if provided it should be at least 4 inches.

Sidewalks

Sidewalks are pedestrian facilities primarily used in cities and towns. They are typically designed for pedestrians only, and should not be used by bicyclists. Sidewalks typically offer pedestrian connections within a community, and are, therefore, an important component of local pedestrian planning. Guidelines for this type of facility are found in the handbook "Local Community Planning for Bicyclists and Pedestrians," (*Iowa Trails 2000*).

Bicycle Trails

There are extensive guidelines that have been established for bicycle facilities. Bicycles, however, are unlikely to ever enjoy exclusive use of a trail facility. In most cases, bicycle trails will also accommodate pedestrians and in-line skaters on a single paved treadway.

Because bicycles typically travel at higher speeds than pedestrians, trail geometrics are a major consideration. The AASHTO Guide is an invaluable resource when designing bicycle trails. The guide gives detailed information on alignment and profile layout and design.

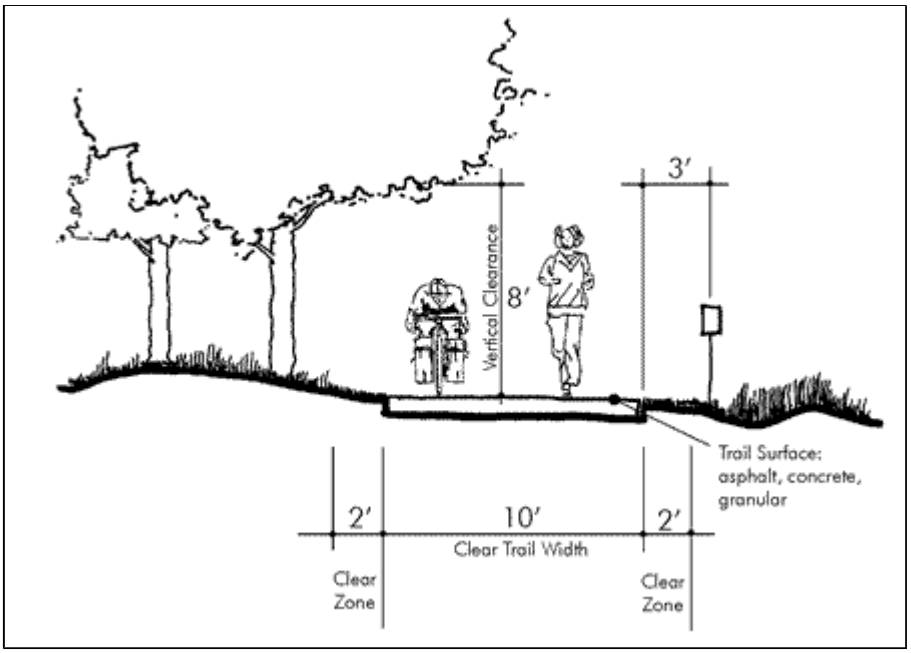
Clear Trail Width

- Recommended width for two-way bicycle trail: 10 feet (may be increased to 12 feet depending trail traffic) (see Figure 4-7).
- Recommended width for one-way bicycle trail: 6 feet (Separated one-way trails in the same corridor should have a minimum 2-foot median between them).

Clear Zones

- Bicycle trails should maintain a minimum 2-foot graded area on each side of the trail, graded at a maximum slope of 6:1 (see Figure 4-7).
- Bicycle trails should maintain a minimum 1-foot buffer zone between the edge of the graded clear zone and any fixed objects such as signs or trees. On bridges this guideline does not apply (see Figure 4-7).

FIGURE 4-7: TRAIL DIMENSIONS FOR BICYCLE TRAILS



Vertical Clearance

Bicycle trails should maintain an 8-foot minimum vertical clearance (see Figure 4-7).

Trail Surface

- Asphalt or concrete are the preferred surfaces for bicycle trails.

The surface of a bicycle trail should be smooth and free of tread obstacles. In some cases, granular surfacing may be used as an interim solution. Granular trails can be difficult to maintain, and can be harder on bicycles than paved trails. In addition, granular surfacing eliminates use of the trail by in-line skaters. Any decision to use granular surfacing for bicycle trails should be carefully evaluated.

Drainage

It is very important that bicycle trails are well drained. Standing water on the trail will adversely affect the trail surface and decrease the life and quality of the trail.

- Bicycle trails should not exceed a uniform cross slope of 2 percent (see Figure 4-8). Crowning of the trail at 2 to 3 percent is acceptable, but may be more difficult and costly to construct (see Figure 4-9).
- Where a trail is benched into a slope, a swale on the uphill side should be considered to catch water before it crosses the trail (see Figure 4-10).
- Culverts may be necessary to move water under the trail.
- Disturbed areas should be seeded and mulched or sodded to prevent erosion.

FIGURE 4-8: TRAIL CROSS SLOPE

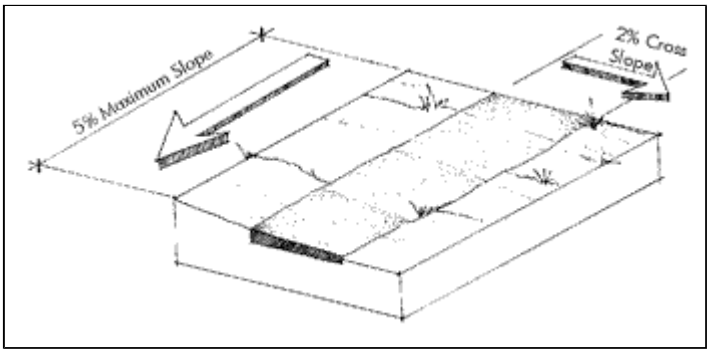


FIGURE 4-9: CROWNING OF A TRAIL

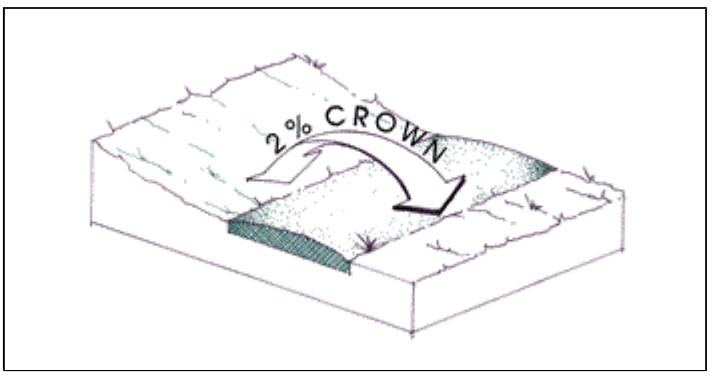
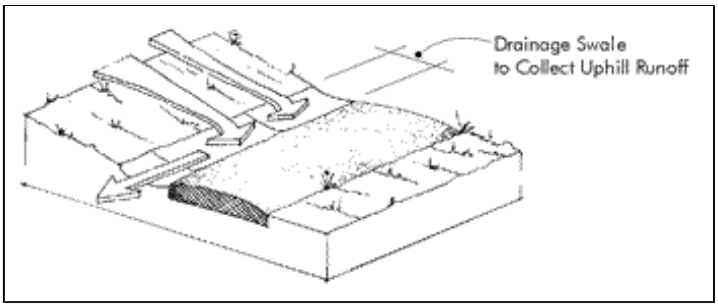


FIGURE 4-10: TRAIL WITH DRAINAGE SWALE



Alignment

The design of bicycle trail alignment can be as complex as roadway design. Many factors must be taken into consideration, including design speed, the surface type, and sight lines. The AASHTO Guide and "Minnesota Bicycle Transportation Planning and Design Guidelines" offer detailed information on alignment and superelevation. In general, a typical curve radius for a bicycle trail will be approximately 100 feet.

Another issue to consider when designing a trail's alignment is visibility on horizontal curves, which is based on stopping sight distance. Stopping sight distance refers to the amount of time it would take a user to stop once an obstruction has come into view. As a general rule, the distance a user can see along the trail should never be less than the distance it would take that user to stop. Procedures for determining stopping sight distance are detailed in the AASHTO Guide and should be applied to both alignment and profile.

Profile

The profile of a bicycle trail is also a major consideration which requires detailed analysis and design. Issues to consider when designing a trail's profile include steepness (or overall grade of the trail) and stopping sight distance (discussed above). The following recommendations are for general planning purposes only. Final trail design requires more detailed analysis based primarily on the AASHTO Guide.

- Maximum recommended grade for bicycle trails: 5 percent.
- Grades on bicycle trails steeper than 5 percent are possible, but should be restricted to distances as indicated in the AASHTO Guide.

Stopping sight distance applies to vertical curves (hills) just as it does to horizontal curves. This consideration is especially important on downhill sections, as speeds will be higher. As described above, the AASHTO Guide is an invaluable resource for detailed trail design, and should be consulted during the final design process.

Edge Protection

Edge protection, typically in the form of fencing, is required on bicycle trails only in areas where safety is a concern. Such safety considerations should be evaluated in detail during the final design of the trail. If fencing is provided, it should be at least 42 inches high. Some possible situations where fencing might be warranted include:

- Locations where the land on either side of the trail drops off steeply.
- Locations where sharp curves may cause users to lose control and leave the trail.
- Locations where adjacent uses, such as railroad tracks or active industry, may cause a threat to trail user safety.
- Bridges (see "Grade-Separated Crossings").

Where fencing is included, rub-rails should be installed for the safety of bicyclists and

wheelchair users. Rub-rails should be installed at ground level and at the general level of an adult bicyclist's handlebars.

In-line Skating Trails

In-line skaters are typically accommodated along with other modes. They will be commonly found along with bicyclists and pedestrians on multi-use trails. In-line skating trails, therefore, can use the standards described for bicycle trails (see "Bicycle Trails").

On-Road Bicycle Facilities

There is extensive literature relating to guidelines for on-road bicycle facilities. AASHTO and FHWA, as well as many states, offer a wide range of guidelines for various types of bicycle accommodations. There are essentially three types of on-road bicycle facilities: paved shoulders, shared roadways (including wide curb lanes), and bicycle lanes. All on-road bicycle facilities should be designed so bicyclists travel in the same direction as motorists.

Safety is of great concern in the design of on-road bicycle facilities. Conflicts with pedestrians, automobiles, or other bicyclists can lead to serious injury. Poorly maintained pavement, snow build-up and debris can also lead to safety problems. The guidelines listed below are minimum recommendations only, and site-specific conditions may dictate variations for safety purposes.

Clear Trail Width

- Paved shoulders: minimum 4 feet, to accommodate bicycle use, but refer to AASHTO's "A Policy on Geometric Design of Highways and Streets (Green Book)" and FHWA's "Selecting Roadway Design Treatments to Accommodate Bicycles" for recommendations for greater shoulder width, which is desirable where shoulders provide multiple benefits and where motor vehicle speeds exceed 50 miles per hour (see Figure 4-11).
- Paved shoulders adjacent to guardrails or other roadside barriers: 5 feet.
- Widened curb lanes: 14 feet of usable lane width (see Figure 4-12).
- Widened curb lanes on steep uphill segments: 15 feet (continuous wide lanes greater than 15 feet are not recommended, as motor vehicles may use them as two lanes).

FIGURE 4-11: PAVED SHOULDER DIMENSIONS

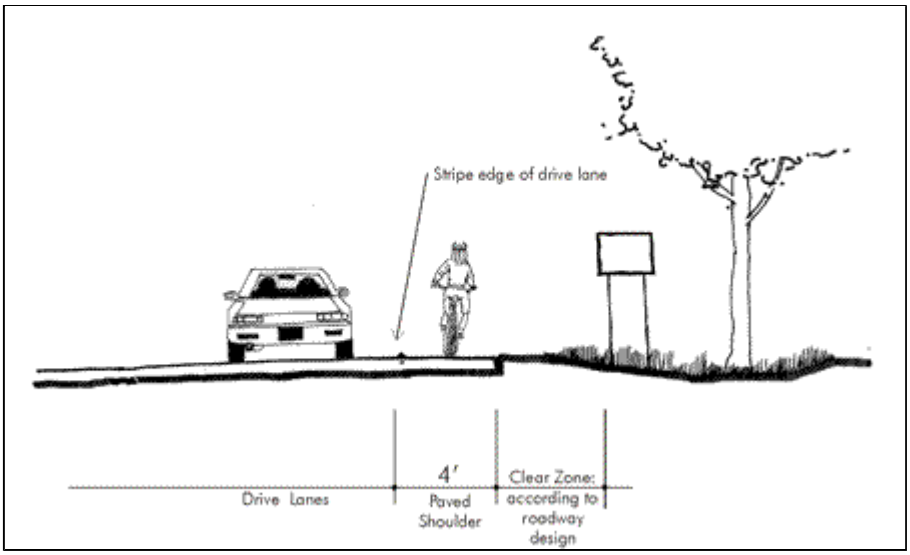
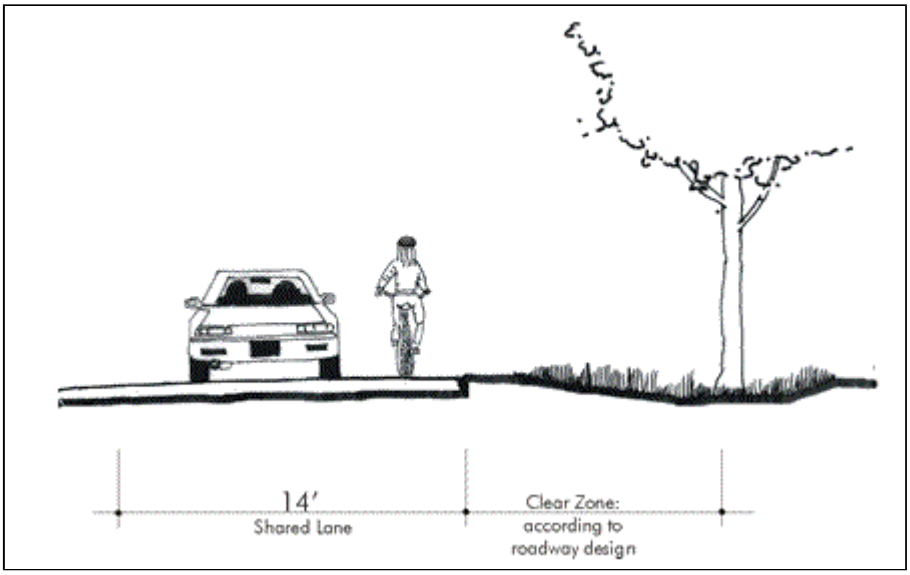


FIGURE 4-12: SHARED LANE DIMENSIONS



- Minimum width of bicycle lanes: 4 feet as measured from edge of roadway, or 5 feet as measured from the face of the curb or a guardrail to the bicycle lane stripe (see Figure 4-13).
- Desirable width of bicycle lanes: 5 feet as measured from edge of roadway.
- Minimum width of bicycle lanes adjacent to parking: 5 feet (see Figure 4-14).

