



A Framework For
Transportation
In Northwest Michigan



**FRAMEWORK
FOR OUR FUTURE**
A REGIONAL PROSPERITY PLAN
FOR NORTHWEST LOWER MICHIGAN

2014 REPORT

A *Framework for Transportation in Northwest Michigan* was prepared as part of the *Framework for Our Future: A Regional Prosperity Plan for Northwest Michigan*, a regional resource for local governments, community organizations working to meet local goals.

The *Framework* was developed with support from the US Department of Housing and Community Development's Office of Economic Resilience and Partnership for Sustainable Communities, the Michigan Department of Transportation, the Michigan State Housing Development Authority, and the State of Michigan Regional Prosperity Initiative, as well as countless community partners including members of the public, county human service collaborative bodies, local units of government, nonprofit organizations, and many others.

The *Framework for Our Future* includes information and tools that can help stakeholders address issues such as housing, transportation, land use, energy, arts and culture, workforce and economic development, community health, food and farming systems, and natural resources. Data and information will help communities supplement their local deliberation,

planning, and decision-making processes, and will help to identify the steps a community can take to address a local issue, if desired.

The *Framework for Our Future* was developed by Networks Northwest (formerly the Northwest Michigan Council of Governments) with input and partnerships from a variety of community stakeholders and members of the public. An intensive community outreach process featured a wide variety of opportunities for participation from the public: events, surveys, focus groups, online forums, and public discussions were held region-wide throughout the process. Outreach activities and engagement opportunities included a series of community dialogues, interviews, and other events designed to obtain input from individuals with disabilities, minorities, youth, those in poverty, and others that have historically been underrepresented in planning processes. Public input was used to identify priority community issues and concerns, and to help develop goals, strategies, and actions.

The goals, strategies, and actions included in the *Framework* were built upon public input heard throughout the process, as well as on existing

and adopted goals from local plans and planning initiatives. Strategies are not intended as recommendations, nor do they supersede and local government decision-making. Moreover, the *Framework* is not intended for, nor shall it be used for, infringing upon or the taking of personal property rights enjoyed by the residents of Northwest Michigan. Rather, the information included in the *Framework* is instead intended to serve as a compilation of best practices to help guide local decision-makers who would like to address the issues identified in the *Framework*.



In This Report

INTRODUCTION	3	NON-MOTORIZED TRANSPORTATION	26
Transportation & Economic Prosperity	4	Northwest Michigan Regional Non-Motorized Strategy	28
TRANSPORTATION PLANNING	5	RAIL, AIR, WATER & FREIGHT TRANSPORTATION	30
Transportation Planning Legislation	6		
Predicting Future Travel	10	MULTI-MODAL TRANSPORTATION NETWORK	33
State Transportation Plans	11		
Transportation Planning Resources	13	LOCAL IMPLEMENTATION CHECKLIST	35
ROADS & HIGHWAYS	14	FRAMEWORK STRATEGIES	37
Levels of Service	16	Data, Education & Outreach	38
Transportation Access & Equity	18	Planning & Policy	40
TRANSIT	22	Financing & Incentives	42
Transit Plans & Studies	23	Development & Implementation	44

➔ A Framework for Transportation: Introduction

Antrim, Benzie, Grand Traverse, Kalkaska, Leelanau, and Wexford counties' transportation network of roads, trails, rail, air, and water transportation is perhaps one of its most critical economic development assets. Our road systems, in particular, are foundational elements to both our lifestyles and our economy, providing mobility and access to employment, housing, services, and recreation. In addition, our road networks connect us to the global economy and facilitate the movement of goods and services within and between communities: all parts of our economy, from manufacturers to the tourism industry, rely on the ability to access a well-maintained road network.

An effective transportation system relies on more than roads alone, however. Public transit systems are vital options for many residents – particularly for the elderly, disabled, and others without a vehicle – in getting to work, shopping, and medical appointments. Non-motorized transportation networks encourage healthy physical activity and promote economic opportunities, while providing additional important transportation options for those that cannot or do not drive; and walkable communities with ample non-motorized connections are becoming increasingly desirable places to live. Rail and air transportation, meanwhile, are important elements of our economic infrastructure, transporting freight to and from the region, and in the case of air transportation, supporting both business and tourism activity. Maintaining, enhancing, and improving this multi-modal transportation infrastructure is vital to our region's economy, connecting communities to each other and to global markets.

Planning for these many transportation elements requires involvement from many agencies and non-profit organizations that spend millions of dollars annually to maintain



Improving and enhancing transportation infrastructure connects communities and is vital to the region's economy.

and improve the transportation network. County Road Commissions and some local units of government receive state and local funding for road maintenance and improvements, the Michigan Department of Transportation manages state and federal roads throughout the region, transit agencies provide bus services in many of the region's counties, and local governments, road agencies, and advocacy groups come together to develop bike paths and trails. Additionally, some local governments and road agencies have adopted Complete Street resolutions to ensure transportation network design and improvements meet the needs of all users, including passenger vehicles, commercial vehicles, bicycles, and pedestrians.

Even with all these efforts, a number of key issues present

challenges in local, county, and regional efforts to provide the most effective transportation system:

- Lake Michigan, the Grand Traverse Bay, Little Traverse Bay, and hundreds of inland lakes comprise a significant portion of the region's boundaries and land area. These waterbodies limit a grid based road network and concentrate travel into relatively narrow areas, creating congestion in many areas.
- Long winters put an extra burden on road conditions and road agency budgets, and continuous reductions in gas tax revenues diminish the resources available to meet ever increasing demands for infrastructure maintenance and improvements.

- Decisions on transportation investments are made by diverse and distinct entities with differing funding sources and requirements, making coordinated multi-modal investments more challenging.
 - Transportation costs are among the largest household expenses for most Americans, second only to housing. For lower income workers, many of whom must live farther away from the region's employment centers, transportation costs can exceed the costs of housing in some rural areas. In some areas, the combined costs of housing and transportation consume nearly three-quarters of an average household's income.
 - There are few viable alternatives to the private automobile. There have been significant improvements to transit systems in the Grand Traverse area, with fixed routes within the Traverse City and commuter routes from Benzie and Leelanau County to Traverse City, but large geographies and limited funding restrict the services that are available. Public input indicates that limited schedules and long travel times discourage the use of transit for accessing employment or services—particularly for low-income workers, who often work nights and weekends.
 - Bicycle lanes and paths are expanding, but there are still many connections that are needed to provide a viable transportation alternative; and the focus on non-motorized options has been on their recreational value, versus their transportation utility.
 - There are differences among decision makers and the citizenry on the best way to improve mobility and access: some believe that expanding existing roads and building new roads is best, while others believe that we can't build our way out of congestion and will need other solutions.
- The ability of the region to meet these challenges will require significant coordination, communication and consensus throughout the region. *The Framework for Our Future* identifies opportunities and roles for various community players to meet local, county, and regional transportation needs in a coordinated fashion in order to maximize transportation investments. For instance, local policies such as Complete Streets ordinances or resolutions can aid in accommodating all road users, while coordination among transit stakeholders can work to coordinate regional transit programs to improve travel times and cross-county service. In addition to local and regional strategies, the *Framework for Transportation* also includes the Transportation Improvement Program, which features a list of major transportation projects to occur in the region over the next 5 years, as prioritized by local communities.

Transportation & Economic Prosperity

An efficient, well-maintained and connected transportation network is a foundation for economic development and prosperity:

- Well-maintained road systems provide confidence for businesses that they can market their goods in a timely and effective manner.
- Effective public transit systems allow more people to get to work, as well as to shop and attend appointments.
- Non-motorized transportation networks encourage healthy physical activity and promote varied economic opportunities.

Transportation Planning

The factors affecting transportation needs, services, infrastructure, and functionality are diverse:

- The six-county region's population is rapidly growing and changing. Between 1970-2000, the region's population nearly doubled. While growth has slowed somewhat since then, the region remains one of the fastest growing regions in Michigan and the Midwest, with growth rates in most areas of the region far exceeding population growth in the State of Michigan. Continued growth is anticipated over the next 25 years, increasing from 199,687 in 2010 by nearly 52,000 in 2040, to an estimated 252,068 in 2040 (see table).
- The region's population is not only growing—it's changing. The population overall is getting older as the Baby Boomer generation reaches retirement age, bringing with it far-reaching changes to the nation's housing market, service needs, workforce, and other. The labor pool is shrinking, as are household sizes. With these changes, the demand for housing types and transportation choices is shifting.
- The seasonal population increase experienced in most northern Michigan communities in the summer months has significant impacts on the region's transportation network. A 2014 Northwest Michigan Seasonal Population Analysis, conducted by the Michigan State University Land Policy Institute, found that the region's population grows by nearly 82,000 people during the summer months. In addition, a recent survey conducted by the Anderson Group commissioned by Traverse City Tourism calculated that over 3.3 million visitor trips were made to the Traverse City area. The National Cherry Festival in early July attracts over 500,000 people over an eight day period, the Traverse City Film Festival in late July attracts around 120,000 people over a five day period, and numerous other festivals and events attract a large number of local attendees and visitors alike. These seasonal population changes strain the ability of the transportation system to meet mobility needs, while challenging the capacity planning for major infrastructure investments.
- All counties in the region rely on out-of county workers for a substantial portion of their employment. 2011 Census data indicates that all ten counties in the region depended on out-of county labor for 20% or more of their workers. Conversely, the majority of workers in some counties – Benzie (53%), and Leelanau (53%) counties – commuted to work outside of the county. This in-flow and out-flow of workers between counties in the region means that substantial numbers of commuters depend on the region's road network to access employment.

Addressing the transportation needs of the region's changing population and workforce requires planning. Because of the costs, impacts, and other factors involved in maintaining and improving transportation networks, transportation planning is a complex process involving a wide variety of stakeholders at all levels of government. In addition, transportation planning is significantly impacted by other planning decisions and factors: state and federal funding availability, etc

TRANSPORTING AND PLANNING

	COUNTS							PROJECTIONS			
	1980	1990	2000	2010	2020	2030	2040	2000-2010 NUMBER CHANGE	2000-2010 % CHANGE	2010-2040 NUMBER CHANGE	2010-2040 % CHANGE
POPULATION											
Antrim	16,194	18,185	23,110	23,580	24,951	26,427	27,387	470	2.0%	3,807	16.1%
Benzie	11,205	12,200	15,998	17,525	18,648	19,460	20,077	1,527	9.5%	2,552	14.6%
Grand Traverse	54,899	64,273	77,654	86,986	101,164	111,925	120,127	9,332	12.0%	33,141	38.1%
Kalkaska	10,952	13,497	16,571	17,153	18,475	19,784	20,507	582	3.5%	3,354	19.6%
Leelanau	14,007	16,527	21,119	21,708	23,848	26,237	27,854	589	2.8%	6,146	28.3%
Wexford	25,102	26,360	30,484	32,735	33,846	35,022	36,117	2,251	7.4%	3,382	10.3%
Six County Region	132,359	151,042	184,936	199,687	220,931	238,854	252,068	14,751	8.0%	52,381	26.2%

Transportation Planning Legislation

From a state and federal perspective, all of northern Michigan constitutes a “rural” transportation area. In the early years of transportation planning, rural highways were designed based the concept that the automobile was a pleasure vehicle. Most roadways not in urban areas were designed to connect town centers to the countryside. As a result, most rural transportation systems were fragmented and lacked consistent quality.

Federal Highway Act of 1956

By the late 1930s, the desire for the construction of an interconnecting, national highway system was growing. The Federal Highway Act of 1956 acted as the catalyst for the biggest public works project in American history. \$25 billion was authorized for fiscal years 1957 through 1969 to expand the interstate system to 41,000 miles.

Michigan Public Act 51 of 1951 (Act 51)

Act 51 governs the state appropriations for most Michigan transportation programs, including state and local highway programs and state and local public transportation programs.

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was formed to create an economically efficient, environmentally sound national transportation system in order to compete in a new global economy. ISTEA provided for statewide planning processes that required the involvement of local officials to better understand the transportation needs of non-metropolitan (rural) areas. Involvement was to include:

- Planning of transportation systems;
- Funding of specific transportation projects;
- Activities to maintain and improve transportation systems.

However, ISTEA did not include any national standards for the transportation planning process in rural areas. Individual states adopted varying techniques in their rural transportation planning process.

Transportation Equity Act for the 21st Century

ISTEA has since been reauthorized twice, once as the Transportation Equity Act for the 21st century (TEA-21) in 1998 and again as the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005. TEA-21 and SAFETEA-LU continued the principles of ISTEA with additional requirements for rural participation in transportation planning as well as greater emphasis on multi-modal transportation and non-transportation impact of highways. Public involvement is one of TEA-21’s fundamental requirements, which states that state departments of transportation “shall provide citizens, affected public agencies, representatives of transportation agency employees, other affected employee representatives, private providers of transportation, and other interested parties with reasonable opportunity to comment” on transportation programs. SAFETEA-LU legislation expired at the end of fiscal year 2009 but has been continually funded through a series of continuing resolutions.

Moving Ahead for Progress in the 21st Century

Commonly referred to as MAP-21, this current transportation legislation is a two year bill covering fiscal years 2013 & 2014. Key provisions of MAP-21 include:

- Consolidation of funding programs by two-thirds
- Greater ability to transfer funds among categories
- Funding for bicycle and pedestrian transportation is reduced and consolidated into a broader program called “Transportation Alternatives”;
- Increase in funding for highway safety projects
- A national freight policy will be developed

Transportation Agencies

Federal road funding for the six counties comes from the Federal Surface Transportation Program (STP) Rural for improving the federal aid road system, while state funding comes from a variety of sources depending on the purpose. For instance, snow plowing and general road maintenance needs are funded through the Michigan Transportation Fund (MTF), transit needs are funded through the Comprehensive Transportation Fund (CTF), while the Transportation Economic Development Fund (TDEF) Category D is used for building an all-season network. Most major transportation projects are funded by federal and/or state funding and must be selected, reviewed, and approved through a public process involving a variety of transportation stakeholders and government entities at the local, county, regional, and state levels:

- All cities and incorporated villages in the region are designated Act 51 road agencies that receive state and federal funding. These communities are also in a unique position to have direct responsibility for both transportation and land use. They often also administer local funds, primarily for operation and maintenance, to manage the road system within their borders. Road improvement projects on city or village major streets are eligible for state and federal funding, but must go through either the Rural Task Force process for villages or the Small Urban Program for cities. The nomination process for major street improvement projects varies by community and may include staff recommendations or official action by the City or Village Commissions or Councils. For local road projects that are not county primary roads or city/village main streets, County Road Commissions and townships can cooperate to fund road improvements. Often, property

owners along the proposed improvement road are assessed a fee, but the costs borne by the property owners cannot exceed 50% of the total project cost.

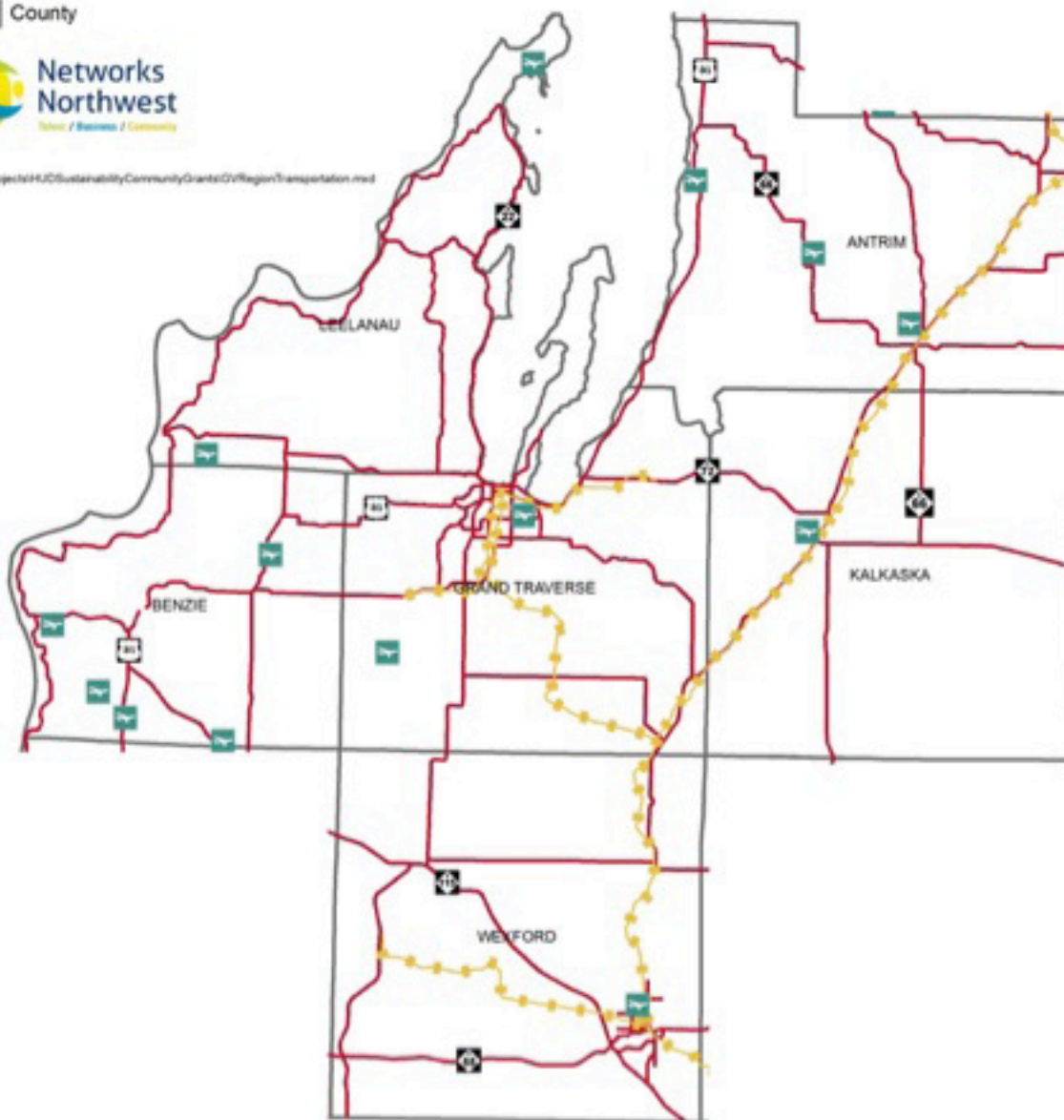
- County road commissions are independent agencies that are generally appointed by elected county boards, although they are elected by voters in Benzie and Leelanau counties. Road commissions are designated Act 51 agencies which are responsible for most roads in the region, and have purview over projects which are funded by local millages and in cooperation with townships. Projects that receive federal and/or state funding are decided through the Rural Task Forces.
- There are six organizations in the region providing public transit services in all six of the region's counties. The organizations are eligible for Michigan Comprehensive Transportation Fund (CTF) funds for their portions of the funding.
- Tribal Governments may designate roads as Tribal Roads and make them eligible for Bureau of Indian Affairs (BIA) funding for improvements. Tribal Governments are also active in transit, non-motorized and other forms of transportation by initiating and/or assisting in the planning and funding of projects.
- The Michigan Department of Transportation (MDOT) has direct jurisdiction over Michigan's nearly 10,000-mile highway system, comprised of all I, M, and US routes. It is the backbone of Michigan's 120,000-mile highway, road and street network. MDOT also administers other state and federal transportation programs for aviation, intercity passenger services, rail freight, local public transit services, the Transportation Economic Development Fund (TEDF), the Transportation Alternatives Program (TAP), and others. In addition, the department is responsible for developing and implementing a comprehensive transportation plan for the entire state that includes all modes of transportation.
- Metropolitan Planning Organizations (MPOs) are regional planning agencies that operate in larger urban areas. The Federal Highway Act of 1962 requires urbanized areas to have a continuing and comprehensive transportation planning process to become eligible for planning and construction funds from the Federal Highway Administration (FHWA) and capital and operating assistance from the Urban Mass Transit Administration (UMTA). While there are currently no MPOs in the six-county region, TC TALUS (Traverse City Transportation and Land Use Study) operates in a capacity similar to an MPO. TC TALUS was formed in 1990 in response to a recommendation from the Michigan Department of Transportation (MDOT) to prepare as an MPO. Organized as a voluntary association by Memorandums of Understanding between the TC-TALUS Board of Directors and the City of Traverse City, the Grand Traverse County Townships of Acme, Peninsula, Long Lake, and Whitewater, and Charter Townships of Garfield and East Bay, and the Charter Township of Elmwood in Leelanau County, the purpose of TC-TALUS is to provide continuing, comprehensive, and coordinated transportation planning to the Grand Traverse area. TC TALUS recently produced its first Long Range Transportation Plan in preparation for their eventual official designation as an MPO, which included the Transportation Improvement Plan recommended by the RTF.

Regional Transportation Infrastructure Antrim, Benzie, Grand Traverse, Leelanau, Kalkaska, Wexford

-  Airport
-  Railroad
-  Major Road
-  County



M:\GIS\Projects\HUD\Sustainability\CommunityGrants\CV\Region\Transportation.mxd



Rural Task Force & Small Urban Task Force Planning Programs

The region's transportation agencies participate in varying capacities in programs known as the Rural Task Force (RTF) and Small Urban transportation planning processes, which provide state and federal funding to rural counties with a population under 400,000 to be spent in their geographic areas. Road capital projects on county primary roads and village main streets, as well as transit capital projects, are eligible.

The six-county region is represented by three Rural Task Forces, comprised of representatives of designated Act 51 agencies, which include road commissions, incorporated villages, public transit agencies, and MDOT. A representative of the Grand Traverse Band of Ottawa and Chippewa Indians is a member for RTF 10-C.

In the RTF process, each local road and/or transit agency typically develops their own list of priorities which then are brought to the RTF or Small Urban meetings to be balanced against the other members' needs in consideration of available funding. The projects selected must meet certain federal criteria in order to qualify for the funds; for instance, only federal aid roads classified as Minor/Major Collectors and Minor/Principal Arterials are eligible for this type of funding. A map of federal aid eligible roads can be found here. Transit capital projects are also eligible, such as the purchase of a bus; however, funds cannot be used for operating cost of running the bus on a route.

With input from all transportation stakeholders and the public, the RTF process culminates in a Transportation Improvement Program (TIP) that covers a four year period and addresses the most immediate transportation priorities for each of the six counties, as determined by the RTF. The meetings of the Rural Task Forces and Small Urban Task Forces are all publically noticed

DESIGNATION	COUNTIES	FEDERAL FUNDING	STATE FUNDING
RTF 10-A	Antrim, Charlevoix, Emmet, Kalkaska	\$1,718,187	\$293,212
RTF 10-B	Manistee, Missaukee, Wexford	\$1,349,604	\$193,246
RTF 10-C	Benzie, Grand Traverse, Leelanau	\$1,199,909	\$260,510

in the local newspaper and the meetings are open to the public.

In addition to the RTF, Federal Funds are available to small urban areas under a similar process. The Small Urban Program provides federal Surface Transportation Program (STP) funding to areas with an urbanized population of 5,000 to 49,999. Road and transit capital projects are eligible for STP funds. There are two Small Urban Areas in the six county region recognized by MDOT: Cadillac and Traverse City. Unlike MDOT, RTFs, and county road commissions, Small Urban Areas do not automatically receive federal target allocation dollars. The representatives of the Small Urban Areas prepare the Transportation Improvement Plans that are comparable to those developed within the RTF process.

To be responsive to public needs, local and state land use, governmental and transportation planning and investment decisions all require public input. However, engagement in this complex process is a challenge even for elected and administrative officials, and even more so for busy citizens. While each of the Rural Task Forces has certain benchmarks to meet for public input and project nomination, each group has differing methods of communication and outreach, and for approving projects as part of the TIP. In addition, many of the project nominations for the TIP come from representative participants, who also have differing nominating processes. This lack of consistency

creates barriers for citizens that would like to be involved, but must struggle to navigate the process.

State Transportation Planning

There are two components to State Transportation Planning: the State Long Range Plan, a broad policy document that identifies areas in need of improvement and establishes policies and actions necessary to achieve transportation goals for a 25 year period; and the State Transportation Improvement Program, which lists all transportation projects scheduled for construction and identifies available funds needed to implement projects throughout a 3 year period.

The 2010 – 2035 State Long Range Plan, entitled "The Michigan Transportation Plan: Moving Michigan Forward" (2035 MITP) is based on an extensive public and stakeholder involvement process that spanned two years and resulted in contacts with thousands of individuals through meetings, telephone interviews, and webinars. Main ideas of the State Long Range Plan.

The State Transportation Improvement Plan is the final planning document preceding the actual construction or implementation of projects. Opportunities for public participation in the development of the State Transportation Improvement Plan are provided throughout the project selection process at local, regional, and state levels. This cooperative

effort includes, but is not limited to, open meetings at the state and local level where project selection and programming decisions are publicly considered, opportunities to comment on proposed projects at city council and city manager meetings, and public notices in local newspapers throughout the state requesting public comment on proposed projects. In addition to these public participation opportunities, MDOT regions and its Transportation Service Centers (TSCs) host annual meetings and summits for rural elected officials, tribal members, and the general public, with invitations

mailed to the clerks of all counties, cities, villages, townships, and Tribal Officers within non-MPO areas and advertisements through radio announcements and press releases.

The draft STIP is made available on MDOT's STIP Web site for public review and comment for 30 days before being sent to the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) for final approval. An e-mail notification is sent to county road commissions, Rural Task Force agencies, small urban communities,

Regional Planning Agencies, and local units of government. The STIP can be amended every two months, if necessary. Whenever amended, the STIP is posted to the MDOT website for public review and comment two weeks before it is sent to the FHWA, and FTA if required, for review and final approval. Once approved, the STIP is posted to the MDOT STIP Web site. MDOT continues to accept and address all comments on the STIP as they are received. Comments can be submitted via email at MDOT-STIP-Comments@michigan.gov or by contacting the MDOT Regional Office,

Predicting Future Travel

There are sophisticated computer models that will predict the future volume of travel on roadway, and even test the effect of roadway improvements on that future volume. TC TALUS, has been running computer traffic models for the southern portion of the region since 1990. The most recent modeling efforts were conducted using a model TC TALUS has used in the past and forms the basis of the Long Range Transportation Plan required under federal law. The TC TALUS Board has recommended to move forward with a revised model that will enhance the ability to better predict the effect of alternative transportation on roadway capacity. The Michigan Department of Transportation (MDOT) also utilizes a statewide Travel Demand Model to predict volumes on MDOT jurisdiction roadways throughout the region and state.

The model was most extensively applied to the Grand Vision work. Several areas of the model were refined. The major inputs for the model included:

ROAD NETWORK DATA » The model did not include significant additions to the road network;

LAND USE DATA (DEMOGRAPHICS) » Projected increases were calculated for housing, population, and employment by retail, service, and other sectors;

ORIGIN – DESTINATION DATA » An origin – destination study was conducted, capturing three trip types relating to the study area: external-external, internal-external, external-internal.

TRIP GENERATION » MI Travel Counts data was used to establish new trip production rates. The trip production rates for all TAZs were updated using trip production rates from the small urban sample area from MI Travel Counts.

FRICTION FACTORS » Friction factors are used to calibrate the average trip lengths in a TDM. Specifically, friction factors limit the average trip length and are used to help calibrate average trip lengths.

AUTO OCCUPANCY RATES » The MI Travel Counts data was also used to estimate auto occupancy rates within the Grand Traverse region.

MODEL VALIDATION PROCESS » After the refinement of the above inputs, the model recalibrated to a 2007 base year. The validation/calibration process involves comparing model generated link volumes with traffic counts at a specific location.

Additional information on the methodology for the Grand Vision Traffic Demand Model is included in Task 3.4 Travel Demand Methodology Report.

MDOT TSC, Networks Northwest, or the applicable Rural Task Force.

Transportation Planning in Local & County Master Plans

In addition, the impacts of land use and transportation are closely interrelated: all land use decisions have impacts on transportation, and transportation improvements likewise have significant impacts on land use patterns and development. The integration of land use and transportation is critical to achieve the goals outlined in most every master plan in the region: protecting natural resources, directing development to existing communities, encouraging compact development, creating a range of housing options, encouraging cooperation in development decisions, and providing for transportation choices.

Many public investments that don't directly involve transportation nevertheless have significant impacts

on transportation and land use—where a city, village or township decide to develop a park, where counties decide to construct a jail or office building, where school districts decide to build schools, and even where the state decides to build regional offices will all affect transportation patterns and needs. Michigan's Planning Enabling Act requires most all public investments, including “a street, square, park, playground, public way, ground or other open space; or public building or other structure...” to be submitted and approved by the planning commission of that jurisdiction. The Act also authorizes master street plans that must specify a means for implementation in cooperation with the County Road Commission and Michigan Department of Transportation (MDOT).

Most of the region's cities, villages, and townships, along with some counties, have zoning jurisdiction and are required by Michigan's Planning

Enabling Act (Act 33, PA 2008) to prepare master plans that guide growth, development and public investments and zoning decisions. The Planning Enabling Act also requires master plans to include adequate provisions for “a system of transportation to lessen congestion on streets and provide for safe and efficient movement of people and goods by motor vehicles, bicycles, pedestrians, and other legal users.”