FIGURE 4-13: BICYCLE LANE DIMENSIONS

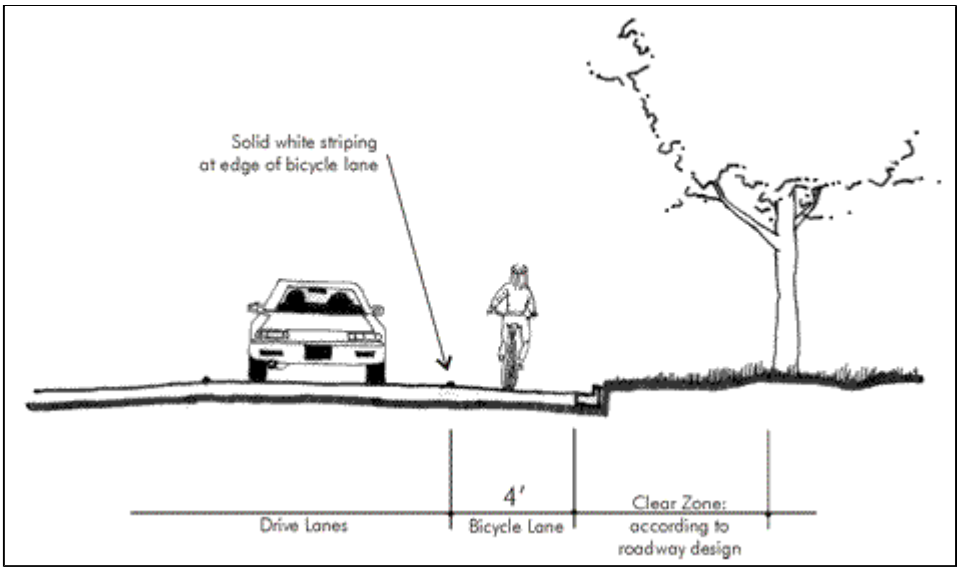
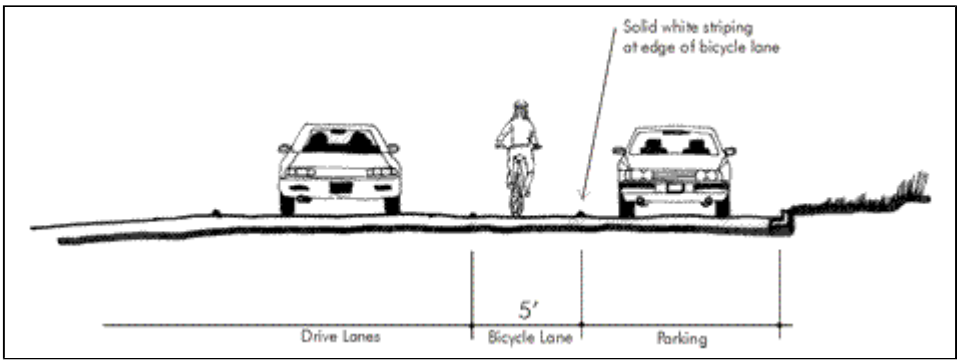


FIGURE 4-14: BICYCLE LANE DIMENSIONS ADJACENT TO PARKING



One issue that may impact on-road bicycle facilities is the presence of rumble strips. Occasionally used on roadways with rural sections, they will lessen the usable width of an on-road bicycle facility. Rumble strips "...are not recommended where shoulders are used by bicyclists unless there is a minimum clear path of 1 foot from the rumble strip to the traveled way, 4 feet from the rumble strip to the outside edge of paved shoulder, or 5 feet to adjacent guardrail, curb or other obstacle." (AASHTO Guide, 1999).

Clear Zones, Vertical Clearance, Trail Surface, Alignment, Profile, And Edge Protection

On-road bicycle facilities will normally benefit from design standards required by the roadway itself. Such requirements are sufficient for the bicycle facility. On-road bicycle facilities should only be designated on hard-surfaced roadways.

Drainage

The primary drainage issue to consider regarding on-road bicycle facilities is the existence of roadway drain inlets. Some types of inlet grates may trap a bicycle wheel or send the rider off course. Bicycle-compatible inlets are widely available, and these should be used on all roadways where bicyclists are expected. On rural sections, the cross-slope required by roadway construction is adequate to drain the bicycle facility.

Mountain Bike Trails

Mountain bike trails are typically rugged, off-road facilities. They have far less stringent guidelines than non-motorized multi-use trails, but can accommodate only one type of bicycle. The hallmark of mountain bike trails is the "single track," which is a narrow pathway with many hills and sharp turns. Such facilities can vary greatly in difficulty.

Recently, there has been a surge of people who recreate in off-road wheelchairs that are designed similarly to mountain bikes. However, not every mountain biking trail will accommodate the additional width of off road wheelchairs (approximately 28 to 34 inches). Therefore, trail designers should post objective information about the minimum clear width of the trail, so people who use off road wheelchairs can make informed recreation decisions.

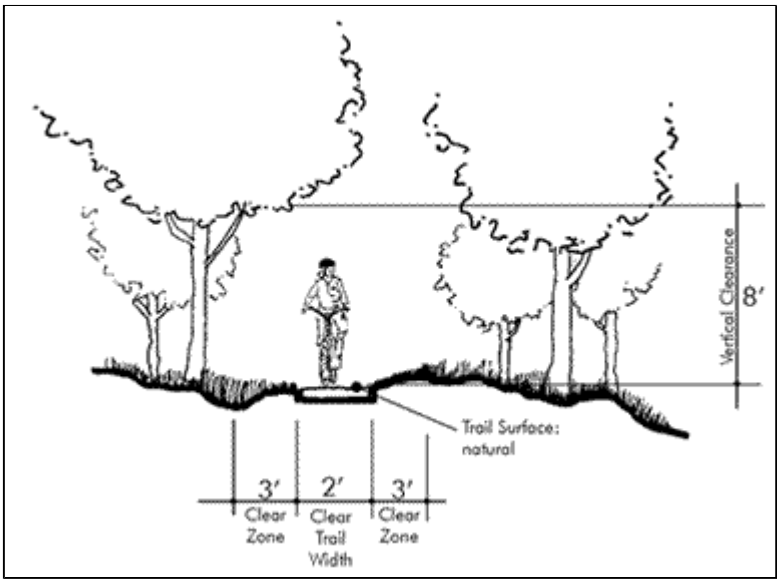
Clear Trail Width

- Desirable width for mountain bike trails: 2 feet (see Figure 4-15).

Clear Zones

- Shrubby vegetation should be removed to a distance of 3 feet on each side of the tread. Established trees and grasses may remain (see Figure 4-15).

FIGURE 4-15: TRAIL DIMENSIONS FOR MOUNTAIN BIKE TRAILS



Vertical Clearance

- Mountain bike trails should maintain an 8-foot minimum clearance (see Figure 4-15).

Trail Surface

- Preferred surface for mountain bike trails: compacted earth.

Drainage

Without proper drainage, mountain bike trails may become severely eroded. Several options exist for properly draining mountain bike trails.

- Mountain bike trails should be cross-sloped at 3 to 5 percent.
- Flexible waterbars or swales should be used to remove water from trails.
- Special consideration should be given to placement of trails.

Alignment

Alignment of mountain bike trails will primarily depend on the difficulty of the trail to be constructed. In general, the tighter the turn, the more challenging a trail may become.

Profile

- Maximum overall grade for mountain bike trails: 10 percent. This level of steepness will allow minor increases or decreases in slope to avoid obstacles. Dips and inclines should be built into the trail to provide interest and facilitate drainage.

Edge Protection

Edge protection is not usually required for mountain bike trails. In areas where safety is of great concern, fences with a minimum height of 42 inches should be installed.

Equestrian Trails

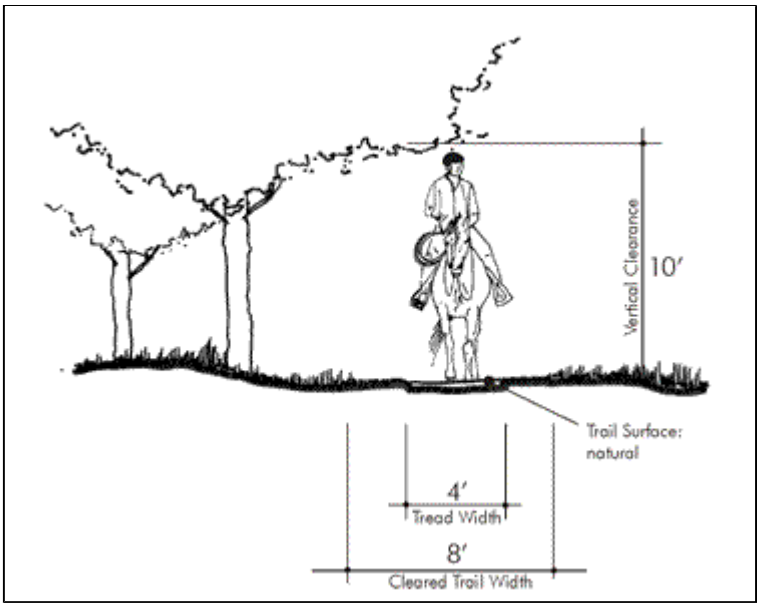
Trails designed to accommodate horses have a great deal of flexibility in design. The most important consideration for equestrian trails is the surface, which should be designed to reduce injuries to animals and riders. The placement of obstacles is also a key issue for designing equestrian trails. Some people with mobility impairments are able to travel by horseback but are not able to walk a horse around obstructions. Therefore, equestrian trails should not require the rider to dismount to avoid obstacles while on the trail. In all design elements, the safety of the horse and rider is paramount.

Clear Trail Width

- Desirable tread width for equestrian trails: 4 feet (see Figure 4-16).
- Desirable cleared trail width for equestrian trails: 8 feet (see Figure 4-16).

Tread width refers to the actual traveled surface of the trail. Cleared trail width refers to the areas where underbrush, branches, and other obstructions have been removed. In most cases, there will be little difference between the two, as riders will use the entire cleared area, especially when passing in opposite directions.

FIGURE 4-16: TRAIL DIMENSIONS FOR EQUESTRIAN TRAILS



Clear Zones

The cleared trail width listed above includes adequate clear zones for equestrian use.

Vertical Clearance

- Equestrian trails should maintain a minimum vertical clearance of 10 feet (see Figure 4-16).

Trail Surface

- Equestrian trails should have a surface of uncompacted natural material.
- Equestrian trails should be free from brush, stumps, logs, large rocks, and other obstructions that may injure horses.

Drainage

Areas where standing water is likely should be drained by sloping the trail or installing ditches.

Alignment

Horses can maneuver almost any corner, and can travel at low speeds. Therefore, no alignment guidelines are necessary for equestrian trails.

Profile

Because equestrian trails are used by animals carrying a significant amount of weight, trail grade is an important consideration.

- Maximum grade for equestrian trails: 10 percent.
- Maximum grade for shorter slopes (100 feet) on equestrian trails: 20 percent.
- Switchbacks should be used for surmounting slopes greater than the above parameters.

Edge Protection

Edge protection is not usually required for equestrian trails. In areas where safety is of great concern, fences should be installed.

Snowmobile Trails

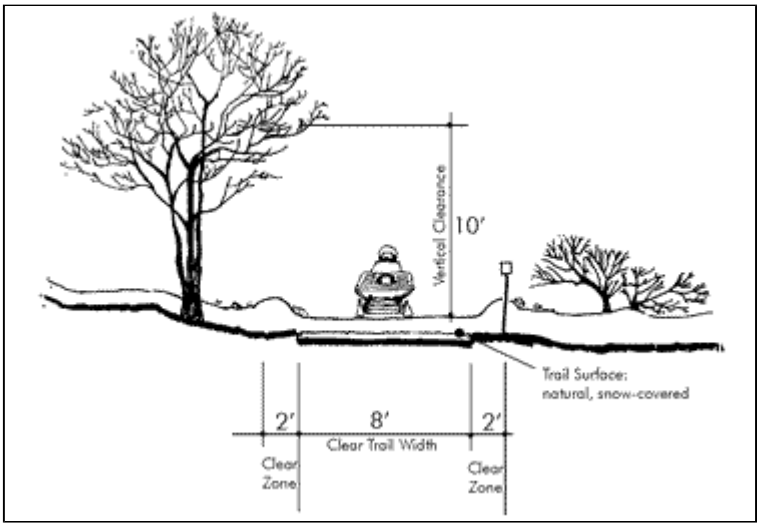
Snowmobile trails are unique among the trail modes considered in *Iowa Trails 2000* because their use will only take place in winter. This seasonal dependency necessitates some unique design considerations. In addition, snowmobiles are capable of high speeds, increasing the need for safety through trail design. As with all motorized trails, signing should be used to warn non-motorized users of the predominate use mode. In some situations clearly indicated dual trails can be indicated for the safe sharing of a corridor by motorized and non-motorized users.

Clear Trail Width

- Desirable groomed surface for one-way snowmobile trails: 8 feet (see Figure 4-17).
- Desirable groomed surface for two-way snowmobile trails: 10 feet.
- At sharp corners or unusually rugged terrain, the trail should be widened to accommodate grooming equipment and provide user safety.

The groomed surface refers to the area which is free from branches, large rocks, brush, stumps, and other obstructions that would create an uneven and unsafe surface even when the trail is covered with snow.