An integral component of transportation planning on a regional basis is the statutory land use plans of each city, village or township and their implementation through municipal zoning. There are 109 local governmental units in the six-county region; 71 of those governments have master plans, most of which include a transportation component related to land use, with direction for specific transportation projects and services. Nearly all of the master plans in the six counties address road maintenance, non-motorized goals, and related

State Transportation Plans

The Michigan Transportation Plan

Moving Michigan Forward—2005-2030 is the overarching Michigan Department of Transportation (MDOT) policy document and also the state long range transportation plan. The Plan contains an overview of the trends and challenges facing Michigan today with references to many other more technical documents, and sets forth goals and strategies for managing the transportation network and related financial decisions. Overall, the current policy is to identify and focus on the corridors of highest significance at the state, regional and local levels. A listing of State and regional corridors are identified in the document, including the transportation crossings between the U.S. and Canada. The M-72 Corridor through Traverse City is identified as a corridor of significance at the statewide level as an “activity center” which is defined as a place, from the perspective

of the State of Michigan, where population, employment, tourism, transportation, and other economically important activities are concentrated.

MDOT State Transportation Improvement Plan 2014 – 2017

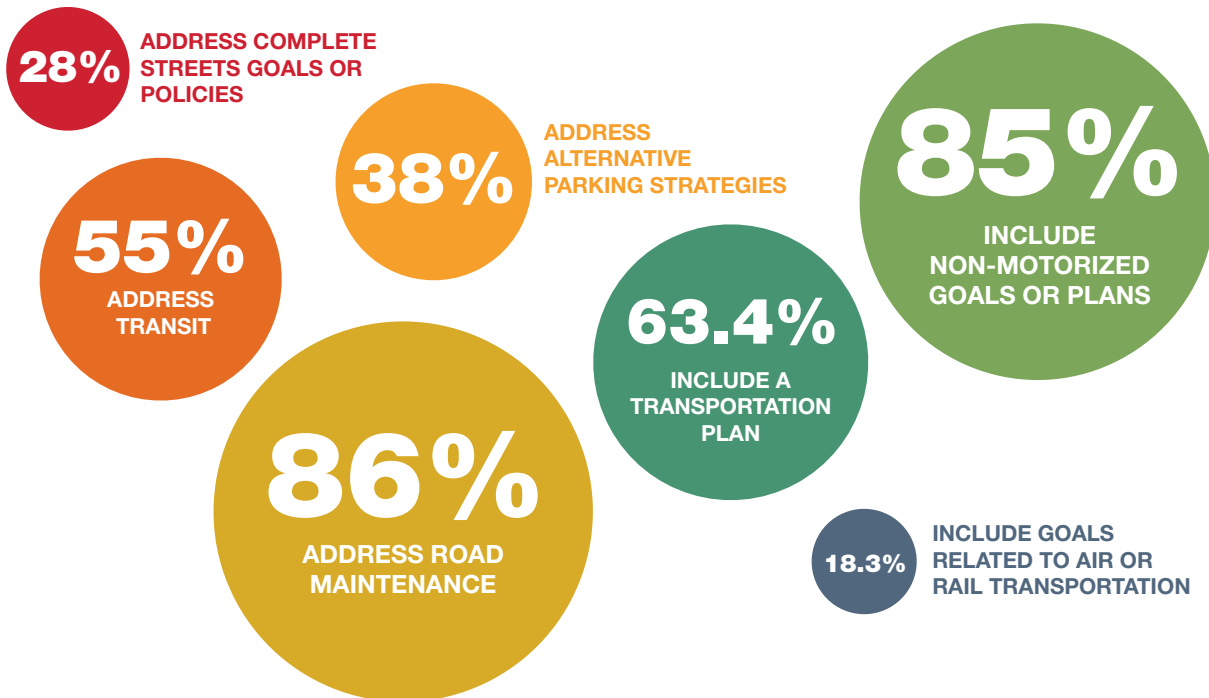
The State Transportation Improvement Plan (STIP) is a compilation of all transportation projects that will be authorized for funding in fiscal years 2014 – 2017. The STIP document lists only projects outside of the Metropolitan Area Boundaries. Some portion of the document contains information about how the STIP is developed; much of the balance of the Plan is in spreadsheet format listing counties and projects. In the TC – TALUS area, the STIP includes Reconstruction of US-31 from Three Mile Road to Holiday Hills Road at an estimated cost of \$9,311,000 (underway in June 2014).

issues. However, the degree to which specific transportation improvements are addressed varies widely between communities. Some communities support additional infrastructure as a way of improving safety and efficiency for traffic moving through a growing region. Other communities hold that a high-volume, high-speed road moving traffic through

the region will erode the region's unique, high-quality life and generate sprawl type development.

Additionally, both plans and zoning ordinances aren't always consistent in how transportation issues that extend beyond local boundaries are addressed. Development patterns along major transportation corridors

have major impacts on land use and transportation in neighboring jurisdictions; yet zoning ordinances that regulate development along these corridors often vary widely from community to community, which can potentially result in disjointed development or access management that contributes to congestion or safety issues along these corridors.



Source: Northwest Michigan Council of Governments, 2014

Opportunities: Transportation Planning

Together, communities decide how to spend public dollars for transportation investments. These public expenditures are and should be a reflection of the hopes, desires, and dreams of the community and the region. Effective, collaborative transportation planning can help to identify opportunities and coordinate efforts to maximize those investments in order to ensure the greatest possible good for all citizens in the region.

Because transportation funding filters from federal, state and local sources to diverse agencies with distinct purposes, coordinating and integrating transportation investments can be challenging even for the staff and experts in the field, and even more so for public officials and citizens. However, there are important opportunities to provide input to the transportation planning and investment process, and transportation agencies are working hard to frame the questions for public input, ensure that the community is

aware of the process and the opportunity, invite participation, and reflect the comments received into the plans. Most public agencies now maintain an email list to share information on the latest plans, public meetings, information, and approval processes. In addition, citizens can engage with the Rural Task Force that covers their community. As the primary entity that determines how state and federal transportation funds are spent, these groups and their representatives also have the most contact with MDOT and can serve as a conduit for input to the state. A consistent, reasonable and effective project nomination process and communication mechanism between the Rural Task Forces and other public agencies, including counties, townships, planning commissions, parks and recreation commissions, advocacy groups, and the media could help to ensure that all affected stakeholders have the information needed to provide input and share with their constituents. To improve outreach

and engagement in the process, the region's three Rural Task Forces could consider opportunities such as joining together to develop a communication program across the region.

Another opportunity to enhance local and regional transportation planning is within the local master planning and zoning process. Most local units of government have adopted master plans that guide land use, growth, and

transportation stakeholders in the planning process, can help to guide future transportation investments in a way that best meets the community's vision.

Annual capital improvement plans (CIPs), which are required for each local unit of government, offer additional opportunities to coordinate transportation activities with other development and public investment. These CIPs are typically

Many communities are preparing corridor master plans to address specific areas of concern along major roadways.

other community issues like transportation. Because transportation and land use are so inextricably linked, master plans offer an important opportunity to consider transportation improvements in the context of land use changes and development needs. In addition, many communities are preparing corridor master plans to address specific areas of concern along major roadways. Incorporating comprehensive transportation plans, goals, and strategies in master plans, while proactively engaging

prepared as part of the annual budget process, typically three to four months prior to the beginning of the fiscal year. These plans may include larger construction projects, like new jails or governmental office buildings, which will likely be the result of more significant conversation and often reviewed in the context of the broader issues of financing and land use planning. Often, these projects come with transportation impacts and offer opportunities to coordinate transportation improvements with public investments.

Transportation Planning Resources

A Citizen's Guide to Transportation Planning

A Citizen's Guide to Transportation Planning, developed by NWMCOG and regularly updated, explains the transportation planning process and transportation issues in Northwest Michigan. The guide includes glossaries, contact information, regional transportation-related statistics, and other information to help citizens get involved in the transportation planning process.

Asset Management Reports

Assess Management Reports for years 2006 – 2013, detailing road conditions and maintenance priorities for each county in the region, are available at the NWMCOG Transportation Asset Management webpage.

The Grand Vision

The Grand Vision provides a vision for growth and development over the next 50 years. The major reports and documents produced as part of the Grand Vision provide a comprehensive set of transportation recommendations and land use analyses to guide future decisions in Antrim, Benzie, Grand Traverse, Kalkaska, Leelanau, and Wexford counties. Detailed transportation reports are available online at www.thegrandvision.org.

➔ Roads & Highways

The primary mode of transportation in Northwest Michigan is the automobile: residents' and visitors' access to homes, businesses, schools, recreation opportunities, services, places of employment, shopping centers, and more is dependent on an extensive network of roads and highways.

Existing Road Network

Within the region, there are about 2,300 miles of primary roads, along with over 6500 miles of local roads that are maintained primarily by county road commissions and city or village governments. Traffic counts indicate that travelers from within and outside the region travel over 3,000,000 miles annually on these roads.

Highway access from outside the area is provided by a number of routes. Interstate Route 75 (I-75) only touches a small portion of Emmet County, but serves as a primary link to southeast Michigan. US Routes 31 and 131 carry traffic to and from southwestern Michigan, and US-127 provides access from south-central Michigan. US-131 is the closest freeway facility ending just south of the Grand Traverse / Wexford County line. M-72 and M-37 also provide access to the Grand Traverse Region, M-22 carries traffic to and from the Leelanau Peninsula, M-32 and M-66 provide access to Charlevoix.

Asset Management, Maintenance, & Road Improvements

A critical component of road and highway infrastructure is the on-going maintenance of the existing road surface. To plan for and manage needed road surface maintenance, communities throughout the region engage in a program known as "asset management," a process for collecting surface condition data about the existing road network



1,317
TOTAL **PRIMARY ROAD MILES**
IN THE SIX-COUNTY REGION



3,981
TOTAL **LOCAL ROAD MILES**
IN THE SIX-COUNTY REGION



2,157,093
VEHICLE MILES TRAVELED ANNUALLY
IN THE SIX-COUNTY REGION

	PRIMARY ROAD MILES	LOCAL ROAD MILES	VEHICLE MILES TRAVELED, 2013
Antrim	210.43	663.51	258,669
Benzie	180.25	445.75	209,002
Grand Traverse	318.19	940.69	859,068
Kalkaska	230.38	620.62	217,862
Leelanau	177.16	443.39	237,275
Wexford	201.03	866.57	375,217

Source: Michigan Department of Transportation

and managing pavement conditions based on strategic goals outlined by the MDOT and local road agencies.

The asset management process includes inventory, scenario evaluation, and action that results in selecting the best method for identifying,

prioritizing, and implementing road construction projects. Ultimately, asset management is a planning tool that is used by transportation agencies to make the most efficient use of public resources for the purposes of improving road infrastructure in a community.

Much of the region's road network is addressed by county-wide asset management processes that are conducted in partnership with the Northwest Michigan Council of Governments, MDOT, and county road commissions. Asset management is also conducted on a city and village level by local staff and stakeholders. Each year, NWMCOG, MDOT, road commissions, and municipalities survey the condition of all arterial and collector roads in the region that are eligible for federal aid dollars using the Pavement Surface Evaluation and Rating (PASER) system. PASER is a subjective, visual rating process that assigns a value to a road segment based on its condition at the time of the rating. Based on that evaluation, maps and comparative tables are generated by county. Asset Management provides the primary input into annual maintenance plans for the road commissions, cities that manage roads under Act 51, and MDOT. In 2013, NWMCOG staff coordinated the rating of over 2,700 miles of federal-aid-eligible roads in Northwest Michigan. Regionally, 46% of roads were rated "good" or "fair;" 31% were rated "poor."

Congestion & Road Capacities

The most recognized and discussed transportation issue for the six counties is congestion. It is caused by a number of contributing factors, including the region's geography and seasonality issues. Some of the region's abundant water resources – including many large inland lakes that each provide a signature identity for their respective communities – limit connectivity, particularly in communities near Lake Michigan, where traffic must be channeled into narrow areas between Lake Michigan and the inland lakes. In addition to geography, a growing population in a region dependent on private vehicles for the majority of transportation needs means that daily errand and commute trip times are increasing in the region. Tourism, too, plays a role in congestion, as

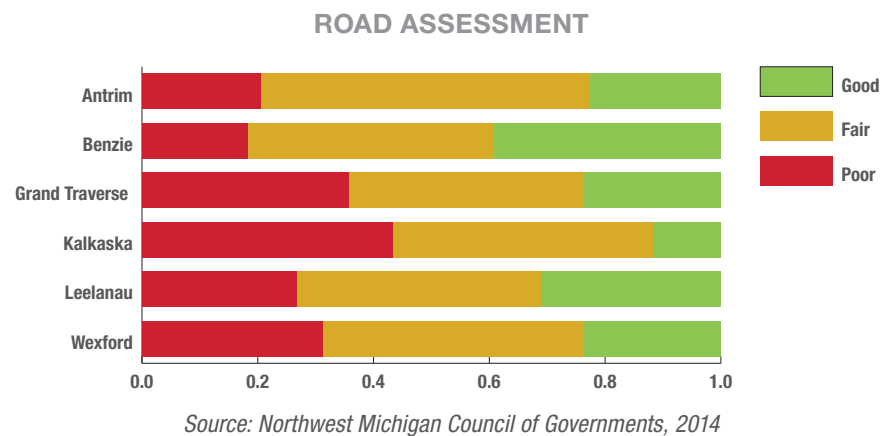
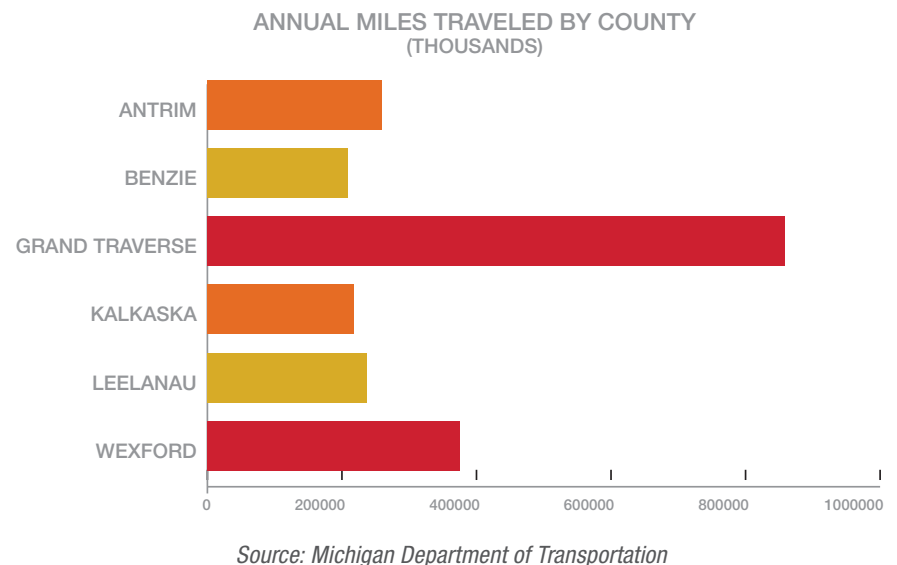
visitors travel, largely by car, to travel throughout the region on roads that are designed for a smaller year-round population. As the population, tourism, and related traffic grow in the region, traffic congestion will continue to be a central issue in transportation planning.

There are two kinds of traffic congestion: recurring and non-recurring. Non-recurring congestion is caused from things such as an accident, construction, or inclement weather. Non-recurring traffic congestion, while a major contributor to traffic delays, is usually not a focus of transportation planning efforts. Recurring traffic congestion is due to over capacity, or traffic volumes higher than those for which the road is designed, that causes predictable traffic delays. Most recurring traffic congestion

occurs in urban areas, but as the region continues its growth, predictable traffic congestion will be a major factor in effective transportation planning. The current SLRP names three of the six-county region's road corridors as "highest significance" in regard to traffic congestion management: US-131 (Wexford, Kalkaska, and Antrim counties), M-72 (Antrim, Grand Traverse, and Kalkaska counties) and US-31 (Benzie, Grand Traverse, and Antrim counties).

For the most part in the region, the road network is adequate to carry traffic volumes through most months of the year; however, there are selected areas of congestion during the summer, particularly in the urban area of Traverse City.

In the Traverse City area, east-west routes carry the greatest volumes



of traffic. Major east-west routes include Grandview Parkway (US-31, M-72, M-37), Eighth Street/ Fourteenth Street and South Airport Road. Major north-south routes include M-22, Division Street (US-31, M-37), Cass Road/Street, Woodmere Street/ Barlow Street, Garfield Road, Center Road (M-37) and Three Mile Road. In the Petoskey area, significant congestion is experienced on U.S. 31, U.S. 131 and portions of M-119. All of these roads are very near or above their design capacity, particularly during the busy summer months. Additionally, many of the roadways were developed with uncontrolled access, resulting in multiple driveways onto the road, which can cause traffic backups and safety concerns. Generally speaking, traffic crashes on these corridors are predominately rear-end crashes that involve turning movements.

Other areas of traffic congestion include the regional Lake Michigan shoreline communities of Frankfort, Empire, Leland, Northport, Suttons Bay, and Elk Rapids. For these areas in particular, the summer tourist season brings traffic volumes significantly higher than average. In some communities, the primary commercial corridor is also a state highway, and in the busy summer season, high traffic volumes can affect local businesses. A challenge to addressing summer peak traffic congestion is whether to expand capacity to meet a relatively short period of high demand.

Congestion has driven extensive and heated discussions on potential transportation improvements that may address congestion, such as road widening to accommodate additional

traffic; and bypasses that would route through traffic around cities or villages on higher-speed roads. Bypasses have been discussed, and in some cases implemented, in communities including Traverse City, Cadillac, Manton, and Kalkaska.

In Traverse City, bypass discussions have been heated and controversial. Discussions around a planned connection of Hartman and Hammond Roads and crossing over the Boardman River, began in the early 1990's in order to address the existing Cass Road Bridge in the Boardman River Valley, which was classified as being critically deficient by the Michigan Critical Bridge Committee in 1988 and slated for replacement based on funding availability. The bridge project advanced through several stages of planning and permitting, until 2003 when opposition

Levels of Service

Transportation planners use a benchmark called Level of Service to measure the volume of traffic to the design capacity of the road. The following is a description of the Levels of Service and the volume to capacity ratios:

Level of Service	Definition	Volume to Capacity Ratios
A	Conditions of free flow; speed is controlled by driver's desires, speed limits or physical roadway conditions	0.0 to 0.34
B	Conditions of stable flow; operating speeds beginning to be restricted; little or no restrictions on maneuverability from other vehicles	0.35 to 0.50
C	Conditions of stable flow; speeds and maneuverability more closely restricted; occasional backups behind left-turning vehicles at intersections	0.51 to 0.74
D	Conditions approach unstable flow; tolerable speeds can be maintained but temporary restrictions may cause extensive delays; little freedom to maneuver; comfort and convenience low; some motorists at intersections, especially motorists making left turns, may wait through one or more signal changes	0.75 to 0.89
E	Conditions approach capacity; unstable flow with stoppages of momentary duration; maneuverability severely limited	0.90 to 0.99
F	Forced flow conditions; stoppages for long periods; low operating speeds	Greater than 1.00

to the project, based on potential environmental and land use impacts, grew through grass roots activities. The Grand Traverse County Road Commission paused the permit process in 2004, and federal funds designated for the project were re-appropriated by U.S. Congress to be used for a long-term planning process, subsequently entitled The Grand Vision. Over three years, 15,000 citizens got involved and voiced their opinions through surveys and a series of public workshops. This input, with unparalleled collaboration between government, non-profits and the private sector, shaped The Grand Vision, which studied residents' preferences for growth and its impacts on transportation needs. The Grand Vision is a comprehensive analysis of land use and transportation, as well as the intertwined issues of housing, energy, natural resources, and food and farming.

While less controversial, the extension of the US 131 Freeway from Cadillac to Petoskey has been a long standing proposal that had a strong advocacy group, but has not historically ranked high on the MDOT list of projects. Major upgrades to the route of US-131 have been completed in Wexford County, including the completion of the "Cadillac bypass" in 2001 and the "Manton bypass" in 2003, both of which are actually just segments of a long freeway extension from south of Cadillac to north of Manton. A northeasterly continuation of the US-131 freeway past Fife Lake toward Kalkaska and beyond had been studied for several years, but at present, MDOT has shelved all plans for a US-131 freeway north of the Manistee River bridge between Manton and Fife Lake, due to traffic volume and environmental considerations. Safety and capacity improvements to the corridor have been promised, however.

Bypass discussions encompass a number of the region's largest transportation issues: congestion and traffic volumes; the impacts of traffic and transportation infrastructure

on land use, business, and the environment; and the varying roles of state, local, and federal partners in the transportation improvement process. There are many ways to deal with congestion; however, developing consensus of the best approaches to addressing congestion requires careful study and participation from all stakeholders.

State Highways & Commercial Corridors

Many of the six-county region's most prominent roads are state highways. Located within the region's growth and investment areas are a number of commercial corridors, places with significant concentrations of both commercial and residential development that act as commercial, service, and employment centers for surrounding communities. These commercial corridors may include downtown areas or strip commercial development along state highways or arterials, and are often the most visible portion of the region's communities. Many act as visual gateways into the

110 
COMMERCIAL CORRIDORS

60 
COMMERCIAL CORRIDORS
LOCATED ALONG
STATE TRUNKLINES

114 
MILES OF COMMERCIAL
CORRIDORS

Northwest Michigan Council of Governments, 2014

community, creating visitors' first impressions and expectations of the community. These corridors also carry large volumes of both local and regional traffic and are heavily influenced by the region's transportation network. 59% of these corridors are located along state trunklines.

Recognizing the importance of commercial corridors to the economies of individual communities and the six-county region as a whole, Networks Northwest conducted a commercial corridor inventory (CCI). Local governments were asked to identify commercial corridors and the assets within these corridors. The resulting inventory detailed infrastructure assets, population, housing, employment, and other data for each of the 70 commercial corridors identified by local governments within the region's growth and investment areas. The CCI indicated that over two-thirds of the region's jobs are located within a quarter-mile of one of these commercial corridors; and that over a third of the region's population lives within that radius. Population, housing, and

employment densities in and around commercial corridors are higher, on average, than densities regionwide.

Despite these economic and population impacts, commercial corridors struggle with a variety of challenges, including transportation, design, and development-related issues. High traffic counts in these corridors can act as both a blessing and a curse: while high traffic volume renders businesses more visible, high traffic volumes and speeds create challenges in walking to or accessing businesses, and can create an unwelcoming environment for customers and pedestrians.

As many of these areas are the gateways into community core areas, their design and functionality contribute to the community's image and sense of place. Yet many corridors lack a cohesive design, resulting in traffic hazards and a disjointed development pattern. Those areas leading into downtowns may also suffer from disinvestment, declining property

values, and blight, thereby negatively impacting the local sense of place.

Commercial corridors present important opportunities for growth, development, and redevelopment, with important assets like sewer and water services, properties with high visibility, and a proximity to a variety of service and residential areas. Yet, new development often occurs outside of these areas. Infrastructure costs can discourage new investment, while the costs and risks involved in developing blighted or potentially contaminated areas can discourage other developers and zoning may act as a barrier for some types of development or redevelopment and result in poor functionality and design. However, one of the most fundamental challenges facing these commercial corridors is their location along busy roads. Businesses and homes in and around these corridors experience significant business and safety impacts related to the flow of traffic, including unsafe pedestrian environments, high

traffic speeds, and poorly-planned access management that causes safety and congestion concerns. However, decisions about transportation funding and improvements aren't always made in the context of these related land use, growth, and investment discussions. When transportation planning fails to account for land use impacts or economic development needs, communities may experience added congestion, safety issues, and increased construction or maintenance costs which in turn can have negative impacts on communities' abilities to attract and manage new growth and investment. Many communities struggle to balance the desire for safe, efficient traffic flow with pedestrian improvements and improved corridor aesthetics along these important transportation routes. Additionally, state transportation agencies play an enormous role in growth and development along these corridors, particularly as they relate to pedestrian improvements and traffic flow.

Transportation Access & Equity

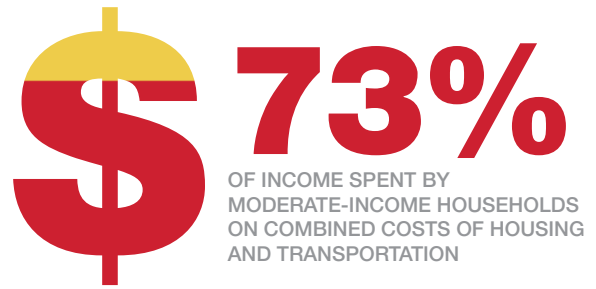
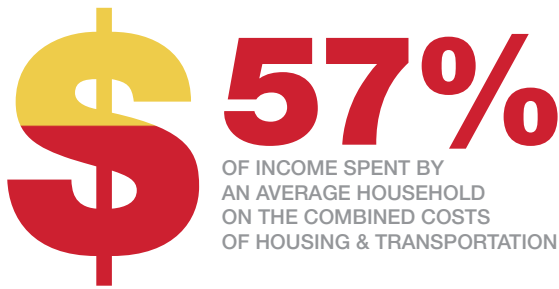
Northwest Michigan's rural character scattered development patterns leave many residents dependent on private vehicles, leading to higher transportation costs. Long commutes between the region's more "affordable" housing and its employment centers create added transportation costs for those that "drive til they qualify" - that is, those who move far from employment centers in search of cheaper homes. In the Traverse City/Cadillac micropolitan areas, because of long travel distances between homes and work, the annual cost of transportation can exceed \$15,000. When considered in the context of other housing costs, such as heating and utilities, the costs of transportation for an average regional household leave little left in the budget for other basic needs like housing, food, and medical expenses. These untenable financial situations can result in crisis situations, with many lower-income residents forced to choose between traveling to work, paying utility bills, making monthly mortgage payments or rent, purchasing necessities like food, or making needed repairs to the home. Transportation costs prevent many of those living in or near poverty from owning or driving a vehicle. Many who do own cars—on which they depend for employment and other daily necessities—report that they are "one repair bill away" from not having transportation, which, in the absence of effective and timely transit, can affect their ability to get to work and maintain employment.

Options outside of private vehicle ownership are limited, however. Transit is reported as the "option of last resort" for individuals that need to get to work. Bus service times rarely coincide with employment schedules, which include very early mornings, late evenings, and weekend hours, particularly for those working service jobs. Additionally, most bus service in the six-county region is demand response, or dial-a-ride, which leaves no assurance that any rider can get to work or to an appointment on time.

When faced with limitations in respect to private vehicle ownership and transit access, many individuals in the region bike or walk to work and other places, which presents different challenges. Most bike trails are designed for recreation, rather than for commuters, and may not connect with or provide routes to important destinations such as employment or shopping centers. Many jobs are located in high-traffic commercial areas—often without sidewalks—that present major obstacles and safety hazards when walking or crossing a street. These difficulties are compounded by winter weather, when snow may make some walking or biking routes impassable. And, because road design may not accommodate those with disabilities, disabled individuals experience more difficulties in accessing non-motorized transportation pathways. Biking or walking is likely not an option at all for those that live long distances away from their jobs or other needed destinations.

\$16,076

AVERAGE ANNUAL **TRANSPORTATION COSTS** FOR AN AVERAGE WAGE HOUSEHOLD IN BENZIE, GRAND TRAVERSE, KALKASKA, LEELANAU, MISSAUKEE AND WEXFORD COUNTIES



Road Safety

Transportation safety for users, passengers, and pedestrians must always be on the forefront of transportation planning. In 2013, there were 18,365 automobile accidents, or crashes in Northwest Lower Michigan, not including deer/car collisions. These crashes resulted in 119 fatalities and over 4300 injuries.

In rural areas of the region, the predominant crash type involved a fixed object, such as trees or fences. These crashes are often influenced by factors such as lighting, weather, and other driving conditions. In urban and congested areas, however, including Grand Traverse and Emmet counties, rear-end crashes make up the largest proportion of traffic crashes, accounting for over a third of all accidents. In many cases, high degrees of congestion and poor access management contribute to the crash.

Other key safety issues facing transportation planning in Northwest Michigan include issues such as:

- Intersection/ Road departure safety;
- Young/Elder driving groups;
- Altering negative driver behavior;
- Highway work zones;
- Snowmobile crashes;

- Seatbelt usage;
- Deer accidents;
- Pedestrian and bicycle safety.

One notable safety issue often raised in communities that feature commercial corridors along state trunklines is that of pedestrian safety. High volumes of traffic along these roadways, combined with relatively high traffic speeds, create safety concerns for pedestrian crossings across the trunkline. In some cases, these trunklines include high concentrations of hotels, restaurants, and other tourism-related assets along both sides of the road; however, access to and from these destinations often lacks safe pedestrian crossings, discouraging pedestrian activity. The significant role that state transportation stakeholders play in improvements to these trunklines can create challenges for communities working to address this safety issue locally.

Freight Routes

The large majority of the nation's products is delivered from producers to retailers for purchase by consumers by trucks through the existing road network. Truck traffic typically represents between 5% - 8% of the total traffic volumes, depending upon the road. This percentage calculation reflects the presence of semi-truck traffic on the road system, which may include trucks associated with a

freight service operation in the region or may be carrying supplies directly to commercial or industrial business operations. In some cases, cargo from semi-trucks is transferred to smaller trucks for final local delivery. In other cases, deliveries are made during off-peak hours. There are, nonetheless, times when semi-trucks are travelling in urban areas during peak traffic hours. Major travel routes for truck traffic need roads designed to accommodate semi-truck traffic movement including turning movements and passing lanes. These routes are essential components of the region's economic activity and strength. At times, these design features can seem contrary to pedestrian and bicycle multi-modal goals. It operates on a larger scale than personal vehicle travel and can sometimes conflict with other transportation mobility issues.

Opportunities: Roads & Highways

The region's road and highway network is impacted by a wide range of interconnected factors. Addressing its needs therefore requires a comprehensive approach that accounts for all factors, including existing needs, future population trends and development patterns.