FIGURE 4-17: TRAIL DIMENSIONS FOR SNOWMOBILE TRAILS



Clear Zones

- Snowmobile trails should maintain a 2-foot clear zone on each side of the groomed surface (see Figure 4-17).

Vertical Clearance

- Snowmobile trails should maintain at least 10 feet of vertical clearance above the average snow level to accommodate grooming equipment (see Figure 4-17).

Trail Surface

Many snowmobile trails are enjoyed by other trail users during the summer months. In these situations, the surface should be designed according to the needs of the additional user. If the trail is not used during the summer, a variety of surfaces are possible because the trail will be buried with snow for snowmobile use. The surface should be relatively flat and free from obstructions as listed above.

- Snowmobile trails may exist on an otherwise unprepared surface, provided that stumps, brush, and other obstructions are removed. Snowmobile trails within road rights-of-way demonstrate this type of surface.
- Snowmobile trails may exist on crushed stone surfacing.
- Snowmobile trails may exist on wooden bridges or boardwalks when crossing watercourses or wetlands.
- Placement of snowmobile trails on asphalt surfaces should be avoided, as studs will cause damage to the asphalt. When implementing a snowmobile trail along with an asphalt trail, a natural surface corridor should be provided and clearly marked for snowmobile use.

Alignment

- Minimum forward visibility for snowmobile trails: 50 feet.
- Minimum radius for snowmobile trail curves: 25 feet.
- Where hazards exist (such as a steep drop-off) near a curve, the trail should be superelevated.

Profile

- Maximum slope for snowmobile trails: 12 percent.
- Maximum grade for shorter slopes (100 feet) on snowmobile trails: 25 percent.
- Snowmobile trails should ascend steep slopes at right angles to the contour lines (directly up the fall line). Ascending such slopes at angles could cause sliding of snowmobiles and slope erosion.

Edge Protection

Edge protection is not usually required for snowmobile trails. In areas where safety is of great concern, fences should be installed.

Other Points To Consider

- Water crossings: Even though ice may be in place for much of the snowmobiling season, water crossings without bridges are not acceptable as part of a snowmobile trail.
- Exposure: In order to extend the snowmobiling season, trails should be placed, wherever possible, to retain snow cover. Tree lines, woods, valleys, and north-facing slopes are areas that tend to retain snow, and these areas should be sought out for snowmobile trails.
- Signage: The Iowa Department of Natural Resources has developed uniform signage for snowmobile trails. The DNR's signage scheme should be used for all snowmobile trails. These signs should be installed before the first snowfall and removed in the spring.
- Maintenance: Snowmobile trails require a significant amount of maintenance, since winter storms can take their toll on trailheads, signage, and the groomed trail itself. Such maintenance issues should be considered during the initial planning stages of the project.
- Noise abatement: There is the potential for disturbance from snowmobile noise.

For this reason, snowmobile trails should be placed as far as possible from residential areas. Other noise abatement possibilities include placing the trail behind existing vegetation or within valleys. In addition, sound monitoring and enforcement should be initiated to ensure that machines do not exceed the legal limits.

Off-Highway Vehicle Trails (3- and 4-wheeled)

As with snowmobiles, off-highway vehicles (OHVs) are capable of high speeds, and safety is a primary consideration in the establishment of design guidelines. OHV trails may exist as either a nodal or linear facility, with nodal facilities offering looping trails within one designated area or park, and linear facilities offering connections between riding parks, communities, and support services. As with all motorized trails, signing should be used to warn non-motorized users of the predominate use mode. In some situations clearly indicated dual trails can be indicated for the safe sharing of a corridor by motorized and non-motorized users.

The Iowa Department of Natural Resources has recently established a policy regarding the acquisition and development of OHV parks (nodal facilities). This policy is included in Appendix E.

The following guidelines generally hold true for trails in both nodal and linear facilities.

Clear Trail Width

- Recommended width for a one-way OHV trail in a wooded area: 5 feet (see Figure 4-18).
- Recommended width for a two-way OHV trail in a wooded area: 8 feet.
- Recommended width for a one-way OHV trail in an open or grassy area: 4 feet (see Figure 4-19).
- Recommended width for a two-way OHV trail in an open or grassy area: 8 feet.
- Trail width on switchbacks or in areas with steep side slopes should be increased by 6 to 20 inches.
- On sharp curves, trail width should be increased by 1 foot.

FIGURE 4-18: TRAIL DIMENSIONS FOR ONE-WAY OHV TRAILS IN WOODED AREAS

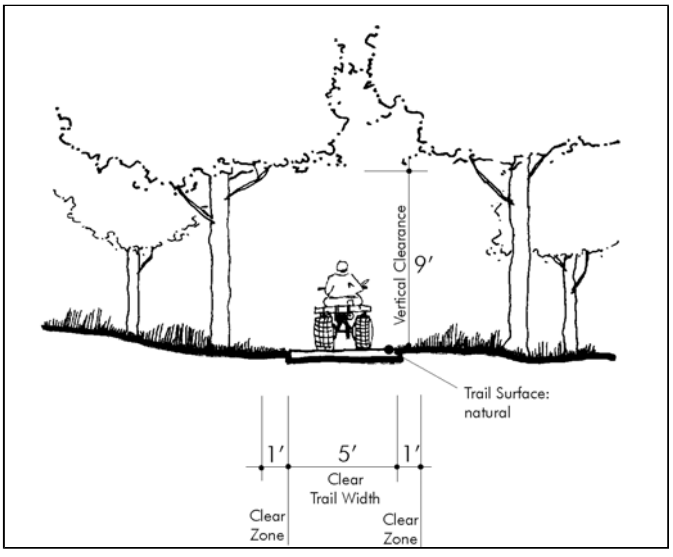
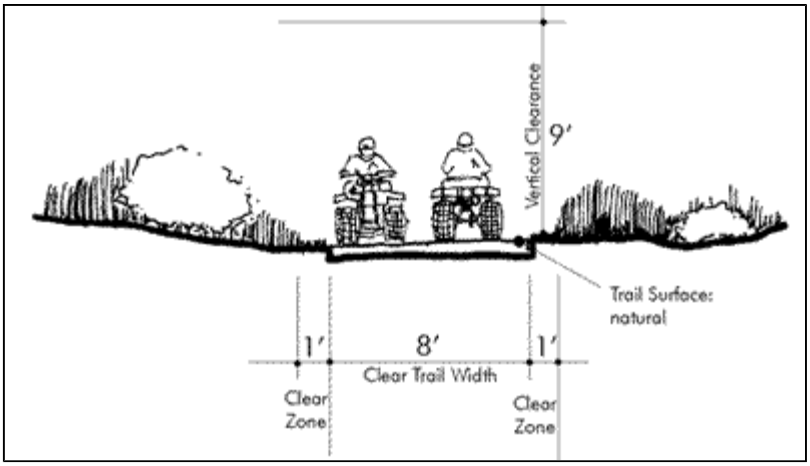


FIGURE 4-19: TRAIL DIMENSIONS FOR TWO-WAY OHV TRAILS IN OPEN AREAS



Clear Zones

- OHV trails should maintain a 1-foot minimum clear zone on each side of the trail (see Figures 4-18 and 4-19).

Vertical Clearance

- OHV trails should maintain a vertical clearance of at least 9 feet (see Figures 4-18 and 4-19).

Trail Surface

- OHV trails should have a natural surface.
- OHV trails should be placed on soils that are resistant to erosion. Sandy soils should be avoided. County soil survey maps should be consulted to determine the best location for an OHV trail.
- The OHV trail surface should be free of logs, large rocks, stumps, brush, and other obstructions, unless a more challenging experience is desired. In such a case, some obstacles may be left in place.

Drainage

Improper drainage on OHV trails can lead to rutting and severe erosion. Trails can be drained by using changes in grade or rolling drain dips. Waterbars should be used as a last resort, as they increase maintenance costs.

Alignment

- Minimum radius for curves on OHV trails: 10 feet.
- OHV trails should be widened slightly at curves for safety reasons (see "Clear Trail Width" above).

Profile

- Variety in grades for OHV trails is recommended, as it increases the challenge and desirability of the trail, and facilitates drainage.
- Minimum slope for OHV trails (for drainage purposes): 2 percent.

- Maximum continuous slope for OHV trails: 8 percent.
- Maximum grade for shorter slopes (100 feet) on OHV trails: 15 percent.

Edge Protection

Edge protection is not usually required for OHV trails. In areas where safety is of great concern, fences should be installed.

Other Points To Consider

- OHV parks: Facilities specifically designated for OHV use can offer great challenge and variety. Such parks are typically designed with a system of loops, beginning at a trailhead and possibly offering several loops of different ability levels. OHV parks are likely to be shared by motorcyclists, so loops should be planned for these users, as well.
- Erosion: To reduce the potential of erosion, OHV trails should avoid unstable soils and provide adequate drainage, especially on steep slopes and hillsides.
- Noise abatement: OHVs may reach noise levels significantly higher than allowed by the Code of Iowa. Natural buffers such as hills, ridges, and existing vegetation can help to mitigate noise impacts. To reduce noise conflicts, OHV parks should have regular sound level monitoring to ensure all OHVs comply with the Iowa Code.

Motorcycle Trails

Motorcycle trails are very similar to OHV trails in that they both accommodate motorized recreational vehicles. These two trail modes often use the same facilities, the only exception being motorcycle-only trails located in OHV riding areas (see "Other Points to Consider" above). The following guidelines relate only to variations in trail width, alignment, and profile associated with motorcycle-only trails. For all other trail elements, guidelines for OHV trails should be followed. As with all motorized trails, signing should be used to warn non-motorized users of the predominate use mode. In some situations clearly indicated dual trails can be indicated for the safe sharing of a corridor by motorized and non-motorized users.

Clear Trail Width

- Recommended width for a one-way motorcycle trail in a wooded area: 3 feet.
- Recommended width for a two-way motorcycle trail in a wooded area: 6 feet (see Figure 4-20).
- Recommended width for a one-way motorcycle trail in an open or grassy area: 2 feet (see Figure 4-21).
- Recommended width for a two-way motorcycle trail in an open or grassy area: 6 feet.
- Trail width on switchbacks or in areas with steep side slopes should be increased by 6 to 20 inches.
- On sharp curves, clear trail width should be increased by 1 foot.

FIGURE 4-20: TRAIL DIMENSIONS FOR TWO-WAY MOTORCYCLE TRAILS IN WOODED AREAS

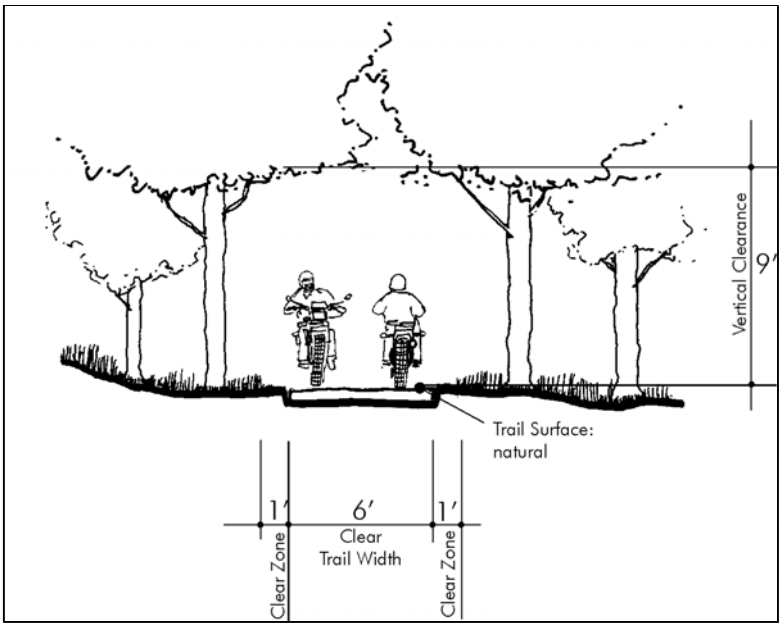
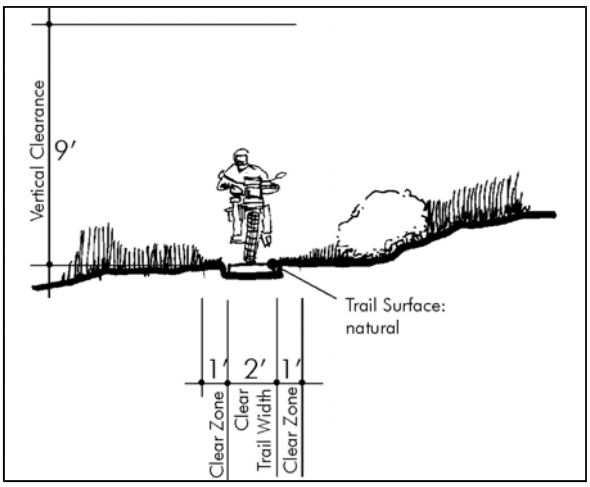


FIGURE 4-21: TRAIL DIMENSIONS FOR ONE-WAY MOTORCYCLE TRAILS IN OPEN AREAS



Alignment

- Minimum radius for curves on motorcycle trails: 6 feet
- Motorcycle trails should be widened slightly at curves for safety reasons (see "Clear Trail Width" above).

Profile

- Variety in grades for motorcycle trails is recommended, as it increases the challenge and desirability of the trail, and improves drainage.
- Minimum slope for motorcycle trails (for drainage purposes): 2 percent.
- Maximum continuous slope for motorcycle trails: 12 percent.
- Maximum grade for shorter slopes (100 feet) on motorcycle trails: 30 percent.

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Iowa Trails 2000
CHAPTER FOUR:
DESIGN GUIDELINES

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> Chapter 1: Introduction
> Chapter 2: Needs and Benefits
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> Chapter 4: Design Guidelines
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> Chapter 6: Implementing the Vision
> Chapter 7: Operations and Maintenance
> Chapter 8: Recommendations
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TRAIL DESIGN GUIDELINES: MULTI-USE CORRIDORS

In reality, many of the trails implemented in the state of Iowa will be multi-use trail corridors. The classic example of a recreational trail – a long linear pathway connecting parks or communities – is a multi-use trail used by bicyclists, walkers, in-line skaters, and, possibly, snowmobiles in the winter. There are two types of multi-use trails:

- Single-treadway corridors have only one trail facility, which is planned to accommodate all desired modes.

- Dual-treadway corridors accommodate a variety of modes on two or more different trails.

The former example is the most cost effective, but can only be used when the user modes are reasonably compatible with each other. The latter example allows for separation of uses within a corridor. This can reduce conflict and still accommodate varied users. The dual treadway corridor may also provide the same support services, such as trailheads, restrooms, and rest areas, for many different users, thereby economizing trail development. It does, however, require a wider right-of-way.

Single-Treadway Corridors

Single-treadway corridors are the simplest type of trail, providing a single recreational facility within a corridor that may not be much wider than the trail itself. On these types of facilities, it is important to control the uses that take place, as incompatible user modes will cause serious conflict on a relatively narrow facility.

Compatible Modes

The following are examples of user modes which may occur on the same single-treadway corridor. There may be other possibilities, depending on the design of the trail and community desires.

- Pedestrians, bicyclists, and in-line skaters on a paved multi-use trail facility. This is the classic example of a multi-use trail, and conflicts are relatively rare. Depending on the volume of traffic, however, pedestrians may need to be separated from faster moving bicyclists and skaters for their own safety (see "Pedestrian Trails").

- Pedestrians and bicyclists on a granular trail with snowmobiles in the winter. The seasonal offset of these uses makes them compatible.

- Pedestrians, bicyclists, and in-line skaters on a paved trail with snowmobiles in winter. The sharing of a trail in this way is possible, but snowmobiles with studs may cause severe damage. In some areas, paved trails are plowed to provide a recreation or transportation amenity even in winter. In this case, snowmobiles must be disallowed.

- Equestrians and snowmobiles. The seasonal offset of these uses makes them

compatible.

Guidelines

The guidelines for single-treadway corridors are simple: of the user modes planned, the most stringent guidelines should be used. If pedestrians are one of the designated users of the corridor, accessible facilities should be developed that meet the needs of older adults and people with disabilities. This should hold true even if pedestrians are not the primary trail users. This applies even to multi-use trails where users have a seasonal offset.

Dual-Treadway Corridors

Dual-treadway corridors are used when incompatible uses coexist in the same corridor. In these cases, it is important to provide more than one trail, each tailored to the unique needs of a use mode or group of use modes.

Incompatible Modes

Incompatible uses may be a result of drastically differing speeds, trail surface needs, or volume of users. The following list of incompatible modes shows those uses which warrant separate treadways if both are planned in one corridor.

- Bicyclists/pedestrians and equestrians. These two user types have different requirements for trail surface, and bicycles and pedestrians may frighten horses.
- Bicyclists/pedestrians and OHV/motorbike users. These two user types have greatly different average speeds, which could create hazards for both groups. In addition, the two groups require different trail surfaces.
- Equestrians and OHV/motorbike users. Despite the similarity of trail design for these two modes, the speed and noise of OHVs and motorbikes could frighten horses.
- Pedestrians and bicyclists/in-line skaters. If traffic volume on a trail is very high, dangerous conflicts can occur. In cases of high traffic volume, the multi-use trail should be split into separate trail facilities for these two groups (see "Bicycle Trails" and "Pedestrian Trails").

Guidelines

When dealing with dual treadways, there are two issues to consider.

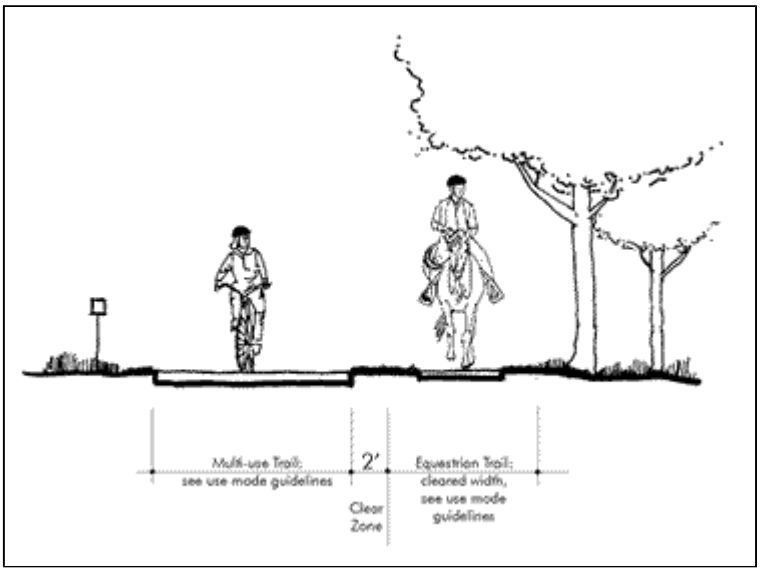
- The design of each treadway.
- The separation of the various treadways.

The design of each treadway is similar to that described above under "Single-Treadway Corridors." Each treadway should follow the most stringent guidelines, based on the user modes it will host. In addition, each treadway should be wide enough to permit users to travel in both directions.

The separation of treadways varies with local conditions and planned user modes. The following is a brief list of some common dual-treadway corridors and recommended separations.

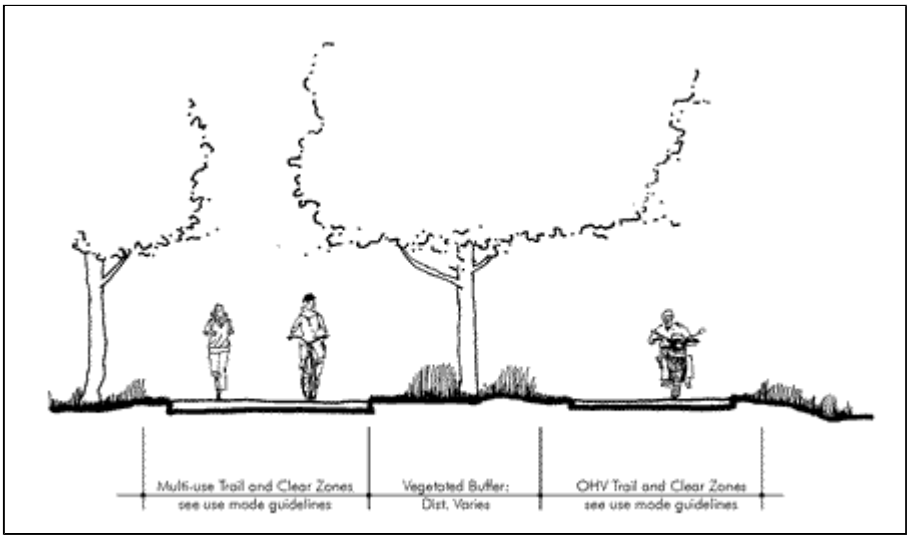
- Separation between multi-use trails and equestrian trails: 2 feet or greater, possibly with a fence or planted median between them (clear zones from each trail to any fence or tree should be maintained) (see Figure 4-22).

FIGURE 4-22: MULTI-USE AND EQUESTRIAN TRAILS



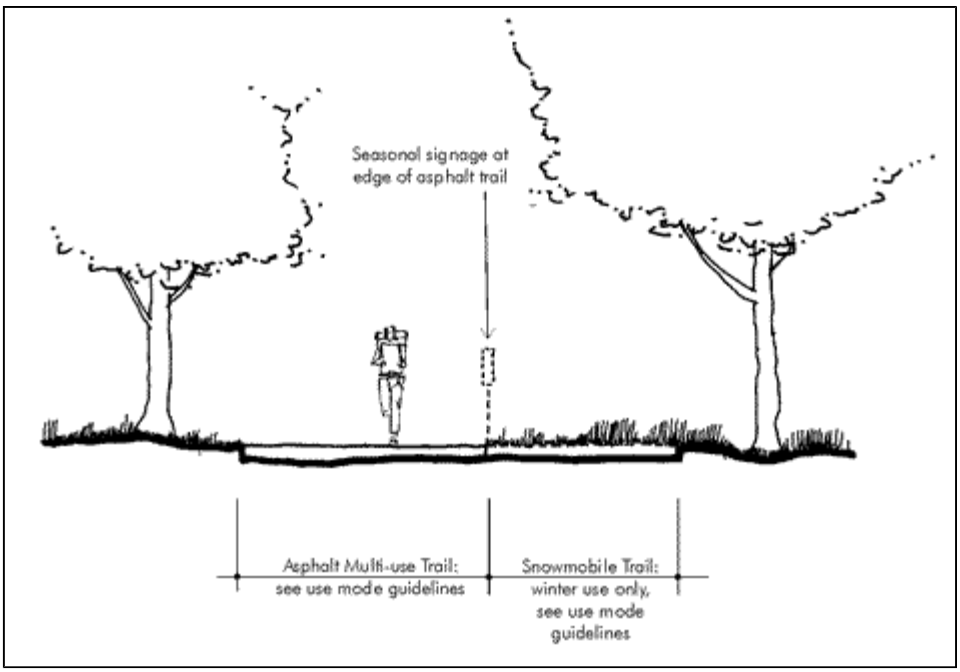
- Separation between multi-use trails and OHV/motorbike trails: distance is variable, but a vegetative buffer or fencing should be provided (see Figure 4-23).

FIGURE 4-23: MULTI-USE AND OHV TRAILS



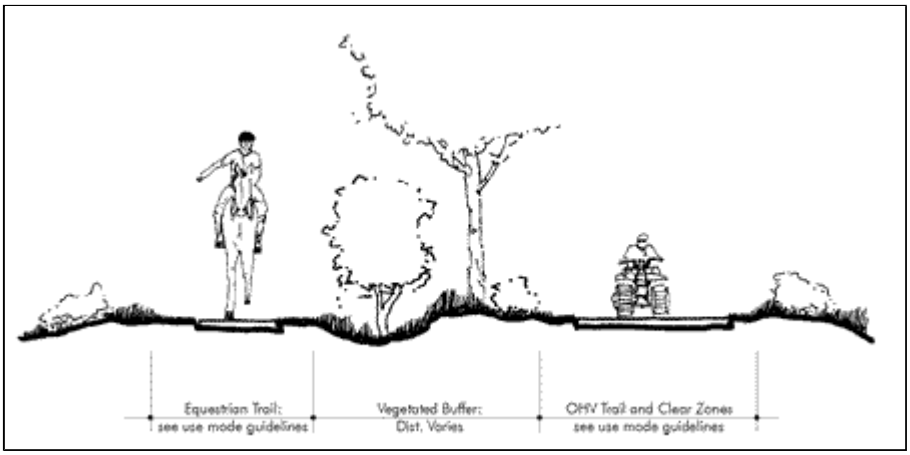
- Separation between paved trails and adjacent snowmobile trails: none required, but edge of paved surface should be clearly marked in winter (see Figure 4-24).

FIGURE 4-24: MULTI-USE AND SNOWMOBILE TRAILS



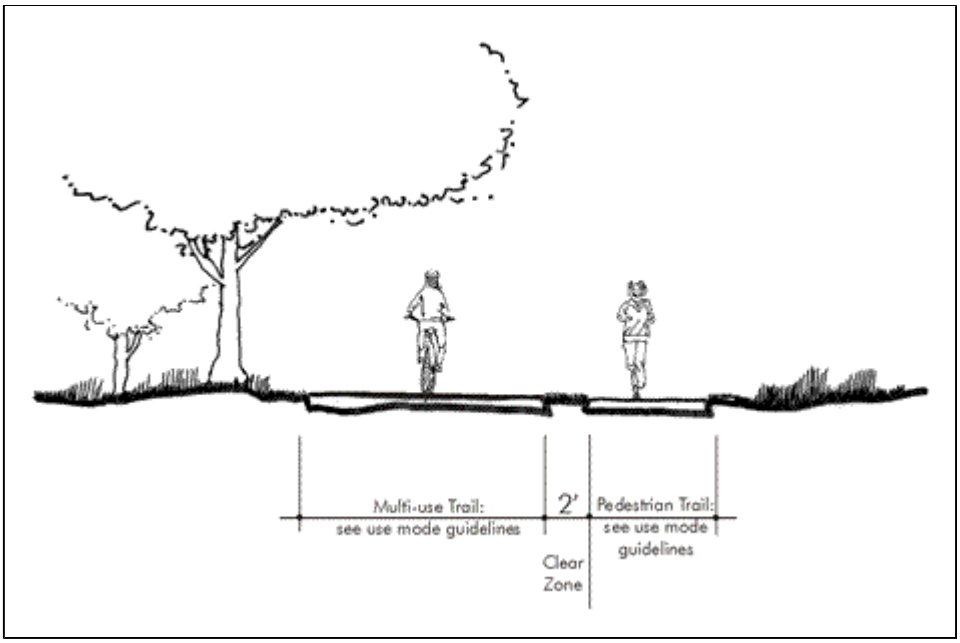
- Equestrian and OHV/motorbike trails: as far apart as possible, with vegetative buffer or fencing provided (see Figure 4-25).

FIGURE 4-25: EQUESTRIAN AND OHV TRAILS



- Pedestrian trails and bicycle/in-line skating trails: at minimum, a solid white stripe; 2-foot break in pavement preferred (see Figure 4-26).

FIGURE 4-26: MULTI-USE TRAIL WITH SEPARATED PEDESTRIAN TREADWAY



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Appendix C
Sample Maintenance Agreements

APPENDIX C

MANAGEMENT AGREEMENT FOR
GREENE COUNTY GREENWAYS

WHEREAS the following jurisdictions have participated in ownerships, planning, and developing of recreational trails in Greene County, Ohio, hereafter known as GreeneWays, and

WHEREAS the Green County Recreation, Parks and Cultural Arts Department (GCRPCA) has taken the responsibility and lead in the construction and management of the trails as an agent of the Greene County Commission, and

WHEREAS the initiating agreement organizing and maintaining the GreeneWays expires on September 14, 2000,

THEREFORE, BE IT RESOLVED that the City of Beavercreek, City of Fairborn, City of Xenia, Beavercreek Township, Village of Cedarville, Village of Yellow Springs, and the Greene County Park District and Greene County enter into this five year renewable agreement for management of 50.78 miles of trail (GreeneWays) corridors, plus connecting spurs, as documented September 1999 with the county-wide Trails Maps and any approved additions by the Greene County Commissioners and the GCRPCA; effective September 15, 2000 through September 14, 2005 with annual renewal beyond the termination date being automatic unless acted upon otherwise by the parties listed.