The Grand Vision provides an important example of how to determine the most effective course of action for transportation infrastructure improvements. It sets the stage for a different approach to congestion management in core urban areas, by considering capacity issues in the context of land development policies, mode shift incentives – such as funneling some traffic into transit or non-motorized means of transportation – and travel demand strategies, as well as in some cases, areas where safety and capacity

The best method for preserving as much roadway capacity as possible is to reduce the number of driveways on the roadway and provide additional inter-parcel connections to reduce conflicting turning movements along the corridor. Communities can develop access management plans that can integrate zoning approvals for development projects and public capital improvement plans to manage the corridor access. The access management plan should be developed and implemented as soon as possible, since such the opportunities for changes come quickly, should be well planned to avoid undue time delays and burdens on private development projects, and the changes are incremental in nature and take years or even decades to fully develop.

Communities can conduct gap analysis, which measures traffic volume data with road design capacity to determine the Level of Service of a particular corridor or section of road.

improvements are needed. This methodology focuses investments on strategic and targeted improvements in key intersections and areas of high crash incidence, rather than the “business as usual” approach of road widening

To assess road needs, communities can conduct gap analysis, which measures traffic volume data with road design capacity to determine the Level of Service of a particular corridor or section of road. Traffic volume data is measured throughout the region in varying degrees, and communities can determine those areas in which additional traffic volume data may be necessary. For state trunklines, capacity information is available from MDOT. For city and county roads, the capacity for each segment is calculated based on a specific methodology prescribed in the Highway Capacity Manual, which is published by the Transportation Research Board. The methodology is different for the three subcategories of road applicable to the six county region: rural multilane highways; rural two-lane highways; and arterials. Within gap analysis, traffic volume is divided by design capacity to calculate the Volume to Capacity Ratio, which is an indicator of how well the road functions. This Ratio is then grouped into ranges that indicate operational characteristics of the road, called Level of Service. The Level of Service provides an understandable “grade” for roadway and focuses attention for either reducing traffic or increasing design capacity in those sections with an “E” or an “F” grade, which indicate safety and capacity transportation gaps.

Safety improvements such as rumble strips, luminescent paints, the ability to view signs more easily, continuous safety education, and improving crash data to identify areas of needed improvement are current efforts to minimize transportation related accidents. Additionally, the prevalence of rear-end type accidents at intersections can be effectively mitigated by providing larger and more visible advance warning signs. This project type can easily be implemented because of its low cost and lack of right-of-way acquisition. Access Management uses a variety of proven traffic techniques designed to effectively control driveways and intersections to maintain safety at a roadway's full traffic carrying capacity. Implementing an access management program will encourage smooth and safe traffic flow on community roadways and can help communities avoid some of the traffic problems caused by uncontrolled strip development.

Another intersection safety mitigation technique is to add channelizing lanes to provide turning traffic an opportunity leave the through traffic lanes when slowing / stopping to make a turning maneuver. Intersections that are near capacity and do not have appropriate right turn and/or left turn lanes, tend to have conflicts between through traffic and turning traffic in the same direction of travel resulting in a prevalence of rear-end type accidents.

Accidents on curved roadway segments with high crash concentrations can be mitigated by installing centerline and shoulder rumble strips. These

relatively low cost mitigation techniques can be implemented without acquiring new right-of-way.

Certain segments of roadway currently have excess capacity: that is, the traffic volumes on the road are significantly lower than the volumes for which the road was designed. When roads are projected to retain this excess capacity, communities and stakeholders may consider “road diets.” Road diets involve reducing the number of lanes on these road segments, in order to provide room for streetscape and multi-modal facilities, such as sidewalks, bike lanes, or transit stops, within the road right-of-way without causing future capacity concerns. This is especially true for road segments that have adjacent land-use patterns of commercial and residential development that can benefit from additional multi-modal facilities. Aesthetic improvements can also be implemented to improve the design of the corridor.

Development limitations or complexities in cities or villages can restrict the amount or affordability of housing in these areas, leading to shortages of affordable housing in urban areas. These affordable housing shortages force many families and individuals to “drive til they qualify,” that is, commute farther into the countryside where homes are cheaper. Planning and zoning for new housing, or higher-density housing, in areas close to jobs, services, and shopping can create more opportunities for new residential development in locations with lower transportation costs – while also reducing traffic and congestion.

Communities can also work to develop sidewalk or trail connections between residential neighborhoods and commercial areas or services, in order to provide alternative transportation options for residents. Improving pedestrian and bicyclist safety along connecting routes can also encourage more residents to walk or bike,

Road diets involve reducing the number of lanes on road segments, in order to provide room for streetscape and multi-modal facilities such as sidewalks, bike lanes, or transit stops.

For segments of roadway that are going to function as key connections between population centers and projected to be over-capacity, communities might consider adding through lanes. These capacity improvement projects represent major transportation investments.

Signal Optimization projects seek to keep the signal timing programs current with traffic patterns and make the most efficient use of the traffic signal. These projects require detailed traffic counts and turning movement studies to be completed and used by qualified traffic operations engineers.

Each of the County Master Plans include provisions for maintaining an efficient and effective roadway transportation network, and highlight access management, multi-model transportation, expanding transportation options, expanding non-motorized trails and pathways, and improving safety.

Planning and zoning policies contribute in many ways to high transportation costs. Zoning regulations often require the separation of land uses, resulting in the development of new homes built in neighborhoods that are not connected to commercial areas, employment centers, or schools—leaving many residents dependent on a vehicle.

reducing their dependence on a car. In rural, auto-dependent areas, transit changes that offer greater connectivity and more efficient travel times may make transit more accessible and realistic for rural residents that are currently dependent solely on a private vehicle.

Transportation and land use planning should consider locations for freight terminals and businesses with freight service. Locations served by rail, air service, sea ports and major roads are ideal. Space may need to be preserved through land use planning to minimize future conflicts and to allow for future expansion and additional economic development. Planning efforts should also consider the impact on those roads carrying semi-truck traffic. Specialized models can predict the impact of freight on proposed developments and future road conditions.

Transportation and mobility are vital to regional economic activity and personal well-being, connecting people to jobs, education, health care, and community. Alternative transportation options such as public transit provide access to all types of riders—commuters, seniors, the disabled, visitors, and students—and allows residents and tourists to contribute economically to the region. The services provided by public transit agencies spur economic activity, lessen traffic congestion and emissions, and add value to our quality of life.

Transit access is an important factor in the struggle for equal opportunity among those with disabilities, lower-income households, and seniors. Because our nation’s investments in transportation infrastructure have disproportionately favored cars and highways, those who cannot afford cars or do not drive cars often lack viable transportation options. Affordable and reliable transportation allows people with disabilities, seniors, and those with limited resources access to important opportunities in education, employment, health care, housing, and community life.

However, transit access throughout the six counties has historically been limited. Transit agencies face the challenges of serving permanent residents and visitors throughout a region that is generally low in density and large in area, requiring long bus routes to connect the activity centers. Other significant challenges include serving high volumes of seasonal tourists who come to the region; providing service with travel times that enable reasonable commutes for the region’s workers, and ensuring financial sustainability by increasing revenues and controlling operating costs. In addition, the ability to provide a coordinated, efficient transportation system requires great expertise in navigating the

complicated network of federal transportation funding sources and rules, and applying this understanding to the web of community partners and needs. Layered onto federal funding sources are state and local governments, transportation providers, and supporting social services. The person looking for a ride and the organizations offering rides can get lost in the complexity of navigating this network of often overlapping programs.

Existing Transit Services

The six-county region is served by six organizations providing transit services in all six counties. Services include both “fixed-route” service—in which a bus arrives at known stops throughout the day to take riders along a regular route—and “dial-a-ride,” or demand-response service, which allows residents to call the transit agency to be picked up at one location and taken to another. The Bay Area Transportation Authority (BATA) operates a fixed route system in greater Traverse City area with connections to Acme, Kingsley, and Interlochen in Grand Traverse County, and Empire and Suttons Bay in Leelanau County. The Benzie Transportation Authority (Benzie Bus) also recently added a fixed route from Thompsonville to Interlochen, with connections from Frankfort, which connects to the BATA system.

Ridership in each county varies widely, from about 40,000 riders annually in Antrim County to a high of about 575,000 riders annually in Grand Traverse County. Disabled riders make up about a quarter of transit users, and about 10% of transit riders are seniors. Ridership increases in the summer, with additional passengers using the fixed-route village connector services in particular

Barriers to Transit Use

While transit agencies and advocates have made important strides in improving transportation services region-wide, a number of factors persist in discouraging new transit ridership.

Awareness, familiarity, and comfort with transit systems is important in increasing transit ridership. Using transit can be intimidating for many first time riders – especially the elderly and people with disabilities who may need assistance in accessing the system. Other would-be riders may struggle to navigate the system or routes, while still others may be discouraged from using transit due to various stigmas associated with bus usage.

In addition to these barriers, the practicalities of using transit in rural areas prevent many workers and others from using transit for daily needs. Because much of the region

EXISTING TRANSIT SERVICES

COUNTY	ORGANIZATION	FIXED ROUTE	DIAL-A-RIDE
Antrim	ACT – Antrim County Transportation		✓
Benzie	Benzie Bus	Thompsonville - Interlochen	✓
Grand Traverse	BATA – Bay Area Transportation Authority	Traverse City area	✓
Kalkaska	KAT - Kalkaska Area Transit	Links to Benzie and Leelanau	✓
Leelanau	BATA – Bay Area Transportation Authority		✓
Wexford	CWTA – Cadillac Wexford Transportation Authority	Empire, Suttons Bay to Traverse City	✓

Transit Plans and Studies

Emmet County Transportation Coordination Study (2005)

The included recommendations for an enhanced system which would include “around town” demand response (dial-a-ride) systems combined with scheduled out-county flexible routes. Recommendations should be considered a small scale start-up system, with the anticipation that the system will grow as ridership and opportunities increase. Also in Emmet County, a group of representatives from human service agencies, business, groups serving seniors and persons with disabilities, and other community leaders called Friends Enhancing Emmet Transit - FEET are working to build Emmet Transit, a countywide transportation system that would provide limited fixed route and “dial-a-ride” bus service throughout the county. FEET prepared Proposed Public Transit Service Options for Emmet County, which recommended an expanded system financed through a proposed millage based on using the current public transit provider, Straits Regional ride, to provide “around town” demand response (dial-a-ride) service combined with scheduled out-county flexible routes.

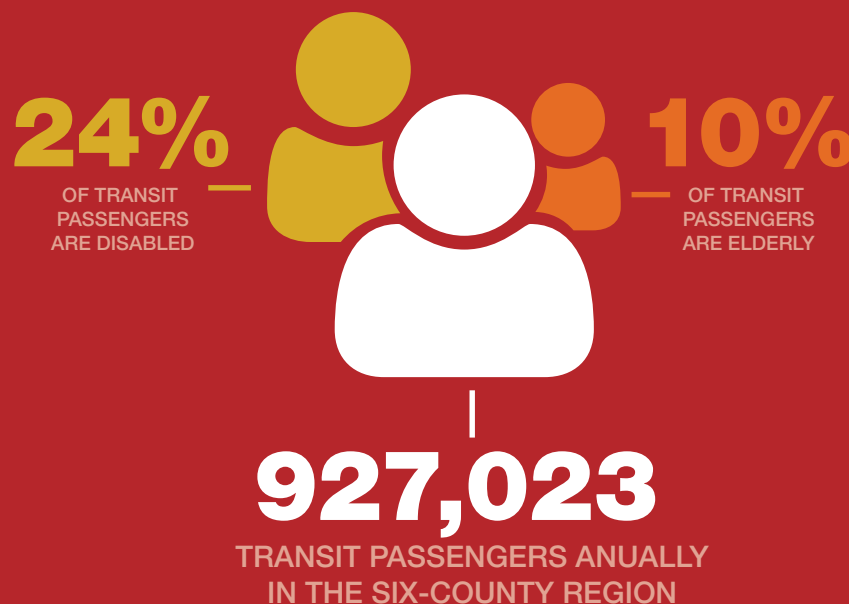
Expanding Transportation Choices in the Grand Traverse Region, Connecting Villages and Towns with Public Transit
The Michigan Land Use Institute published this 2009 study which suggests the public transit services provided in the region expand their target population to commuters, which are the largest potential market for increasing bus ridership. The report states that evidence suggests commuters will

only use fixed route bus service that offers a fast, efficient, reliable transportation choice, and offered insight into how to effectively increase and improve public transit services.

Grand Vision Mobility Management and Coordination Strategies
Prepared under the auspices of the Michigan Livable Communities Demonstration Project and prepared by Smart Growth America for the Grand Traverse region, the Grand Vision Mobility Management plan provides a series of recommendations and implementation strategies that can serve as a model for the whole region. The report included specific actions the region can take around the following 5 transportation priorities, as identified by stakeholders:

1. Improve Coordination between transportation providers (public and private)
2. Integrate transit with the tourism economy
3. Consider water transportation
4. Integrate transportation with regional planning
5. Coordinate and integrate human services transportation into a broader mobility management effort

The plan's recommendations and strategies are incorporated in the Framework for Transportation in Northwest Michigan. The complete Mobility Management report is available online at www.nwm.org/rpi.



is served by demand-response transit, travel times are generally lengthy. Poor connections between communities and across county boundaries also act as barriers, particularly for the many commuters and others that must frequently cross county lines for employment, shopping, or medical appointments. Without a coordinated fare system or schedules, transfers between counties can be costly and time-consuming.

Further, input heard throughout the *Framework for Our Future* process indicated that bus service times rarely coincide with employment schedules, which include very early mornings, late evenings, and weekend hours, particularly for those working service jobs. Additionally, the lengthy travel times associated with demand response services leaves no assurance that any rider can get to work or to an appointment on time.

Regional & Intercity Bus Service

Currently, most public transportation in the region stops at county lines, and the convenience of transferring to the adjacent county service varies greatly. In some cases direct service is offered, but limited resources prevent this service from meeting the needs of commuters. For example, Kalkaska offers round trip service to Traverse City three times a day, three days a week. While this could be effective for meeting many NEMT needs, it will not meet commuter needs.

The Grand Traverse region is served by Indian Trails (Trailways) Schedule 14847 between Petoskey and Grand Rapids, one round trip per day, seven days a week. The bus is also an Amtrak Thruway Schedule 85328. No passenger rail exists in the Grand Traverse region. The Indian Trails bus route offers one trip north and one trip south every day serving the following communities included in the six-county region: Cadillac, Manton, Kingsley, and Traverse City. Riders have less than an hour wait for a transfer in Grand Rapids to travel to Chicago, Kalamazoo,

Lansing, Flint, and Detroit. All coaches are wheelchair accessible. In the remainder of the state, Indian Trails operates four daily trips between Chicago and Flint, with less frequent service throughout northern Michigan. Riders can transfer onto Amtrak, other Indian Trails buses or Greyhound buses in Grand Rapids to travel across Michigan and the country.