Any jurisdictions who violate either the management agreement or the policies of Greene County GreeneWays may be subject to fines for recovery of damages to the trails and/or loss of voting status on the Management Committee.

Prior agreements entered into for the planning and development of trails between the Greene County Park District and the Federal Highway Administration remain in effect and on file with the Greene County Parks Office.

Prior management agreements among jurisdictions are nullified by this agreement, and this agreement supercedes all previous agreements for the administration, management, maintenance and patrol of trails.

I. Administration

A. Administration of the GreeneWays corridors will be the responsibility of the Board of Greene County Commissioners using their agents: Greene County Recreation, Parks and Cultural Department; and the Greene County Park District.

B. A Management Committee of representatives from the participating jurisdictions shall discuss and decide future use of the corridors including utilities and occupations and will establish policies affecting the trails. This Committee will meet on a quarterly basis at minimum. Special meetings may be called as needed. Actions concerning Greene County GreeneWays will be regulated by a separate policy handbook which will be the responsibility of the Management Committee.

C. The Management Committee consists of the following representatives:

Greene County Administrator
Greene County Board of Park District Commissioners, President
Greene County Recreation, Parks and Cultural Department, Director
Greene County Recreation, Parks and Cultural Department, Trail Manager
City of Xenia, City Manager
City of Fairborn, City Manager
Beavercreek Township Trustees
Village of Yellow Springs, Village Manager
Village of Cedarville, Mayor

These individuals or their designees shall serve and meet as indicated.

D. Business may be enacted by a majority vote of members present at a regularly called meeting or special meeting.

E. Future jurisdictions, or additional acquisitions for proposed trail corridors, wishing to participate in GreeneWays and be included on the committee must petition for membership and receive a majority vote of the Management Committee.

F. Regular operations of the GreeneWays shall be governed by the Policy Manual.

II. Maintenance

A. Maintenance of GreeneWays shall be the responsibility of the Greene County Recreation, Parks and Cultural Department.

GreeneWays Corridors within the agreement include:

(List trails, where they are located and how many miles)

AGREEMENT FOR FUNDING LONG-TERM CARE AND MAINTENANCE OF TRAILS IN GREENE COUNTY, OHIO

This agreement, made the 15th day of November, 2001 between the City of Xenia, City of Beavercreek, Beavercreek Township, Greene County Park District, City of Fairborn, Village of Yellow Springs, Village of Cedarville, Greene County Engineer (hereinafter "participants") and the Board of Greene County Commissioners through the Greene County Recreation, Parks and Cultural Arts Department, as agent for the Board of Greene County Commissioners and trail management agency (hereinafter "the County"):

WITNESSETH:

WHEREAS, Section 307.15 of the Ohio Revised Code states, in part… "The board of county commissioners may enter into an agreement with the legislative authority of any municipal corporation, township, … park district …, or other taxing district or with the board of any other county, and such legislative authorities may enter into agreements with the board, whereby such board undertakes and is authorized by the contracting subdivision to exercise any power, perform any function or render any service, on behalf of the contracting subdivision or its legislative authority …" and,

WHEREAS, a Trail Management Agreement was entered into to facilitate the maintenance, management, and improvement of the trails in Greene County, Ohio, and

WHEREAS, the County has established a special fund to receive moneys for the maintenance and management of the trails, and

WHEREAS, the trails contain occupations of public utilities, communications and various other occupations for which fees may be paid.

NOW THEREFORE, IN CONSIDERATION OF THE MATTERS DESCRIBED IN THE ABOVE RECITALS AND IN SEPARATE AND INDEPENDENT CONSIDERATION OF THE PROMISES SET FORTH BELOW, THE PARTIES AGREE AS FOLLOWS:

1. Participant agrees to deposit all current and future moneys derived from rents and/or occupations into the fund established by the Greene County Auditor and administered by the Board of Greene County Commissioners to provide for the long-term care and maintenance of the trails.
2. Participants will sign necessary consent legislation as required to permit the Board of Greene County Commissioners to utilize these funds for the long-term care and maintenance of the trails.
3. Long-term care and maintenance shall be defined as replacement of trees, shrubs, signs and other trail amenities, planting of additional trees and shrubs, the addition of supplemental signage and fencing; sealcoating, repaving and restriping and other maintenance and amenities that provide for the safety, enjoyment and benefit of trail users.
4. The Trail Manager, as agent for the County, will provide cost estimates to participants in advance of any proposed expenditure, along with a benefit analysis by jurisdiction of the work to be performed. Proposed projects for improvements or maintenance will be submitted to the management committee for approval in advance of the work being performed. The Trail Manager will develop bid specifications and contracts as required for the conduct of all work under the requirements of the Ohio Revised Code for such work. Expenditures from the Trail Management Fund will be approved annually by the Trail Management Committee and the Greene County Board of Commissioners.
5. Specific infrastructure repairs and requests for additional services, not covered by this agreement are the responsibility of the local jurisdictions, unless agreed to unanimously by all other participants.
6. This agreement is contingent upon approval and authorization by all parties.

NOW, THEREFORE, BE IT RESOLVED that the City of Xenia, City of Beavercreek, City of Fairborn, Village of Yellow Springs, Village of Cedarville, Beavercreek Township, Greene County Engineer, Greene County Park District, Board of Park District Commissioners and Board of County Commissioners of Greene County, Ohio enter into this Agreement for the Long-Term Care and Maintenance of Trails within Greene County, Ohio.

Signatures……

Appendix D
Workshop Information

Northeast Michigan Regional Non-Motorized Transportation Plan and Investment Strategy
Comment Form

County: _____

Location: (city, village, township) _____

If located within a park – name of park: _____

Name of Trail: _____

Ownership Type: (Circle one) Public Private

Owners Name: _____

Trail Type: (circle all that apply) hike bike horse x-country other_____

Surface Type: (Circle one) dirt gravel crushed stone asphalt concrete other_____

Approximate Length: _____

Primary Purpose:_____

Other amenities: _____

_____

_____

Please draw a map showing the location of the trail. If possible draw in the actual trail or you could supply a map of the trail system.

Show the following:

- Roads with names
- Water features
- Parking
- Picnic sites
- Camp sites
- Trail location or trail
- City or Village

N

Send the completed form to: NEMCOG, P.O. Box 457, Gaylord, MI 49734
Fax to: 989-732-5578
Scan and email to: ntucker@nemcog.org

Northeast Michigan Regional Non-Motorized Transportation Plan and Investment Strategy
Comment Form

Is there a local entity/organization in your community that is involved in trail planning, development and maintenance? _____

If so, please provide name, address, phone and other contact information:

_____

_____

If your community or organization is planning for the development of a new trail please provide the following information:

County: _____

Location: (city, village, township) _____

If located within a park – name of park: _____

Name of Trail: _____

Ownership Type: (Circle one) Public Private

Owners Name: _____

Trail Type: (circle all that apply) hike bike horse x-country other_____

Surface Type: (Circle one) dirt gravel crushed stone asphalt concrete other_____

Approximate Length: _____

Primary Purpose:_____

Other amenities: _____

_____

_____

If the proposed trail will connect with existing trials, please provide a description of the linkage and long term goals: _____

_____

_____

Expected funding sources: _____

Estimated costs: _____

Other information: _____

_____

_____

_____

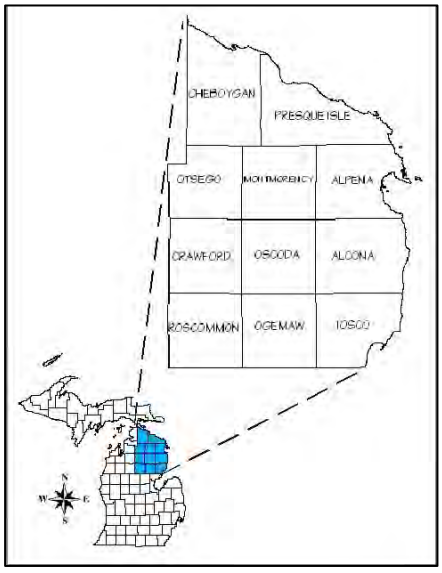
_____

_____

_____

Send the completed form to: NEMCOG, P.O. Box 457, Gaylord, MI 49734
Fax to: 989-732-5578
Scan and email to: ntucker@nemcog.org

You are invited to participate in the Northeast Michigan Regional Non-Motorized Trails Summit/Kick-Off Meeting



NEMCOG has initiated a one-year planning effort funded by the Michigan Department of Transportation. The purpose is to develop a comprehensive, regional *Non-Motorized Transportation Plan and Investment Strategy* for *Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle and Roscommon Counties.* The end product can be used by the Michigan Department of Transportation and local officials to prioritize projects, identify funding sources and guide investment in the region's non-motorized transportation system.

Identification of priority projects within this area will help guide MDOT's investment in the region's non-motorized transportation system. **Local community input is crucial to the success of this planning effort.** State, county and local officials in the region, non-profit organizations and interested citizens with an interest in the non-motorized trail systems are invited to participate in this year long process. You will have numerous opportunities to provide input and be part of this important planning effort.

We will be holding a series of meetings within the 11 county planning region.

- This first meeting will be the Regional Trails Summit/Kick-off Meeting.
- Next, there will be 11 meetings - one in each county to identify potential future non-motorized projects.
- A series of sub-regional working committee meetings/public input sessions to gather feedback on the draft plan.
- Final regional meeting to present the completed plan.

Non-Motorized Trails Summit

Meeting Location: Treetops Resort, Gaylord
Meeting Date: January 8th, 2008
Meeting Time: 1:00 p.m. to 5:00 p.m.

Agenda

1. Introductions
2. Project Overview
3. Presentations
   - On-Road Non-Motorized Connections – Cindy Krupp, MDOT Bicycle and Pedestrian Planner
   - The Trailway Development Process- Nancy Krupiaz, Executive Director, Michigan Trailways and Greenways Alliance.
   - Overview of Rails to Trails Accomplishments in Northern Michigan – Emily Meyerson, AICP, Northern Lower Peninsula Trailways Coordinator, Top of Michigan Trails Council
4. Break-out sessions by sub regions to identify existing trails, identify additional stakeholders and identify proposed/funded projects.

Please complete the form on the other side and mail or fax to NEMCOG. You may also call or email your R.S.V.P. to NEMCOG

Northeast Michigan Regional Non-Motorized Trails Summit

Connecting Trails, Communities and People

A comprehensive, regional Non-Motorized Transportation Plan and Investment Strategy for Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle and Roscommon Counties.

A workshop for State, county and local officials; non-profit organizations and interested citizens

Date: January 8, 2008
Time: 1:00 p.m. - 5:00 p.m.
Location: Treetops Resort in Gaylord

Presented by:
NEMCOG and MDOT
Sponsored by:
Michigan Department of Transportation

****

NEMCOG
PO Box 457
Gaylord, MI 49734

****

Northeast Michigan Regional Non-Motorized Trails Summit

NEMCOG
P. O. Box 457
Gaylord, Michigan 49734

Phone Number: (989) 732-3551 Ext. 10
FAX Number: (989) 732-5578
Email address: ppapendic@nemcog.org

_____I will be attending the Non-Motorized Trails Summit on January 8, 2008
_____ I am interested in serving on the _____ County Committee and would like to be notified when that meeting occurs in my county.
_____ I am NOT interested in attending the meetings, but would like to be kept informed of the process by receiving project information via emails.

Name _____ Representing_____ Number attending ____

Address _____

Phone _____Email: _____

Connecting Trails, Communities and People

Roscommon County Trails Workshop & Community Input Session

An opportunity to help identify future non-motorized trails, trail facilities and trail connectors in Roscommon County

Associated with: Northeast Michigan Regional Non-Motorized Trails Plan & Investment Strategy

A workshop for State, county and local officials; non-profit organizations and interested citizens

Date: March 6, 2008
Time: 3:00 p.m. - 7:00 p.m.
Location: Denton Township Hall

Sponsored by NEMCOG & MDOT

****

NEMCOG
PO Box 457
Gaylord, MI 49734

«Name»
«Address»
«City_State__Zip»

****

Northeast Michigan Regional Non-Motorized Trails Plan & Investment Strategy
Roscommon County Trails Workshop & Community Input Session

NEMCOG
P. O. Box 457
Gaylord, Michigan 49734

Phone Number: (989) 732-3551 Ext. 10
Fax Number: (989) 732-5578
Email address: ppapendic@nemcog.org

_____ I will be attending the Roscommon County Trails Workshop & Input Session.
_____ I am unable to attend the meeting, but would like to be kept informed of the process by receiving project information via emails.

Name _____ Representing_____ Number attending ____

Address _____

Phone _____Email: _____

The Future of Non-Motorized Trails in Your Community

Connecting Trails, Communities and People

You are invited to participate in a workshop/input session regarding non-motorized trails and trail connections within your community. This meeting is part of the on-going Non-Motorized Trails Planning process initiated by NEMCOGand ECMP&DR, and funded by the Michigan Department of Transportation. **This key meeting provides communities, organizations and individuals their primary opportunity to provide input and help identify locations for future non-motorized trail connections**. Future sessions will provide the opportunity to prioritize projects, and review the draft plan.

The trails open house will run from 3:00 to 7:00 p.m. There will be brief presentations at 3:15 and 5:15. You are welcome to stop in anytime during the open house to meet with staff, review maps and help in identifying locations of future non-motorized trails, trail facilities and critical trail connectors in your community.

Local community input is crucial to the success of this planning effort. Please invite anyone you feel may have an interest in the future of non-motorized trails within your community. If you are unable to attend but would like to provide input, you can download a comment form from the NEMCOG website (www.nemcog.org). Just click the Non-Motorized Trails Plan link on the main page to find the comment form and other information about the project.

Roscommon County Non-Motorized Trails Workshop & Input Session

Date: March 6, 2008
Time: 3:00 p.m. to 7:00 p.m. Come at anytime.
Location: Denton Township Hall
2565 South Gladwin Rd
Prudenville, MI 48651

Please complete the form on the other side and mail or fax to NEMCOG. You may also call or email your R.S.V.P. to NEMCOG.