Transit Infrastructure & Technology

Technology is essential for both transit riders and providers, in making transit easy to use and in managing the transportation network. While some of the transit providers in the six counties are currently working to improve technological capabilities, the 2013 Mobility Management plan identifies a general lack of technological capacity as one the weakest elements of the region’s existing transit services. Transit websites throughout the region vary widely in terms of the level of information provided; and all transit websites lack real time bus tracking and other important elements. On all the websites, information about regional transit options is inconsistent and often lacking.² In addition, as of 2014, none of the region’s transit providers have implemented Google Transit Feed Specification (GTFS), which enables agencies to publish transit access data online and allows

users to access transit information on Google map applications. Dispatch capacity, too, varies greatly between the transit agencies, with dispatch systems ranging from intelligent transportation solutions (ITS) software to pen and paper.

In addition to technology, transit requires other supports to enhance access, convenience, and safety for riders. For instance, bus stops should be easily accessible for both riders and drivers, with easily-navigated paths to and from the bus stop. For ideal bus stop placement, this infrastructure should be coordinated with development reviews and approvals, road connectivity, and complete streets considerations that ensure rider safety. However, the lack of coordination between land use decisions and transit infrastructure has resulted in commercial development site designs that require buses to drive through parking lots to drop off and pick up passengers. In many locations, state highways have no bus stop infrastructure and no safe way for passengers to walk between the road and the entrance of the commercial buildings. Driving through large parking lots typically causes significant travel time increases and also increases safety concerns as drivers negotiate unpredictable parking lot traffic and pedestrians.

	2013 TRANSIT AGENCY RIDERSHIP REPORT					
	COUNTY	TOTAL PASSENGERS	ELDERLY PASSENGERS	PERSONS W/ DISABILITIES	ELDERLY W/ DISABILITIES	TOTAL ELDERLY AND DISABLED
AGENCY						
Agency	County	Total Pas-sengers	Elderly Pas-sengers	Persons w/ Disabilities	Elderly w/ Disabilities	Total Elderly and Dis-abled
Antrim County Transportation	Antrim	39,435	2,749	15,873	0	18,622
Bay Area Transportation Authority	Leelanau & Grand Traverse	575,217	43,001	129,172	24,128	196,301
Benzie Transportation Authority	Benzie	89,382	22,076	23,401	1,603	47,080
Cadillac/Wexford Transit Authority	Wexford	119,228	13,908	44,864	18,111	76,883
Kalkaska Public Transit Authority	Kalkaska	103,761	8,040	4,126	4,805	16,971

Source: MDOT, Public Transportation Management System Performance Indicators Report

Opportunities: Transit

Transit agencies, transportation partners, communities, volunteers, advocates, and other stakeholders can engage in a number of strategies to improve the six-county region's transit service, including regional coordination of service, business and intergovernmental partnerships that encourage transit use and interconnection of regional systems, zoning and land use practices that facilitate access to transit and encourage sustainable development, and improved information and public awareness through signage, website enhancements and coordination with tourism-oriented organizations.

A regional, coordinated approach to transit service can improve travel times, reduce costs, and enhance efficiency for both riders and transit agencies. An important first step to achieving greater regional coordination is to form coalitions of local governments, tribes, education, business, and citizens, agencies that represent transit-dependent populations, and advocacy organizations. A regional coalition can come together to advocate service expansion and pool limited resources that could be directed to provide a transit funding base. From there, partners can consider coordinated routes and fare structures between counties to help residents efficiently reach important services in nearby communities. Working with non-public transportation providers and other transit providers, such as Indian Trails, Amtrak, or private transportation services, can create additional opportunities to offer new or enhanced services.

To reduce barriers to using transit and promote greater ridership, a number of opportunities exist to introduce new users to the service. Travel training programs help people become comfortable using transit services by improving their knowledge of routes, stop locations, fares, and other aspects of fixed route bus service. Travel training can include live demonstrations of how to board the bus, pay, and navigate transit schedules and other information such as web based resources and mobile apps. Many communities around the nation have developed successful travel training programs through partnerships between human service agencies and transit providers. Trainings may be conducted at convenient locations such as senior centers or during events attended by target populations.

Transit partners can help to raise awareness of service opportunities by implementing region-wide unified branding and messaging on websites, hard copy materials, buses, bus stops and advertising will be particularly important for increasing ridership, particularly by tourists. Linking transit service to airports represents another important opportunity to introduce both visitors and residents to public and/or privately operated mass transit. A trip to or from the airport may be the first time an individual considers using transit, and if the experience is positive it will encourage them to try using transit for other trips.

A regional, coordinated approach to transit service can improve travel times, reduce costs and enhance efficiency for both riders and transit agencies.

Coordinating with different community partners, such as human service providers can also help transit providers achieve efficiencies and enhance services. Human service agencies can help to expand services or capacity by contributing funds to meet the whole community's needs. Volunteer driver programs represent another approach to meeting human service transportation needs and have the added benefit of providing flexibility to meet the diverse needs of different populations. While volunteer driver programs can't fulfill all such needs, these programs can serve an important role in filling gaps in service.

Other partnership opportunities include working with tourism and events industry to identify opportunities for expanded service. Events, businesses, and locations such as festivals, resorts, casinos, and state and national parks attract visitors who are often predisposed to getting around without a car. Connecting these locations with transit can improve visitor experience while reducing congestion in the region's busiest attractions.

Transit works best when supported by good land use, road connectivity, and complete streets: coordinating new development with transit infrastructure needs will result in improved safety and efficiency. Communities can consider incorporating transit guidance in site plan review or other relevant zoning policies. Additional needs include improved communications technology that can help residents plan trips while improving the ability of transit providers to maximize services and efficiency

Transit organizations have access through the RTF process to secure funding for transit capital expenditures such as buses and facilities. However, because these transportation sources only fund capital investments, funding for other transit improvements and expanded services will require coordination among many partners to identify grant funding sources or opportunities for partnerships that can enhance cost efficiencies.

Non-Motorized Transportation

Trails are pathways that are used recreationally or for transportation by a variety of users, including bicyclists, horseback riders, snowmobilers, or hikers.

The six-county region boasts over 1,500 miles of motorized and non-motorized trails. Motorized trails include those that were designed to accommodate motorcycles, ORVs or snowmobiles, while hiking, biking, horseback riding and snowshoeing are among uses permitted on non-motorized trails. Multi-use trails are those designed to accommodate multiple user types simultaneously, such as pedestrians and cyclists. Other trails might be designed and designated for certain uses, such as hiking trails, a bike path, or snowmobile or ORV route.

In addition to dedicated trails, there are hundreds of miles of sidewalks and bike lanes, primarily within developed communities that provide pedestrian and bicycle access. These facilities are particularly important to those who can't or don't drive, due to disability or income, and have limited options to access jobs and services.

Non-motorized facilities, including both trails and sidewalks, provide a unique opportunity to combine physical activity with transportation, linking destinations while providing alternatives to motorized transportation. Close, convenient and connected non-motorized pathways encourage physical activity, with benefits in community health. In addition, non-motorized pathways, particularly trails, have been found to have significant economic impacts, generating tourism and visitor spending in retail sales, hotel stays, and restaurant visits. Many trail users travel to the region specifically for access to trails and contribute substantially to local and regional economic activity, and trails are also a top community amenity sought by prospective homeowners.³

Because non-motorized facilities are an important and desired

quality of life amenity that enhance recreation opportunities and draw new residents – particularly the skilled workforce that drives new economic activity – to a community, they are increasingly recognized as important community infrastructure and economic development assets. In addition, they provide important transportation options to the many residents throughout the region that cannot or do not drive. However, despite their importance to all parts of the community, they are often treated primarily as recreation assets that do not receive the same level of funding priority as other transportation options, complicating the development process and creating funding hurdles for new trail or sidewalk connections or development.

Existing Non-Motorized System

The six-county region has a long and extensive history of collaboration to develop non-motorized transportation opportunities for the region. There are over 1,200 miles of non-motorized trails and pathway in the region; all developed with public private partnerships.

There are two primary trail networks that have been developed in partnership with local governments, road commissions, MDOT, MDNR and local citizen advocates: TART Trails in the Grand Traverse Region and the Betsie Valley Trail in Benzie County. Other trails include the Kalkaska Area Recreation and Transportation Trail, the White Pine Trail, and the North Country Trail.

TART Trails

TART Trails is a system of 10 trails that have been developed in partnership with Grand Traverse County, the Grand Traverse County Road Commission, MDOT, MDNR, local citizen advocates, and TART Trails in various stages and phases. The trails and trail organizations have been brought together under the umbrella

of Traverse Area Recreation and Transportation (TART) Trails, Inc., a non-profit organization that provides management and development services. Trails managed by TART include the TART Trail; Leelanau Trail; Boardman Lake Trail; Buffalo Ridge Trail; Three Mile Trail; Nature Education Reserve Trails; VASA Pathway; Boardman River Trail; Mall Trail; and US 31 Bike Path

Betsie Valley Trail

The Betsie Valley Trail is 22 miles long and extends from Frankfort through Elberta and Beulah to Thompsonville in Benzie County. The Betsie Valley Trail is owned by the Michigan Department of Natural Resources (MDNR) and is managed by the Betsie Valley Trail Management Council. The Friends of the Betsie Valley Trail, a non-profit corporation formed in 1993, supports the efforts of the DNR and Benzie County by providing many volunteer hours to maintain it. The Friends of the Betsie Valley Trail have worked since 1988 to plan, design, and build this trail. There are still some projects to be funded and completed, including benches and kiosks; parking facilities and trailheads, the Trail from M-22 to the Elberta Lake Michigan beach, and on-going trail maintenance.

Kalkaska Area Recreation and Transportation Trail

The Kalkaska Area Recreation and Transportation Trail (KART) includes one two-mile trail with 28 landscape beds. 34 engraved stones with donor names helped cover the costs of the project, which totaled \$255,000. \$75,000 was raised locally, and \$180,000 was provided through the Transportation Enhancement program of the Michigan Department of Transportation. Additional phases

White Pine Trail

The Fred Meijer White Pine Trail is a linear trail state park that runs 92 miles between Cadillac to Comstock Park. The trail surface is natural ballast and hard packed gravel, with

13 miles of asphalt pavement from Reed City to Big Rapids. The MDNR currently provides only emergency maintenance services and seeks governmental agencies to operate and maintain its linear park trails.

North Country Trail

The North Country National Scenic Trail is an 875-mile linear route across the state, which is part of a national scenic trail from New York to North Dakota. The Trail links outstanding scenic, natural, recreational, historic, and cultural areas in seven northern States. The trail enters Michigan near Morenci in the southeastern corner of the state and heads northwest through both urban and rural settings toward certified trail segments in the Manistee National Forest, then turning northward through the Jordan Valley, Wilderness State Park, and across the Straits of Mackinac.

Pedestrian & Bicycle Safety

In 2013, there were 220 traffic crashes involving pedestrians or bicycles, accounting for nearly 2% of all automobile crashes in the six-counties that year.

Pedestrian and bicycle safety are particular concerns in downtowns and commercial corridors, particularly those located along state trunklines. High volumes of traffic along these roadways, combined with relatively high traffic speeds, create safety concerns for pedestrian crossings across the trunkline. In some cases, these roads include high concentrations of hotels, restaurants, and other tourism-related assets along both sides of the road; however, access to and from these destinations often lacks opportunities for safe pedestrian crossings, discouraging pedestrian activity. The significant role that state transportation stakeholders play in improvements to these trunklines can create challenges for communities working to address this safety issue locally: transportation stakeholders struggle to balance the need to efficiently move large volumes of traffic through these important corridors while safely accommodating other users of the system.

New Routes & Connectivity

While the Northwest Michigan While the Northwest Michigan Regional Non-Motorized Strategy provides goals and priorities for the six-county region's non-motorized routes, the work to be done to detail the routes, secure the property approvals, and design, finance and construct new trails is complex and lengthy: trail development often takes 10 or more years from concept to construction. And, because trail development, by its nature, often crosses government boundaries, the process of planning and implementing trail routes and connections can encounter procedural barriers and political difficulties. Additionally, trail ownership is often divided among various agencies: portions may be managed by the State of Michigan, others might be maintained by nonprofit organizations, while still others are owned and maintained by local units of government. Increasing the complexity of trail management is the variety of user groups engaged in their use and maintenance: while many trail uses are compatible, some activities may preclude the use of the trails for other activities. For instance, mountain biking and hiking have different trail needs, as do winter activities like snowshoeing, fat-tire bikes, and cross-country skiing, creating some safety concerns and usage conflicts.

Maintenance

As in road network maintenance, non-motorized pathway maintenance and upkeep is often the most significant activity involved in development and management, requiring a long-term community commitment. While the acquisition and development of new trails and sidewalks is a lengthy, complex process, involving significant fundraising efforts, once it's acquired, it must be managed and maintained in perpetuity. These are costs that may or may not be adequately planned for in the acquisition process; and major improvements on top of regular maintenance may be difficult for communities to fund.

Social Equity

The availability of pedestrian and bicycle facilities is particularly important to persons in poverty that have few other transportation choices. When faced with limitations in respect to private vehicle ownership and transit access, many individuals in the region bike or walk to work, school, shopping, and services. Commuters on the region's non-motorized facilities face a number of challenges. For instance, while there are extensive sidewalk and bike lane networks in cities and village throughout the community, these facilities are often focused in the downtown and nearby neighborhoods. Typically, affordable housing is located outside of these areas. The expansion of sidewalks by local communities often includes a cost share requirement with adjacent property owners, which becomes problematic in neighborhoods with more affordable housing due to limited homeowner resources and/or because landlords of rental units have little incentive to pay the additional cost. Additionally, most bike trails are designed for recreation, rather than for commuters, and may not connect with or provide routes to important destinations such as employment or shopping centers. Many jobs are located in high-traffic commercial areas—often without sidewalks—that present major obstacles and safety hazards when walking or crossing a street. These difficulties are compounded by winter weather, when snow may make some walking or biking routes impassable. And, because road design may not accommodate those with disabilities, disabled individuals experience more difficulties in accessing non-motorized transportation pathways. Biking or walking is likely not an option at all for those that live long distances away from their jobs or other needed destinations.

Funding

Non-motorized transportation facilities are rarely included in transportation budgets, and are often regarded and treated as recreation. Non-motorized transportation facilities are generally classified as either

transportation or recreation, and funding sources are often exclusive to these classifications. Recreation funding sources may not fund projects perceived as part of the transportation system, and vice versa. However, there is a greater acknowledgement of all funding sources of the value of non-motorized transportation and trails for transportation, recreation, and economic development.

Additionally, the significant expense of these infrastructure improvements and the lack of a long term revenue stream for capital and operating expense require a long-term approach with multiple funding sources. There is federal and state funding available, but these sources are highly competitive, require significant investments of time and effort to secure, and require sizable financial match commitments that may not be available in increasingly tight local budgets.

Northwest Michigan Regional Non-Motorized Strategy

The Northwest Michigan Council of Governments has developed a regional non-motorized transportation plan and investment strategy for the 13 counties in northwest lower Michigan. The strategy includes the ten counties of the NWMCOG region: Emmet, Charlevoix, Antrim, Kalkaska, Grand Traverse, Leelanau, Benzie, Manistee, Wexford, and Missaukee, plus Osceola, Lake, and Mason.

The Michigan Department of Transportation commissioned the effort and uses the plan to prioritize the funding of projects. The guiding vision of this project is to connect existing trails, offering residents and visitors more opportunities for non-motorized transportation, and to enjoy more of the region's natural resources.

The project has gathered information on existing and future trails from each county, township, city and village parks and recreation commission, planning commission and staff, and board members. Subregional meetings were held with trail organizations, groups, and stakeholders to review the proposed trail maps for their input. The compiled maps were presented to the public at subregional trail summits for input and prioritization.

Opportunities: Non-Motorized Transportation

Because financial resources in many of the six-county region's communities – which are often small and rural in nature – are limited, the development of non-motorized transportation facilities often require outside support from community partners such as nonprofits, volunteers, or community foundations. Some communities also work to develop local funding sources through taxes or bonds that can specifically support recreation activities: A community assessment of housing stock and pedestrian/bicycle routes may help inform community plans for non-motorized transportation.

Communities can work to develop sidewalk or trail connections between residential neighborhoods and commercial areas or services, in order to provide alternative transportation options for residents. Improving pedestrian and bicyclist safety along connecting routes can also encourage more residents to walk or bike, reducing their dependence on a car. Planning and zoning can also

SAFETEA-LU (define) also includes funding of certain non-motorized projects, while the Transportation Enhancement (TE) Program is a federally-designated category of funding that allows for the development and construction of non-motorized facilities, among other eligible expenditures. The TE program has been the primary funding source for non-motorized facility development at the local, regional, and state levels in Michigan. There are other federal programs that fund non-motorized facilities, including the Highway Safety Programs, National Scenic Byways Program, and Recreational Trails Program.

State funding sources include the Michigan Natural Resources Trust Fund (MNRTF), the DNR Recreation Improvement Fund, and the Michigan Transportation Fund. State law also requires that at least 1% of a local road agency's Michigan Transportation Funds must be used for the construction or improvement of non-motorized transportation services and facilities. The types of projects, and the accounting for such projects, varies from road

Trails have been developed with an effective and cooperative coalition of local, regional, state, federal government, along with businesses, the general public, and non-profit trail advocacy groups.

be an important factor in encouraging non-motorized transportation. Zoning ordinances can require new developments, or the redevelopment of an area, to provide sidewalks, street furniture, multi-use paths, parking area for bicycles, higher densities, or undeveloped green space, all of which can enhance non-motorized transportation.

To develop new non-motorized pathways or connections, the region boasts a number of successful models. In most cases, trails have been developed with an effective and cooperative coalition of local, regional, state, federal government, along with businesses, the general public, and non-profit trail advocacy groups.

A number of opportunities exist to fund new non-motorized transportation improvements, including local funding sources such as millages, bonds, or community endowments. Grants, however, typically finance the majority of new non-motorized facilities; and many are provided by state and federal agencies. Bicycle and pedestrian projects are broadly eligible for most federal surface transportation funding categories, including federal aid, highway, transit, safety, and other programs.

commission to road commission. These projects are generally not integrated with overall trail planning in many communities. While not likely a significant amount (1% of Grand Traverse County's MTF allocation was \$68,975 for FY 2012), these funds may assist as a match or part of a larger project. A consistent approach to consider projects, integrated with overall non-motorized trail planning, and account for the expenses may help focus and expanded the effect of the required 1% allocation.

To address non-motorized pathway development or maintenance, volunteer groups can help make the most of limited budgets; and the six counties are served by countless dedicated individuals that donate their time and resources to improving the region's natural environment and recreation opportunities. Individuals, scouting groups, and other service organizations often partner with communities to address specific maintenance or improvement needs for trails or other non-motorized pathways. Other communities work with their sheriff's departments to obtain assistance from jail crews to perform some maintenance and improvement activities.

➡ Rail, Air, Water & Freight Transportation

The six-county region's transportation network serves more than residents: roads, air, rail, and water transportation choices are critical for business, tourism, and industry, providing the infrastructure needed to serve visitors to the region and to import and export a variety of products needed for business and industry.

Rail Service

While passenger rail service is not available in the region, rail remains an important transportation need for industry, and is used to transport freight throughout the six counties.

All railroads in the six-county region are owned by the State of Michigan and operated under contract by the Great Lakes Central Railroad (GLC). MDOT has made substantial investments into the state-owned lines that were purchased by the state in the late 1970s and early 1980s to preserve rail service in the area. The Great Lakes Central Railroad is the largest regional railroad in the state of Michigan and covers 424 miles of track (some of which is not publically owned). Current freight traffic includes fruit and other perishables, scrap metal, and lumber. While the State's rail infrastructure carries over 350 million tons of freight annually, few businesses report using the railroad for freight shipments in the region: a 1995 survey of shippers in the Grand Traverse area found six rail users in the region. Of the six, three utilized rail for lumber transport, and two shippers moved machinery and scrap metal by rail. The existing tracks are in poor repair which discourage their use.

A number of structural obstacles exist to rail service in the six counties. Currently, 65% of track in the Great Lakes Central Railroad is limited to a 40 mph speed for freight and 59 mph for passenger service, while 26% is limited to 25 mph for freight and 30 mph for passengers. These limited speeds, which are based partially



on the condition of the tracks, create obstacles to offering full-service passenger rail service in the region. However, despite the challenges associated with implementation of passenger rail service, preserving and enhancing rail service in the six-county region has long-standing support. A 2002 report found that the preservation of rail service and rail right-of-way could enhance regional opportunities for transportation, economic development, tourism and recreation; and strongly recommends that the Northern Michigan Rail System and right-of-way be protected and maintained in its entirety.⁴ In addition, a recent report prepared by the Michigan Land Use Institute details the opportunity for rail passenger

service between Traverse City and Acme, finding that the estimated cost to improve the tracks, less than \$2 million, may be modest enough to secure funding and serve as a model for other subregional rail services.⁵ With major destinations at each end, downtown Traverse City and the Grand Traverse Resort, the rail may provide services as a seasonal tourist shuttle as an achievable first step and a move towards year-round daily commuter service. Implementation of passenger rail service to Traverse City and/or Petoskey was also consistently identified as a top priority through the State Rail Plan public outreach effort. Supporters argue that regular passenger rail service would provide a substantial benefit to the region by

providing transportation alternatives for visitors and residents alike. The State Rail Plan recommends that MDOT initiate a feasibility study of passenger rail service to this region of Michigan that considers potential routes to both Detroit and Chicago.

Air Service

Air transportation is critical to the region's economy. In addition to providing important services to area residents, our airports support our region's strong tourism industry, and significant amounts of freight travel through them on a regular basis.

Cherry Capital Airport in Traverse City, which is owned by the City of Traverse City and Grand Traverse County and operated by the Northwest Regional Airport Commission, is the region's primary airport, providing both air freight service and commercial air service. Commercial parcel carriers United Parcel Service (UPS) and Federal Express (FedEx) both fly out of the airport multiple times each day. In addition, Cherry Capital Airport is a Port of Commerce for shipping. A private carrier service also flies on weekdays from the airport. In 2012, over 375,000 passengers flew from or to Cherry Capital Airport, making it the fifth largest passenger airport in Michigan; and over 3 million pounds of freight passed through the airport in that year, representing the sixth largest amount of air freight in the state.

While Cherry Capital Airport is the largest airport in the region, each county hosts one or more "utility airports" that provide important services to businesses, visitors, private pilots, and others.

Air transportation is critical to the region's economy. In addition to providing important services to area residents, our airports support our region's strong tourism industry, and significant amounts of freight travel through them on a regular basis.

Cherry Capital Airport in Traverse City, which is owned by the City of Traverse City and Grand Traverse County and



SIX-COUNTY REGION'S COMMERCIAL AIRPORT TRAFFIC, 2012-2013

	# PASSENGERS, 2012	# PASSENGERS, 2013	POUNDS OF FREIGHT, 2012	POUNDS OF FREIGHT, 2013
Total	362,059	378,241	2,768,148	2,707,851

Source: State of Michigan Aeronautics Freight Division, 2014

LOCATION	# OF GENERAL UTILITY	# OF BASIC UTILITY	# OF HELIOPORTS	# OF COMMERCIAL AIRPORTS	TOTAL AIRPORTS
Antrim	1	2			3
Benzie	1	2	1		4
Grand Traverse	1			1	
Kalkaska	1				1
Leelanau		3			3
Wexford	1	1			2

operated by the Northwest Regional Airport Commission, is the region's primary airport, providing both air freight service and commercial air service. Commercial parcel carriers United Parcel Service (UPS) and Federal Express (FedEx) both fly out of the airport multiple times each day. In addition, Cherry Capital Airport is a Port of Commerce for shipping. A private carrier service also flies on weekdays from the airport. In 2012, over 375,000 passengers flew from

or to Cherry Capital Airport, making it the fifth largest passenger airport in Michigan; and over 3 million pounds of freight passed through the airport in that year, representing the sixth largest amount of air freight in the state.

While Cherry Capital Airport is the largest airport in the region, each county hosts one or more "utility airports" that provide important services to businesses, visitors, private pilots, and others.

Water Transportation

The six-county region's extensive Great Lakes shoreline has historically contributed to commercial freight movement by ship. Great Lakes ports have the unique feature of connecting to both the Atlantic Ocean via the St. Lawrence Seaway and also the Gulf of Mexico via the US Coast Guard approved Mississippi Barge Route. All commercial ports in Michigan are service by US Customs offices in Detroit, Sault Ste. Marie, Saginaw and Port Huron.

In the six counties, commercial ports are located in Leelanau County in

Greilickville and Benzie County in the City of Frankfort. The Marathon Oil Traverse City Terminal, which served as a primary distribution center for refined petroleum, closed in 2013. In addition, Traverse City is home to the Great Lakes Maritime Academy, Michigan's state maritime academy, where students are trained as deck and engineering offices for the commercial shipping industry.

In addition to commercial shipping, a passenger/freight services is provided to islands in Lake Michigan. Manitou Island Transit provides ferry service to North and South Manitou Islands generally between Memorial Day and Labor Day.

The Grand Traverse Band of Ottawa and Chippewa Indians is currently exploring a ferry/water taxi service across Grand Traverse Bay to connect the Leelanau Sands casino facilities in Peshawbestown with the Turtle Creek Casino in Acme while providing more convenient transportation for tribal members to access tribal services and resources. This system may also be able to be coordinated or integrated with the existing passenger services to the Manitou Islands in Leelanau County.

Opportunities: Rail, Air, Water & Freight Transportation

Transportation and land use planning should consider locations for freight terminals and businesses with freight service. Locations served by rail, air service, sea ports and major roads are ideal. Space may need to be preserved through land use planning to minimize future conflicts and to allow for future expansion and additional economic development.

and businesses have worked together with the State of Michigan and Great Lakes Central (GLC) and their predecessors to address important issues and provide support to ensure continued rail service in the area. Opportunities may exist for working collaboratively in coordination with MDOT's 2011 Michigan State Rail Plan, which guides the development of the rail system and

Space may need to be preserved through land use planning to minimize future conflicts and to allow for future expansion and additional economic development.

The six-county region has a long history of working together to maintain and improve rail service and expand air service. In the late 1980's, a coalition of local governments and businesses came together to encourage Northwest Airlines to provide commercial air passenger and provide a financial assurance mechanism to guarantee minimum revenues for a period of time. Air service was so successful that the minimum revenue requirement was met every year and the financial support was never needed. Significant improvements have been made to the Cherry Capital Airport; its continued growth is critical to the economic well-being of the region.

If the region is intent on preserving rail lines, similar coalitions can also help to address rail needs and overcome financial obstacles. Local governments

rail services in Michigan and establishes state policy involving freight and passenger rail transportation, including commuter rail operations. The State Rail Plan identifies current and future needs of the system, considers and defines public policies that will encourage and enable ongoing investments to the system to support future needs, and identifies priorities and strategies to enhance or preserve rail service that benefits the public. This Plan meets the state rail planning requirements included in the federal Passenger Rail Investment and Improvement Act of 2008 and will help to assure that Michigan is positioned to obtain federal funding for rail projects. The plan will serve as the basis for future federal and state rail investments in Michigan. MDOT has also contracted for a Northern Michigan Freight Rail study, which is expected to be complete in the fall of 2014.

➡ Multi-Modal Transportation Network

Perhaps the most important and most challenging aspect of transportation planning is to integrate multiple modes into an overall coordinated transportation network that provides mobility, choice, access, and convenience for all users. An effective, integrated multi-modal transportation system can reduce congestion by moving more people in the same amount of space and reduce overall system costs by enhancing alternatives to automobile travel, reducing the need for road capacity expansions and on-going maintenance costs. However, the multiple and diverse transportation entities and a funding system that has historically been based on singular transportation modes makes this challenging.

Multi-modal transportation includes transportation systems that move freight and commercial packages through the transportation system. This set of considerations is focused on moving goods rather than people. It is an essential component of the region's economic activity and strength. It operates on a larger scale than personal vehicle travel and can sometimes conflict with other transportation mobility issues.

Complete Streets

One of the most significant trends in providing transportation choice is the Complete Streets movement. Complete Streets are streets for everyone: they are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, bicycle to work and allow buses to run on time. Benefits of Complete Streets include:

Improved Safety

Streets designed with sidewalks, raised medians, better bus stop placement, traffic-calming measures, and treatments for disabled travelers improve pedestrian safety.



Integrating diverse forms of transportation can reduce congestion while fostering stronger, healthier communities.

Health

Complete streets encouraging walking and bicycling: a CDC study found that 43% of people with safe places to walk within 10 minutes of home met recommended physical activity levels.

Lower Transportation Costs

When residents have the opportunity to walk, bike, or take transit, they're able to replace car trips with these inexpensive options.

Fostering Strong Communities

A recent study found that people who live in walkable communities are more likely to be socially engaged and in better health than residents of less walkable neighborhoods.

Placemaking

Complete Streets create more walkable and livable communities.

Economic Development

Baby boomers, Millennials, and others are increasingly looking to live and do business in neighborhoods and districts that are highly walkable.

Environment

Increased opportunities for walking and biking help to reduce air pollution from cars and trucks, as well as the size and amount of paved areas, resulting in a potential reduction in storm water quantity and quality.

Safety

Improved non-motorized connections reduce conflicts between various modes of travel, improving safety for

pedestrians, bicyclists, motorists, and other transportation network users.

There is no singular design prescription for Complete Streets; each one is unique, designed around and responding to its community context. A complete street may include sidewalks, bike lanes or wide paved shoulders; special bus lanes; comfortable and accessible public transportation stops; and/or frequent and safe crossing opportunities which involve median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, and more.