Background: NEMCOG has initiated a one-year planning effort funded by the Michigan Department of Transportation. The purpose is to develop a comprehensive, regional *Non-Motorized Transportation Plan and Investment Strategy* for *Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle and Roscommon Counties.* The end product can be used by the Michigan Department of Transportation and local officials to prioritize projects, identify funding sources and guide investment in the region's non-motorized transportation system. By definition, non-motorized trails include: bicycle, pedestrian, hiking, horseback riding and snowmobile trails.

The Michigan Trails and Greenways Alliance is spearheading an effort called *CONNECTING MICHIGAN*, a proactive and broad-based initiative to identify and address the critical issues that are impeding Michigan's progress on developing a statewide interconnected system of trailways and greenways. On July 18, 2006, Governor Jennifer M. Granholm announced the state would work with the Michigan Natural Resources Trust Fund to link Michigan's trail system by building new trails and upgrading existing trails throughout the state. Subsequently, the Michigan Department of Natural Resources in collaboration with the Michigan Department of Transportation developed a report called, *Michigan Trails at the Crossroads, A Vision for Connecting Michigan*. This Regional Non-Motorized Transportation Plan and Investment Strategy, funded by MDOT, will focus on bicycle and pedestrian facilities and is designed to complement the above two efforts.

County Non-Motorized Trails Meetings

Date	County	Location	Staff
2-26-08	Oscoda	Community Center	Rick and Nico
2-28-08	Cheboygan	Library	Rick and Nico
3-5-08	Ogemaw		Rick
3-6-08	Roscommon	Denton Township Hall	Rick
3-12-08	Alpena	Library	Nico and Denise
3-13-08	Alcona	EMS Facility	Nico and Denise
3-13-08	Presque Isle	Library	Rick
3-18-08	Crawford	Library	Rick
3-20-08	Iosco	Library	Rick
3-26-08	Otsego	Library	Rick
3-27-08	Montmorency		Nico and Rick

121 E. Mitchell, P.O. Box 457
Gaylord, Michigan 49734
989-732-3551
www.nemcog.org

Northeast Michigan Regional Non-Motorized Trails Plan and Investment Strategy

NEMCOG has initiated a one-year planning effort funded by the Michigan Department of Transportation. The purpose is to develop a comprehensive, regional *Non-Motorized Transportation Plan and Investment Strategy* for *Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle and Roscommon Counties*. The end product can be used by the Michigan Department of Transportation and local officials to prioritize projects, identify funding sources and guide investment in the region's non-motorized transportation system. By definition, non-motorized trails include: bicycle, pedestrian, hiking, horseback riding and snowmobile trails.

The Michigan Trails and Greenways Alliance is spearheading an effort called *CONNECTING MICHIGAN*, a proactive and broad-based initiative to identify and address the critical issues that are impeding Michigan's progress on developing a statewide interconnected system of trailways and greenways. On July 18, 2006, Governor Jennifer M. Granholm announced the state would work with the Michigan Natural Resources Trust Fund to link Michigan's trail system by building new trails and upgrading existing trails throughout the state. Subsequently, the Michigan Department of Transportation developed a report called, *Michigan Trails at the Crossroads, A Vision for Connecting Michigan*. This Regional Non-Motorized Transportation Plan and Investment Strategy, funded by MDOT, will focus on bicycle and pedestrian facilities and is designed to complement the above two efforts.

We will be holding a series of meetings within the 11 county planning region.

- The first meeting will be the Regional Trails Summit/Kick-off Meeting.
- Next, there will be 11 meetings - one in each county to identify potential future non-motorized projects.
- A series of sub-regional working committee meetings/public input sessions to gather feedback on the draft plan.
- Final regional meeting to present the completed plan.

Project Schedule

Time Frame	Project Activity
February – March	NEMCOG will host a non-motorized trails workshop/community input session in each of the eleven counties covered by the plan.
March – June	The first draft of the Non-Motorized Transportation Plan & Investment Strategy will be developed.
June	The draft plan will be distributed to all stakeholders and interested persons for their review and input.
June – July	NEMCOG will host a series of sub-regional meetings/community input sessions to gather feedback on the draft Non-Motorized Transportation Plan & Investment Strategy.
August	The draft plan will be revised based on input gathered at the sub-regional meetings.
August	The final plan will be distributed to stakeholders for review and adoption.
September	The completed plan will be submitted to the Michigan Department of Transportation.

Identifying Trail Connections in Your Community

Local community input is crucial to the success of this planning effort. The identification of priority projects within your community will help guide local agencies and MDOT's investment in the region's non-motorized transportation system. What is a priority project? You tell us...Where do you travel, or want to travel, via non-motorized trails? Do you wish your local bike path went a little further, connected to a shopping center or led to your favorite park?

This effort will focus on linking existing trail systems to communities, destinations, points of interest and other trails. Please consider the following criteria when identifying new connections:

- Consider using low traffic volume roads as connectors (see green roads on county map)
- Consider wide paved shoulders along low traffic volume roadways (see green roads on county map)
- Consider development of separated or dedicated trails

Connections to consider

- Connecting existing trail systems
- Connecting existing trails to communities and community centers
- Connecting existing trails points of interest such as campgrounds, parks, historic and cultural sites
- Connecting communities to points of interest such as parks, historic sites, cultural sites, natural areas, schools, shopping, employment centers, & residential neighborhoods
- Connecting communities to communities
- Connecting regional trial systems
- Connections to state parks, federal parks, state and federal forestlands
- Connections to designated heritage routes and greenways
- Improved access to Michigan's Great Lakes Shorelines and natural resources

Please Sign In

Northeast Michigan Regional Non-Motorized Trails Workshop/ Input Session
MDOT North Region

March 3, 2008

Name	Representing	Address	E-Mail
Laurie Abel	DNR	Gaylord *	abella@michigan.gov
CARL DOXTATOR	DNR P. HIGGINS LK. S.P.	11747 P. HIGGINS LK DR ROSCOMMON	DOXTATOC@MICHIGAN.GOV
GARRY RANDALL	MTRA	6623 W PIERCE RD, MARION 49665	RANCHRANDALL@YAHOO
Emily Meyerson	TOMTC	325 E. Lake St. #22 Petoskey	emeyerson@charter.net
Laurie Marzolo	DNR	13501 M 33 Atlanta	marzolol@michigan.gov
Joyce Angel-Ling	DNR	1732 M-32 Gaylord	angellj@michigan.gov
Paige Ferry	DNR	1732 M-32 Gaylord	perrypa@michigan.gov
BRIAN BURY	DNR - NATURAL RIVERS	" "	buryb@michigan.gov
David Langhorst	MDOT	1083 East M-32 Gaylord	langhorstd@michigan.gov
Robin Pearson	DNR	1732 W M-32 Gaylord	pearsonr@michigan.gov
Susan Thiel	DNR Grayling FMSU	1955 N I-75 BL Grayling	Thielsj@michigan.gov
Troy A. Rife	DNR - Parks & Rec	8015 Mackinaw Tr, Cadillac	Rifet@michigan.gov
KEITH CHELI	DNR. PRD	1732 W M-32 Gaylord, MI 49735	CHEILK@MICHIGAN.GOV

Please Sign In

Alcona County Non-Motorized Trails Workshop/Community Input Session
Alcona County EMS East Station

March 13, 2008

Name	Representing	Address	E-Mail
Joe Miller		PO Box 127 Burton City, MI 48705	joemiller@msn.com
Cassie Miller		Same	Same
Bethany Styer			styerbet@hotmail.com
ART LAHTZ	Heritage Rte	5757 Clark Rd AU	ALAHTZ@charter.net
Liz McNichols	USDA Forest Service	5761 Skeel Rd, Oscoda	emcnichols6@fs.fed.us
Dan Mullen	MI DNR	P.O. Box 326 Harrisville, MI 48740	mullend@michigan.gov
GORDON HAASE	USDA FS.	5761 N. SKEEL OSCODA	ghaase@fs.fed.us
RON YOUNG	ALCONA CO. RD. COMM	301 N. LAKE, LINCOLN	ALLOUGH1@CHARTERMI.NET
RON KENNARD	LINCOLN	385 SOUTH SLEEPER R.	KENNARDRS5@CHARTERMI.NET
Marlena MacNeil	Alcona County Road Commission	PO Box 40 Lincoln MI 48742	alcona03@chartermi.net
Phillip Jordan	LINCOLN	PO Box 13 Lincoln MI. 48742	JorPhil@AOL.com
Sheila R. Phillips	Congressman Bart Stupak & Alcona Co. Board of Comm.	2090 E. French Rd Lincoln	Srplincoln@juno.com

Please Sign In

Alpena County Non-Motorized Trails Workshop/Community Input Session
Alpena County Library

March 12, 2008

Name	Representing	Address	E-Mail
Laurie Marzolo	MDNR Atlanta	Atlanta Field Office	marzolol@michigan.gov
Nancy Hammond	"		
DAVE Golder	NA		
Jackie Krawzak	Chamber of Commerce	235 W. Chisholm St.	jkrawzak@alpenachamber.com
Rebecca Rivard	Wilcox	444 W. Baldwin, Alpena	Becky.Rivard@wilcox.us
Jerry Meek	Alpena County Planning		
Barb Meek			
[illegible]	[illegible]	[illegible]	[illegible]
Randy Boboltz	Alpena City Planning	168 Long Rapids Rd	rboboltz@i2k.net
Lisa Thayer			
SCOTT THAYER	MDOT - ALPENA		thayers@mi.gov

Name	Representing	Address	E-Mail
Dan Ludlow	Alpena County	516 Beebe	
Don Beem		2097 N. Point Rd	
MARK HANSEN	DNR (ALPENA FO)	4343 M-32 WEST ALPENA	hansenm@michigan.gov
Judy McFalda	Century 21 Harbor Realty	550 N. BRADLEY ROGERS CITY	JUDYMCFALDA@SPEEDNETLLC.COM
Lee Shirey	Target Alpena	235 W. Chisholm	Targetalpena@charter.mi.NET
Larry Orcutt	Alp. Co Rd Comm.	1400 N. Bagley, Alpena	Alpcrc@charterinternet.com
JILL HOULE		2540 LAKEWOOD DR. ALPENA	jghoule@charter.net
ERIC CLINE	CITY OF ALPENA	208 N. First Ave	ericcline@alpena.mi.us
Staci Burger	R.S. Scott Associates	405 River St	burgers@rsscott.com
MICHELLE WILLIAMS	Sanborn Township	10258 Ossineke Rd. Oss.	mwilliams1234@charter.net

Cheboygan County 2/28/08

Name	Representing	Address	E-Mail
JACK KECK	MACKINAW TWP	BOX 95 MACKINAW CITY 49701	NJVENTURE@STRATEGICOM.COM
JERRY YOUNG	WAVERLY TWP	697 S. BLACK RIVER RD. ONAWAY	bryoung@voyager.net
Linda Socha	Cheboygan County	2322 Old Mackinaw, Cheb	clachafreeway.net
John F Brown	Mullett Twp	21 W DEGEREMUX LK RD	INDIAN RIVER
Hilary Owen	MDOT-Grayling TSC	1680 Hartwick Pines, Grayling	Owenh2@michigan.gov
Gary Streat	Burt Township	10358 Hosta, Brutus	burtlake@aol.com
CHARLIE Venelos	ALOHA TOWNSHIP/MTA	4089 MANN RD. Cheboygan	CNV@NMO.NET

Please Sign In

Crawford County Non-Motorized Trails Workshop/Community Input Session
Devereaux Memorial Library

March 18, 2008

Name	Representing	Address	E-Mail
Robert R. Howe	Myself	3700 Chase Br. Rd.	
LARRY HELVIE	"	6235 McCullom TR.	
JACK MAHANK	CTY PLNG. COMM.	9270 ROMANY AVE	
Cindy Olson	CC TRAILS COMMITTEE + Grayling Township	635 S. AuSable TR.	
Karl Schreiner	Grayling PD.	PO Bx 549 Grayling	kschreiner@cityofgrayling.org
Wayne C Koppa	Crawford Co Trail Committee	P.O. 375, Grayling, MI 49738	wkoppa@hotmail.com
Don Gooch	FREDERIC TOWNSHIP	9763 PARKSIDE DR, FREDERIC 49733	GOOCHHAUS@i2k.com
BERNIE FELDHAUSER	MAPLE FOREST TWP	7264 N. PETERSEN	
Justin Wing	MDOT-Grayling TSC	1680 Hartwick Pines Rd. 49738	
CRIS JONES	GRAYLING REC AUTHORITY	P.O. BOX 834, ROSCOMMON, MI 48653	xcjones@charter.net
Justin Andre'	Grayling Rec Authority	P.O. Box 361, Grayling, MI 49738	hansonhills@hotmail.com
HERMAN BRATFISH	SOUTH BRANCH TWP	4381 HICKEY CR. RD.	
Kem McClain	City Grayling	706 Chestnut St.	
Cheryl Millikin	Self & Grayling Restaurant	3220 W. North Down River	nwrmil@freeway.net
[illegible] Myers	CCEDP	403 Huron ST	[illegible]@myerssurvey.com
Rosalie Myers	ROSCOMMON CTY ECONOMIC DEV. CORP. Myers Land Survey Co	403 Huron St.	RMYERS@MYERSSURVEY.com
Kim Millikin	Grayling Regional Chamber of Commerce	P.O. Box 406, Grayling, 49738	kim.millikin@graylingchamber.com
Chris Millikin		410 Evergreen	
Robert M Smith	The Bicycle Shop	200 E. Mich. AVE	The-bicycle-Shop@Hotmail
FRED FISHER		6093 HONEYSUCKLE LANE GRAYLING	FREDTFISHER@REMAX.NET

Please Sign In

Iosco County Non-Motorized Trails Workshop/Community Input Session
Robert J Parks Library

March 20, 2008

Name	Representing	Address	E-Mail
Diane Brewer	Baldwin Township	~~311 Newman St E. Tawas~~ Monument Rd TC	[redacted]
JAN BALDWIN	AuSABLE TWN	311 FIFTH ST. Oscoda	
FRAN SENNEWALD	WHITNEY TWP	1575 N. HURON TAWAS City	CLERK_WHITNEYTWP@CHARTERINTERNET.COM
Dave Wentworth	Heritage Route	4129 Douglas Dr TC	dwent[redacted]@aol.com
R. J. MYERS	M.S.C.A.	7326 BLUE OX S. OUTER	BRANCH MICH.
STELLA MYERS	"	" "	"
Pat Killingbeck	City of Au Gres	PO Box 121 Au Gres 48703	cityofaugres@centurytel.ne
Jeff Manhire	Iosco County Parks & Rec	328 W. Mill ST 48750	
Paul Mayville	AuSable Township ? Northland	3657 Forest Rd.	pmayville@northlandcu.com
Solene Senn	Safe Routes to School	300 W Dwight 48750	Jsenn@charter.ne
Keith FRANK	City of EAST TAWAS/City Park	407 W. Bay, E. TAWAS 48730	etcp@charterinternet.com
GORDON HAASE	USDA FOREST SERVICE	5761 N. STEEL OSCODA	GHAASE@FS.FED.US
Karen Barta	—	9741-B Massachusetts Oscoda	Kbarta214@yahoo.com
JOHN BARTA	—	"	Jbarta_214@yahoo.
Chris Rayner	MTRA	5806 E. State Rd. Hale	rayne[redacted]@gmail.com
P. Alexander	IoscoPosse	8901 Esmond Hale Mi	BrokenPRanch5362@Yahoo.
S. Skrentner	Iosco Posse	P.O Box 203 Hale 48739	skrentner@gmail.com
CHRIS RUDOLPH	CITIZEN ADVOCATE	6890 CEDAR LK RD Oscoda 48750	CRICKET2@CHARTERMI.NET
DAN GARY		5657 Riverview Dr. Oscoda MI 48750	dgary@charter.net
GARY KELLAM	OSCODA TWP	5700 GEORGIA DR. OSCODA, MI 48750	OED@OSCODATWP.com

Name	Representing	Address	E-Mail
Joseph Runyan	Osceola	4885 N. Indian Trail	
Gail Runyan	Mikado MI	4885 N. Indian Trail	

Please Sign In

Montmorency County Non-Motorized Trails Workshop/Community Input Session
Montmorency County Road Commission

March 19, 2008

Name	Representing	Address	E-Mail
WM HOUSTON	CITIZEN	17360 LOON HAVEN, ATL 49709	
YVONNE SWAGER	TRIBUNE	ATLANTA	yswager@montmorencytribune.com
Bonnie Flynn	Briley Township	11331 W ST, ATLANTA P.O. Box 207	briley tship@yahoo.com
Rose Cheedle	Briley Township	P.O. Box 207, Atlanta MI	
LARRY GREEN	M. DNR - FMFM.	13501 M-33 Atlanta	GREENLD@Michigan.gov
Jennifer Nemeth	MIDNR - FMFM	13501 M-33 Atlanta	nemethj@michigan.gov
JOE SONCRANTE	MDNR - FMFM	13501 M-33 ATLANTA	soncraij@michigan.gov
JOEL KIM BLEECH	MONT. CO. Rd COMM	11445 M-32 ATLANTA	
Matt Woudenberg	Citizen	10855 River Dr. Atlanta	mwoudenberg2001@yahoo
Gloria Woudenberg	"	"	gwoudenberg@yahoo
Gordon Cady 785-4631	-4 Train Map-	9622 Hessler Rd	

OSCODA COUNTY NON-MOTORIZED TRAILS WORKSHOP and COMMUNITY INPUT SESSION

FEBRUARY 26, 2008

SIGN IN SHEET

PLEASE PRINT NAME	EMAIL ADDRESS
FRED BAUER	FRED.BAUER@GARLANDUSA.COM
Ken Troyer	Clinton Twp Supper.
Shirley Haskill	Shaskill@i2k.NET
Lynne Jauss	lcjauss2004@yahoo.com
Dorothy M. Eddy	
Kathy Eschenburg	ke1mrom@hotmail.com
FRANK COWGER	
Bob Magon	Huron NF bmagon@fs.fed.us
Ken Hansen	Huron NF khansen@fs.fed.us
NINA GEE	
RON BRUNER	brunerr@oscrc.org
Gavia Chicha	—
LIZZ Holzwarth	lizz@metalfabtool.com
JANET BRUCHER	coc@m33access.com
Laurie Marzolo	marzolol@michigan.gov
HERB BRUCHER	JBRUCHER@M33ACCESS.COM

2/25/2008

Please Sign In

Otsego County Non-Motorized Trails Workshop/Community Input Session
Otsego County Library

March 26, 2008

Name	Representing	Address	E-Mail
BARKER, GEORGE		625 EAST MAIN GAYLORD	
Hilary Owen	MDOT - Grayling	1680 Hartwick Pines, Grayling	owenh2@michigan.gov
David Laughorst	MDOT - Region	1088 E M-32 Gaylord	laughorstd@michigan.gov
Bob Felt	MDOT Office of Communications	1088 M-32 E Gaylord 49735	feltb@michigan.gov
Phil Alexander	Otsego Lake Twp. Parks & Rec Committee	P.O. Box 724 Gaylord 49734	alexan17@msu.edu
Gloria Torello	Elmira Twp Plan. Com	1850 Camp 10 Rd Elm. 49730	[redacted]
Duane Hoffman	Elmira Twp Plan Com	1233 W. Martin Lake Rd	duanejanet@Centurytel.net
Joe Duff	City of Gaylord	225 W. Main St. Gaylord	duffjr@cityofgaylord.org

Please Sign In

Presque Isle County Non-Motorized Trails Workshop/Community Input Session
Presque Isle District Library

March 13, 2008

Name	Representing	Address	E-Mail
Anne Belanger	Sunrise Side Bicycle Tours LMB - Sunrise Adventure	6442 Beach Dr. Rogers City MI 49779	amarloveproductions@yahoo.com
Michelle LaBar	RC Parks + Rec	143 E. Ontario RC	mdlabar@speednet.LLC.com
JAMES TOPLIN		24506 US23 N. Millersburg	JRTOPLIN@M&W.com
Virgil Freel	Millersburg Area Historical Society	11592 Hwy 638 Millersburg	
Joan C. Frank	"	P.O. Box 226 Millersburg	
Bobbie Stiller	RC Parks Commission	395 S. Forest RC. 49779	
Martha Brownlee	Millersburg Historical Society	6020 W. Mackinaw Hwy 49743	
Phil Brownlee	" " "	11801 County Rd. #638 W.	
Deb Greene	City of RC	1254 Riverview St	dgreene@freeway.net
SCOTT THAYER	MDOT - Alpena		
Wm Valentine	PICDC		info@picdc.org
David Nadolsky	PI CDC	207 State, RC	davidnadolsky@hotmail.com
Ralph Stedman	P.I. Conservation District	248 N. Bradley Hwy	rstedmanPICD@core.com
Beach Hall	City of Rogers City	193 E. Mich Ave RC	
Mark Slown	City of RC	462 St. Clair St., Rogers City	mslown@rogerscity.com
DEB COOLEY	PLANNING COMM	485 W. ORCHARD	
Dana LaBar		143 E Ontario	
Julie LaBar		"	

Please Sign In

Roscommon County Non-Motorized Trails Workshop/Community Input Session
Denton Township Hall

March 6, 2008

Name	Representing	Address	E-Mail
Marilyn Lipka	Backus Township	4925 S. Maple Valley Rd	St. Helen, Mich.
George Pappas	RCRC	W. Branch Rd.	gpappy23@hotmail.com
Gabe Phelps	MDOT Grayling TSC	1680 Hartwick Pines Rd 49738	phelpsg@michigan.gov
Fred Koenigbauer	Lyon Twp.	P.O. Box 565 Higg. Lake 48627	FANDKK@MSN.com
Barb Stevenson	Rosc. Twp	P.O. Box 610 HL 48629	clerk@roscommontownship.com
Tim O'Rourke	RCRC	P.O Box 820 Prudenville	orourket@charterinternet.com
Carolyn Pietchak	Denton Twp	P.O. Box 289 Prudenville	pietchak@i2k.net
John Sommer	Roscommon Twp	241 Redwine Dr. 48629	
John Feldpausch	Myself	1805 N. Markey HL 48629	
Wayne Koppa	Crawford Trails Comm. Hee	P.O. Box 395 Grayling 49738	wkoppa@hotmail.com
Gloria Owsaski	self	P.O. Box 706 Prudenville 48651	
Cynthia L. Krupp	MDOT	425 W Ottawa Lansing MI 48933	kruppc@michigan.gov

Please Sign In

Ogemaw County Non-Motorized Trails Workshop/Community Input Session
West Branch City Hall

March 27, 2008

Name	Representing	Address	E-Mail
DENNY TARROW	W. BRANCH TWP	313 W. WILLOW ST	
Leona Burseau	Rose City	408 - W page S.T.	
* RON SAPE	" "	3330 DOWNLINE RD. 989-685-2059	
Gay McSweeney	Ogemaw Co. Gen & Hist Soc	PO Box 734 WB 48661	
Denis Stephens	Ogemaw Twp.	1856 S. Dow Rd.	supervisor@sbcglobal.net
Dorothy Teeples	Rose City	PO Box 674	
Jane Tennant	City of West Branch	121 N. 4th St., W.B.	jtennant@westbranch.com
Eric Young	Ogemaw County Herald		reporter@ogemawherald.com
MIKE Dunn	RCL AREA chamber	2596 SHADY SHORES	Info@canoe4rent.com
David Langhorst	MDOT		
Steve Leonard	West Branch Area Chamber	422 W. Houghton	Chamber@westbranch.com
Denny Nurski	RCL Chamber/Scenic Motel	618 S. Bennett St. RC. 48654	dnurski@hotmail.com
BRUCE Reetz	Ogemaw County Comm	710 Ogemaw Center, W.B. 48661	

* NO "FLIER"

Northeast Michigan Regional Non-Motorized Transportation Plan and Investment Strategy

Invitation to trails organizations to attend a workshop/input session regarding non-motorized trails

Date: March 3, 2008
Time: 1:00 p.m.
Location: MDOT North Regional Office
1088 M-32 East
Gaylord, MI 49735

You are invited to meet with staff, review maps and help in identifying locations of future non-motorized trails, trail facilities and critical trail connectors in their community. The meeting is part of the ongoing Northeast Michigan Regional Non-Motorized Transportation Plan and Investment Strategy planning process that covers 11 counties in the Northeastern Lower Peninsula. By definition, non-motorized trails include: bicycle, pedestrian, hiking, horseback riding and snowmobile trails. This Regional Non-Motorized Transportation Plan and Investment Strategy, funded by MDOT, will focus on bicycle and pedestrian facilities and is designed to complement other statewide trails initiatives. In lieu of having to attend each of the individual 11 county workshops, we have provided trails organizations an opportunity to participate in this special meeting.

Organizations are invited to participate in this workshop/input session regarding non-motorized trails and trail connections within the region community. This key meeting provides organizations their primary opportunity to provide input and help identify locations for future non-motorized trail connections. Future sessions will provide the opportunity to prioritize projects, and review the draft plan.

Please complete the registration form and return it to NEMCOG

* *

Northeast Michigan Regional Non-Motorized Trails Plan & Investment Strategy Workshop & Community Input Session

NEMCOG
P. O. Box 457
Gaylord, Michigan 49734

Phone Number: (989) 732-3551 Ext. 10
Fax Number: (989) 732-5578
Email address: ppapendic@nemcog.org

______ I will be attending the Trails Organizations Workshop & Input Session.
______ I am unable to attend the meeting, but would like to be kept informed of the process by receiving project information via emails.

Name ________________________________ Representing______________________ Number attending ____

Address ____

Phone ____________________________Email: ____

* *

Workshop/Community Input Sessions for each County

Date	Time	**County**	**Location**
2-26-08	3:00 to 7:00 p.m.	Oscoda	Oscoda County Community Center 305 East 9th St Mio, MI 48647
2-28-08	3:00 to 7:00 p.m.	Cheboygan	Cheboygan Area Public Library 100 S. Bailey Street Cheboygan, MI 49721
3-6-08	3:00 to 7:00 p.m.	Roscommon	Denton Township Hall 2565 South Gladwin Rd. Prudenville, MI 48651
3-12-08	3:00 to 7:00 p.m.	Alpena	Alpena County Library 211 N. First St. Alpena, MI 49707
3-13-08	3:00 to 7:00 p.m.	Alcona	Alcona County EMS East Station 2600 E. M-72 Harrisville, MI 48740
3-13-08	3:00 to 7:00 p.m.	Presque Isle	Presque Isle District Library 181 E. Erie Street Rogers City, MI 49779
3-18-08	3:00 to 7:00 p.m.	Crawford	Devereaux Memorial Library 201 Plum Street Grayling, MI 49738
3-19-08	3:00 to 7:00 p.m.	Montmorency	Road Commission 11445 M-32 West Atlanta, MI 49709
3-20-08	3:00 to 7:00 p.m.	Iosco	Robert J. Parks Library 6010 Skeel St., Oscoda, MI 48750
3-26-08	3:00 to 7:00 p.m.	Otsego	Otsego County Library 700 S. Otsego Ave, Gaylord, MI 49735
3-27-08	3:00 to 7:00 p.m.	Ogemaw	West Branch City Hall 121 N. 4th Street West Branch, MI 48661

Non-Motorized Transportation in Your Community
Sub-Regional Non-Motorized Transportation Meetings

You are invited to attend a regional meeting on non-motorized transportation in your community. The meetings are follow-ups to a series of community outreach meetings that were held in each of the 11 counties in February and March. The intention of the sub-regional meeting is review draft sections of the plan and priority projects identified from the community input sessions in February and March.

What is a Non-motorized transportation facility? According to the Michigan Department of Transportation, *Non-motorized facilities can be grouped by one of two general types: On-Road or Off-Road. These two groups can be broken down further into more specific types and/or uses: 1) Bicycle facilities on-road, 2) Sidewalks, 3) Side paths and 4) Shared-use off road paths**. Further explanation of shared-use off road paths:** Bicyclists, pedestrians, rollerbladers, wheelchair users, runners, and others who require a smooth surface typically use paved paths. Unpaved paths are more popular with hikers, mountain bikers, and equestrians. In Northern Michigan, these same paths may facilitate either cross-country skiing or snowmobiling in the winter, where permitted under sufficient snow cover to avoid damage to the trails.*

Meeting Dates and Locations

Alpena Sub-Region Meeting **Date: September 29, 2008** **Time: 3:00 p.m. to 5:00 p.m.** Location: Alpena County Library 211 N. First St Alpena, MI 49707	**Mio Sub-Regional Meeting** **Date September 30, 2008** **Time: 3:00 p.m. to 5:00 p.m.** Location: Oscoda County MSU Building 101 South Court Street Mio, MI 48647

Gaylord Sub-Region Meeting
Date: October 1, 2008
Time: 3:00 p.m. to 5:00 p.m.
Location: Otsego County Library
700 S. Otsego Ave
Gaylord, MI 49735

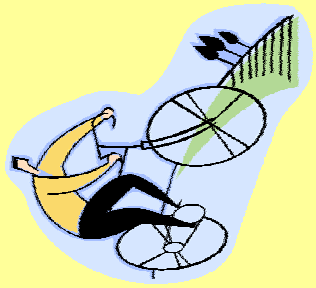
Copies of the Northeast Michigan Regional Non-motorized Transportation Plan will be posted on **NEMCOG's Web Site on Monday, September 22, 2008.** Please download the plan and review information for your community. You have the following options to comment on the plan: 1) Attend the workshop of your choice, 2) Call NEMCOG, or 3) Send an email to NEMCOG

Plan Web Address: http://www.nemcog.org/Pages/Non-Motorized_Trails_Plan.htm
Email: ntucker@nemcog.org rldeuell@nemcog.org
Phone: 989-732-3551 ext. 14

Connecting Communities & People

Northeast Michigan Regional Non-Motorized Transportation Workshop

Supporting the regional Non-Motorized Transportation Plan and Investment Strategy for Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle and Roscommon Counties.



A workshop for State, county and local officials; non-profit organizations and interested citizens

Date: Spetember 29, 2009
Time: 1:00 to 5:00 p.m.
Location: TreeTops Resort in Gaylord

Sponsored by:
Northeast Michigan Council of Governments
Michigan Department of Transportation

****

NEMCOG
PO Box 457
Gaylord, MI 49734

«Name»
«Address»
«City_State__Zip»

****

Northeast Michigan Regional Non-Motorized Transportation Workshop

NEMCOG
P. O. Box 457
Gaylord, Michigan 49735

Phone Number: (989) 732-3551 Ext. 14
FAX Number: (989) 732-5578
Email address: rldeuell@nemcog.org

_____I will be attending the Non-Motorized Trails Summit on September 29, 2008

Name _____ Agency/Organization_____

Address _____

Phone _____Email: _____

You are invited to participate in the Northeast Michigan Regional Non-Motorized Transportation Workshop

Location: Treetops Resort, Gaylord
Date: September 29, 2009
Time: 1:00 p.m. to 5:00 p.m.

Agenda

1. Overview of Northeast Michigan Non-Motorized Transportation Plan
2. Presentations
   - Liability of On-Road Facilities, Safe, Smart and Defendable: Josh DeBruyn, MDOT
   - Tourism and Economic Development
     - Black Bear Bicycle Tour, Au Sable River Recreation Corridor – Wayne Koppa
     - Sunrise Adventure Tour, Presque Isle County – Anne Belange
     - Maximizing the Tourism and Economic Development Potential of Trail Systems – Mary Ann Heidemann
   - Update on the Alpena to Cheboygan Rail-Trail Project – Emily Meyerson
   - Developing Regional Non-Motorized Transportation Networks and Coalitions
     - Complete Streets in Lansing, a Policy for Local Governments - John Lindenmayer, League of Michigan Bicyclists
     - Tips and Techniques for Developing Regional Networks - Todd Scott, Detroit Greenways Coordinator, Michigan Trails and Greenways Alliance
     - SAGE, Safe and Active Genesee for Everyone; a Regional Coalition - Nancy Krupiarz, Michigan Trails and Greenways Alliance

Please complete the form on the other side and mail or fax to NEMCOG by September 24th. You may also call or email your R.S.V.P

NEMCOG has completed a planning effort funded by the Michigan Department of Transportation. The process resulted in the development of a regional *Non-Motorized Transportation Plan and Investment Strategy* for *Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle and Roscommon Counties.* The plan is intended to be used by the Michigan Department of Transportation and local officials to prioritize projects, identify funding sources and guide investment in the region's non-motorized transportation system. A copy of the plan can be reviewed at: www.nemcog.org

THE ALPENA NEWS

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Workshops will help prioritize trail projects

Patty Ramus

POSTED: February 17, 2008

Area residents and government officials will have opportunities to give their thoughts on prioritizing future projects with non-motorized trails in Northeast Michigan.

The Michigan Department of Transportation and Northeast Michigan Council of Governments are involved in a planning effort to develop a comprehensive, regional non-motorized transportation plan and investment strategy for an 11-county area in the northeastern MDOT region.

In March, public workshops will take place in Alpena, Alcona, Presque Isle and Montmorency counties. During these workshops MDOT and NEMCOG representatives will be present to answer questions and record input from attendees.

Fact Box

Public Workshop Dates
? Alpena: March 12, Alpena County Library
? Alcona: March 13, EMS Building, M-72
? Presque Isle: March 13, Presque Isle District Library in Rogers City
? Montmorency: March 19, Montmorency County Road Commission Office, M-32 west
All meetings take place from 3-7 p.m.

“The purpose of those meetings is to invite local officials, parks and rec committees, different state agency groups ... and just private citizens. (We) invite them to come in and brainstorm with us, look at where potential future trails could be located in their particular county,” said Richard Deuell, NEMCOG senior planner. “I think this is an excellent opportunity for communities and organizations in the region to identify future needs for non-motorized trail systems in the area.”

Deuell said MDOT and NEMCOG are looking for input on points of interest in connecting an existing trail system to another, expanding a trail system, creating a new system, linking various communities or bringing a trail into a community.

According to Dave Langhorst, MDOT transportation planning specialist, this type of plan is being developed in other regions throughout the state. The plan is meant to consider where the trails are today, what they are and how they will be prioritized in the future.

“It’s a planning document that we’re going to be using when we develop our projects or when the locals are developing their projects,” he said. “It sort of levels the playing field when you start prioritizing funds, especially from Lansing. From an overall statewide standpoint, I think they’re trying to get a feel for what needs to be done.”

Deuell said information compiled at the workshops will then be used to create a series of maps showing where the routes of interest are and develop a draft plan. This information will then be shared at a regional meeting involving all 11 counties before the plan is submitted to MDOT for final approval.

“The goal is to come out with the final report that shows where the priorities are,” Langhorst said.

Doing this type of plan will be beneficial for tourism because it can show where trail systems can be connected, said Greg Sundin, planning and development director for the City of Alpena.

“We have trails that are quite lengthy and then there are gaps. By being able to see where they are, you begin to see where the missing links are,” he said.

Sundin, who’s also a member of the US-23 Sunrise Side Coastal Highway Heritage Route committee for Alpena County, said the committee has an interest in extending the bi-path from the city limits and eventually connecting it to paths running to the northern and southern county lines.

In Alcona County there’s interest in connecting the US-23 heritage route with the Lincoln Area Multi-use Pathway in the future. Portions of the heritage route exist in Harrisville and portions of the LAMP exist in Lincoln.

“We’d like to see the LAMP path developed so we can connect our trail and their trail together in the future,” said Mary Gillies, LAMP steering committee chair. “We’d like to get a trail in the ARA Site as part of the LAMP trail.”

Efforts have been made to get a non-motorized trail system into the Hubbard Lake area. The regional plan would be useful for entities such as the Alcona Road Commission because it often keeps trail projects in mind when doing work in Hubbard Lake, said Marlena MacNeill, administrative assistant.

In Presque Isle County plans are under way to construct 2.2 miles of 10 feet wide non-motorized path from Hoeft State Park to Forty Mile Point Lighthouse through a collaboration between MDOT and Rogers Township.

Bruce Grant, owner of Manitou Shores Resort, said he doesn’t agree with MDOT spending money to do the regional plan because of the state’s tight budget. If non-motorized trails are going to be further developed, users should be charged a user fee to help with the costs of maintaining them, he added.

“What I don’t like about the non-motorized trail, it doesn’t bring any money spenders into town. They’re working so hard for people that are willing to pay a user fee,” he said. “Are they going to develop these potential assets then are they going to not have the money to maintain them? They’re planning to get this stuff done but they’re not following through.”

Patty Ramus can be reached via e-mail at pramus@thealpenanews.com or by phone at 358-5687.

PRESS RELEASE

For more information contact:
Richard Deuell, Northeast Michigan Council of Governments (989)732-3551 ext. 14

For Immediate Release

TRAILS SUMMIT/KICK-OFF MEETING - January 8, 2008
1:00 p.m. to 5:00 p.m. at the Treetops Resort in Gaylord

Northeast Michigan Regional Non-Motorized Transportation Plan and Investment Strategy will cover 11 counties in Northeastern Lower Peninsula

December 5, 2007 – NEMCOG begins a one-year planning effort funded by the Michigan Department of Transportation. The purpose is to develop a comprehensive, regional Non-Motorized Transportation Plan and Investment Strategy for Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle and Roscommon Counties that can be utilized by the Michigan Department of Transportation and local officials to prioritize project implementation, identify funding sources and guide investment in the region's non-motorized transportation system. This project will build off and utilize the data and maps developed by the Northeast Michigan Council of Governments for the MDOT-funded Non-Motorized Trail Mapping Project. “This project offers anyone interested the opportunity to work with others, both private citizens and governmental agencies, who share their visions of a connected trail network throughout Northeast Michigan,” stated Nico Tucker, Transportation Planner at NEMCOG

The MDOT North Region Office initiated the planning effort. The development of a comprehensive plan and the identification of priority projects within this area will help guide MDOT's investment in the region's non-motorized transportation system. Local community input is crucial to the success of this planning effort.

Activities associated with the project's implementation that will be performed by the Northeast Michigan Council of Governments:

1. A series of meetings will be held across the 11 county planning area.
    a. Regional Trails Summit/Kick-off Meeting with state, county and local officials in the region, non-profit organizations and many others who manage or have an interest in the non-motorized trail system within the region.
    b. Eleven meetings - one in each county - with the individual county-working committees immediately followed by public input sessions.
    c. A series of sub-regional working committee meetings/public input sessions to gather feedback on the draft plan.
2. Create individual maps, illustrating existing infrastructure assets and natural features information, utilizing the data already gathered by the Northeast

Michigan Council of Governments during the MDOT-funded Non-Motorized Trail Mapping Project.

3. To encourage public involvement a project website that explains the initiative and includes an interactive component to gather public input will be created and maintained on NEMCOG's website www.nemcog.org In addition, tabletop displays will be placed in public libraries with pre-addressed comment forms that allow interested parties to provide comments.
4. At the culmination of public and community input component, a plan will be drafted and made available to stakeholders for their review and comments. Key stakeholders will be asked to endorse the plan. After which the plan will be submitted to MDOT.

"This project presents an excellent opportunity for communities across an 11 county region to work together and plan for future trail development and connectivity between their trails systems," stated Richard Deuell, AICP, Deputy Director at NEMCOG. For additional information on the Northeast Michigan Regional Non-Motorized Transportation Plan and Investment Strategy go to www.nemcog.org and look under "Projects" or call Nico Tucker, (989) 732-3551 ext. 20

PRESS RELEASE

For more information contact:
Richard Deuell, Northeast Michigan Council of Governments (989)732-3551 ext. 14

For Immediate Release

Sub Regional Non-Motorized Transportation Plan Meetings

Northeast Michigan Regional Non-Motorized Transportation Plan and Investment Strategy will cover 11 counties in Northeastern Lower Peninsula

September 18, 2008– NEMCOG is nearing completion of a one-year planning effort funded by the Michigan Department of Transportation. The purpose is to develop a comprehensive, regional Non-Motorized Transportation Plan and Investment Strategy for Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle and Roscommon Counties that can be utilized by the Michigan Department of Transportation and local officials to prioritize project implementation, identify funding sources and guide investment in the region's non-motorized transportation system. This project will build off and utilize the data and maps developed by the Northeast Michigan Council of Governments for the MDOT-funded Non-Motorized Trail Mapping Project.

Back in March of this year, NEMCOG sponsored community input sessions, one in each of the eleven counties. Information gathered at these meetings along with other sources was used to develop the draft non-motorized transportation plan. “Our next step is to hold three sub-regional meetings to gather feedback on the draft plan. After the comments have been assimilated into the process, NEMCOG will complete this important regional planning project.” Nico Tucker, Transportation Planner at NEMCOG. “This project presents an excellent opportunity for communities across an 11 county region to work together and plan for future non-motorized facilities and connectivity between their trails systems,” stated Richard Deuell, AICP, Deputy Director at NEMCOG.

The draft plan can be viewed on a project web page developed for this planning effort. Visit NEMCOG’s website www.nemcog.org Please download the plan and review information for your community. You have the following options to comment on the plan: 1) Attend the workshop of your choice, 2) Call NEMCOG, or 3) Send an email to NEMCOG

Plan Web Address: http://www.nemcog.org/Pages/Non-Motorized_Trails_Plan.htm
Email: ntucker@nemcog.org rldeuell@nemcog.org
Phone: 989-732-3551 ext. 14

Alpena Sub-Region Meeting
Date: September 29, 2008
Time: 3:00 p.m. to 5:00 p.m.
Location: Alpena County Library
211 N. First St
Alpena, MI 49707

Mio Sub-Regional Meeting
Date September 30, 2008
Time: 3:00 p.m. to 5:00 p.m.
Location: Oscoda County MSU Building
101 South Court Street
Mio, MI 48647

Gaylord Sub-Region Meeting
Date: October 1, 2008
Time: 3:00 p.m. to 5:00 p.m.
Location: Otsego County Library
700 S. Otsego Ave
Gaylord, MI 49735