Michigan's Public Act 135 of 2010 requires the development of a complete streets policy to promote safe and efficient travel for all legal users of the transportation network under the jurisdiction of the Michigan Department of Transportation (MDOT). Public Act 135 defines complete streets as "...roadways planned, designed, and constructed to provide appropriate access to all legal users in a manner that promotes safe and efficient movement of people and goods whether by car, truck, transit, assistive device, foot, or bicycle."

Complete streets require integrated design that occurs within the context of land use developments: the form and design of buildings can impact a community's walkability, vehicular access, and connectivity of the road network. Regulations affecting these features are thus critical elements of effective Complete Streets planning.

Opportunities: Multi-Modal Transportation Network

Because an efficient, effective, multi-modal transportation network requires consideration of a wider community context that addresses both the built environment and transportation needs, communities must work in partnership with other transportation stakeholders to ensure that all road users' needs are identified and addressed. Communities might consider forming task forces or coalitions to share information and support consideration of Complete Streets in transportation design.

To integrate complete streets priorities into policy and investments, some communities and agencies in the six counties have passed Complete Streets resolutions to declare support and consideration of Complete Streets principles in future long-range planning documents and

crosswalks. State law currently only requires drivers to yield to pedestrians, not necessarily stop for them when they are attempting to enter the street from the curb.

It's also important for communities to recognize that Complete Streets require integrated design that occurs within the context of land use developments: the form and design of buildings can impact a community's walkability, vehicular access, and connectivity of the road network. For instance, development featuring a mix of commercial and residential uses provides greater opportunities for walking and biking, while development patterns that feature high density and/or a series of buildings with continuous street or sidewalk frontage are more conducive to pedestrian activity than low-density development that is set back from

Communities might consider forming task forces or coalitions to share information and support consideration of Complete Streets in transportation design.

projects. Creating complete streets means transportation agencies change their approach to community roads. By adopting a Complete Streets policy, communities direct their transportation planners & engineers to routinely design & operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation. This means that every transportation project will make the street network safer for drivers, transit users, pedestrians, & bicyclists – making a more desirable place to live. Recent Complete Streets policies and endorsements passed recently by communities region-wide represent the priority and consensus to create transportation facilities that accommodate all users.

In addition to, or in place of, Complete Streets plans or resolutions, some communities may enact ordinances that further multi-modal goals. For instance, the Traverse City Commission also adopted an amendment to the City Code of Ordinances that requires all vehicles (including bicycles) to stop for pedestrians in marked

the road behind a large parking lot. Access management regulations, meanwhile, can offer opportunities to more safely address the integration of pedestrian and vehicular traffic. Regulations affecting these features are thus critical elements of effective Complete Streets planning; and communities that are working to improve multi-modal connections can consider zoning changes that incorporate design features, density, mixed use, sidewalks and other features that enhance walkability.

Safe Routes to School programs offer another opportunity for communities and stakeholders to implement multi-modal improvements. The Safe Routes to School Program designed to enable and encourage children to safely bike and walk to school. The initiative can be adopted at a local level, and features partnerships among schools, parents, and community stakeholders to plan, promote, develop, and implement projects that will improve safety and reduce traffic in and around elementary schools.

Local Implementation Checklist: Transportation

Planning and zoning can be important implementation tools for communities that are working to meet housing needs. The Local Implementation Checklist identifies some examples of how communities in the six-county region and other parts of Michigan have addressed transportation needs in their local policies. These examples, and *Framework for Our Future* Strategies, are provided as a resource for communities as they develop and adopt their own local policies.

Master Plan Goals and Objectives

A master plan is a guide that's intended to shape local decisions about managing resources, directing growth, and how development should be designed. Master plans help the community understand current conditions, build a vision for the future, make recommendations about actions to take on various community issues, and act as the foundation for zoning ordinances.

Transportation is inextricably linked to land use and community development needs and patterns. Master plans offer a unique opportunity to ensure that transportation investments are coordinated with land use policies, goals, and investments. Transportation is addressed in nearly all of the region's master plans. Some include general statements, while others identify a number of specific actions that address community needs. A small sampling of goals that address transportation needs and priorities, based on language included in master plans throughout the region, is identified below

Provide a balanced, high-quality, multi-modal transportation network that provides safety and efficiency for all users

- ☐ Maintain and improve the existing road system to provide for traffic flow that is safe and efficient for all users, including vehicle/truck traffic, pedestrians, bicyclists, and others
- ☐ Improve and expand sidewalks

Develop an active transportation network providing safe, convenient, inviting, and efficient infrastructure serving people of all abilities

- ☐ Improve and expand bicycle lanes, sidewalks, crosswalks, multi-use trails, etc.
- ☐ Focus investment for infrastructure around activity centers, such as job hubs, shopping destinations, primary medical facilities, leisure activity facilities, schools, park-and-ride lots, residential developments, etc.

Develop and promote reliable, efficient fixed-route transit services connecting major nodes throughout the region

- ☐ Cooperate with major employers, retailers, schools, and tourism vendors for the use of mass transit by employees, residents, and visitors.
- ☐ Strategically locate park-and-ride facilities.
- ☐ Make transit routes convenient and direct.
- ☐ Upgrade and expand facilities for public transit patrons (all-season bus shelters, route signs depicting services, bicycle racks on buses, reduced headway times, frequency of buses, etc.)

Collaborate with the Michigan Department of Transportation (MDOT) on the "Safe Route to School" program

- ☐ Enable and encourage children, including those with disabilities, to walk and bicycle to school.
- ☐ Make bicycling and walking to school a safer and more appealing transportation alternative by facilitating projects that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of elementary schools

Maintain and improve the existing road system for safe and effective flow of all users by applying Complete Street principles

- ☐ Work with regional partners to develop a roadway Capital Improvement Plan (CIP) that includes a "fix it first" policy.
- ☐ Require new private streets to be designed and built to an appropriate scale and standards.
- ☐ Consider street design and construction standards that provide for safe and efficient traffic flow while ensuring flexibility for road designs and paving surfaces based on expected traffic patterns

Expand and enhance airports and air services to create attractive regional transportation hubs for employers, tourists, and residents

Local Implementation Checklist: Transportation

Design development to provide for safe and efficient traffic flow, including alternative parking strategies.

- ☐ Limit the number of driveway accesses and encourage shared parking lots.
- ☐ Stripe roads for diagonal parking.
- ☐ Work with area businesses to have their employees park in certain areas first.
- ☐ Expand on-street parking in and adjacent to the busiest commercial areas while also making more off-street parking available to reduce congestion

Zoning Ordinance Elements

Zoning ordinances are local laws that regulate land and buildings in order to protect the health, safety, and welfare of all citizens. It helps define how properties are used, what new buildings look like, and how much development can occur in a community.

Zoning offers some important opportunities for improving and enhancing the local transportation network. Communities throughout the six-county region have adopted ordinances that can improve and enhance the region's transportation network connections, safety, and efficiency. Local decision-makers may consider zoning regulations that

- ☐ Limit the number of access drives along major corridors for individual residential or commercial developments
- ☐ Encourage shared access drives and parking
- ☐ Require pedestrian connections for new development
- ☐ Create an airport overly district that allows for larger storage buildings while limiting the intensity of commercial and light manufacturing use
- ☐ Permit higher densities and mixed uses in commercial corridors and neighborhoods with close access to services/mixed uses to reduce the need to drive
- ☐ Encourage or require Complete Streets treatments, such as sidewalks or pedestrian crossings
- ☐ Include design guidance or form-based elements that require or encourage traffic calming measures

Framework Strategies

As a resource for communities in Northwest Michigan, the *Framework for Our Future* identifies a number of strategies and actions that communities can take locally to address their specific needs. Because each community identifies their own goals, through public input, local discussions, and need analyses, the strategies and actions identified in the *Framework* are not intended as recommendations for any communities to implement or adopt. Rather, they are provided as a resource list of potential actions that, if desired, can be taken locally and/or used as model language for local master plans, organizational strategic plans, and other policy documents, to address various community needs.

The strategies and actions in the *Framework* were developed from public input and local, regional, statewide, and national sources. Many are based on public input obtained during the *Framework for Our Future* process in events, focus groups, interviews, online discussions, and community dialogues, and were also drawn from or based on master plan language from existing adopted master plans within and outside the region. Others reflect state or national best practices designed to address specific issues.

Strategies are grouped around four major themes that reflect needs and potential actions for each community issue.

Education, Data & Outreach. Often, taking action on a community need requires a solid understanding of the need, as well as public consensus on the appropriate course of action. *Education, Data, & Outreach* strategies address data gaps, outreach needs, and educational opportunities that can help to improve community understanding and awareness around a particular issue.

Planning & Policy. Many community issues can be addressed in part by local policy, such as master plans and zoning ordinances. *Planning & Policy* strategies identify broad policy goals and specific changes to master plans or zoning ordinances that can impact a particular issue.

Funding & Incentives. Communities can use funding and incentive tools to encourage private, public, and nonprofit initiatives and activities that meet local goals. *Funding & Incentives* strategies identify opportunities that can enhance organizational capacities, as well as incentives that may help communities work with the private sector and others to meet local goals.

Development & Implementation. Goals for each community issue center around programs, development or initiatives that directly and tangibly impact community

needs. *Development & Implementation* goals include specific strategies designed for on-the-ground activities and bricks-and-mortar implementation.

Each strategy includes additional information intended to aid in implementation, including:

Why?

Each strategy is designed to address a certain issue. Information is provided to detail specific community needs that might be met through implementation of the strategy.

Actions

To implement each strategy, communities can consider taking action in a number of ways. This section identifies some specific actions that communities might consider to reach local goals

Tools & Resources

A number of existing tools or resources are available to partners that are interested in taking action on a particular strategy. This section identifies, and provides links to, tools and resources such as:

- Research or background studies that can help communities identify specific community needs in order to develop appropriate policy or initiatives
- The *Framework for Our Future Action Guide*, which provides details and implementation guidance for planning and zoning actions identified in the *Framework*
- Guidebooks and workbooks that provide step-by-step information on actions and the implementation process
- Examples of where the action has been implemented regionally
- Local, regional, state, or national reference documents that can provide additional guidance

Links to all resources are available online at www.nwm.org/rpi.

Measures

Communities can track progress toward these goals and actions by benchmarking data identified in this section. While some measurement data will be locally generated and tracked, many indicators can be accessed on the regional data portal www.benchmarksnorthwest.org.

Transportation: Data, Education & Outreach

Improve awareness, knowledge and understanding of transportation needs, programs, and opportunities

Strategy 1	Proactively engage all stakeholders and the public on transportation system needs, planning, and improvements	
Why?	Transportation improvements affect all parts of the community. However, transportation planning is complex, and it can be difficult to engage the public and stakeholders. Providing information on transportation needs and opportunities to engage can help develop a community consensus on needed improvements and priorities.	
Actions	Develop resources and provide educational opportunities on transportation planning process	Develop communication plan to share information regarding costs and investment process for road network
	Develop, maintain, and regularly update a web-based informational resource to share information on transportation projects for public review	Conduct and share analysis on the interrelationships between transportation and land use
	Create a public education program on individual transportation behavior and impact on costs and the environment	Create an alternative fuel vehicle and infrastructure toolkit for local governments and transportation agencies
Tools & Resources	<i>A Citizen's Guide to Transportation Planning</i>	Northwest Michigan Council of Governments Transportation Improvement maps website
Strategy 2	Develop and provide educational services for cyclists, pedestrians, drivers, and transit users	
Why?	A traditional dependence on private vehicles for transportation leaves many residents and visitors unfamiliar with other transportation options that can enhance mobility and reduce transportation costs. Building an understanding of how different modes of transportation work can improve transportation access for all users.	
Actions	Provide education on laws for both bicyclists, pedestrians, and drivers	Develop an Intelligent Transportation System to provide better traveler information
	Provide and maintain comprehensive data on non-motorized transportation opportunities	
Tools & Resources	UpNorthTrails.org	
	Michigan Department of Transportation	

Strategy 3	Raise awareness and use of transit, rideshare, and vanpool services	
Why?	Using transit can be intimidating for many first time riders, especially the elderly and people with disabilities. Additionally, stigmas associated with transit usage discourage some new riders. Education, awareness, and training programs help people become comfortable with transit services and helps connect residents to services available to them.	
Actions	Leverage media networks to share information on transit, rideshare, and vanpool services	Develop outreach and informational resources for residents and visitors
	Provide, maintain, update, and enhance online transportation data and informational tools for users	Broaden, update, and promote rideshare databases
	Consider partnerships with visitors bureaus, community festivals, and other community	Expand collaboration with human service agencies to provide one-call/one-click transit information
	Develop outreach materials and leverage media networks to address negative perceptions and stereotypes of transit usage	
Tools & Resources	<i>Northwest Michigan Ride Share Connection</i>	<i>Grand Vision Mobility Management Plan & Coordination Strategies</i>
Strategy 4	Ensure transportation plans, ordinances, and initiatives rely on relevant and up-to-date data and studies	
Why?	As the region's population and needs change over time, transportation stakeholders and community leaders must understand how usage, safety, and priorities for the transportation network change over time in order to plan most effectively to meet needs. Accurate, up-to-date data will help transportation providers and agencies anticipate and plan for needs and improvements.	
Actions	Develop and implement monitoring system to measure non-motorized transportation use	Work with airport managers to track annual air passengers
	Develop regional freight forecasting tools	Develop and participate in a data-sharing network
	Work with state and regional partners to provide/participate in regular workshops, presentations, and free and convenient education opportunities such as webinars on transportation planning tools and needs	Collect, maintain, and analyze DOT crash data to identify most dangerous intersections/corridors
	Provide regional crash and traffic county data for use in master plan updates and other transportation planning initiatives	Conduct cost benefit analyses to identify costs of treatment vs. economic activity generated through transit
Tools & Resources	Benchmarks Northwest	UpNorthTrails.org
	Michigan Department of Transportation	Michigan Association of Planning

Transportation: Planning & Policy

Coordinate policies, plans, initiatives & ordinances that support transportation connections and improvements for all users

Strategy 1	Consider plans, programs, and ordinances that ensure a safe, efficient, and cost-effective transportation network	
Why?	A well-maintained and cost-effective transportation network requires consideration of a wide range of community actors. Proactive plans and policies can ensure that transportation investments make the best use of resources while enhancing safety and efficiency.	
Actions	Develop local capital improvement, construction, and/or economic development plans for the purposes of collaborative identification of regionally significant projects	Prepare and implement regularly updated capital improvements plans to provide for effective budgeting, maintenance, and improvements of public facilities
	Develop and implement access management policies along commercial corridors	Consider zoning changes that encourage or require access management and traffic calming measures
	Work with MDOT to define and/or develop a consistent set of requirements for commercial corridor pedestrian crossings of state highways	Develop traffic safety improvement plan to address key issues in dangerous corridors/intersections
Tools & Resources	<i>Michigan Department of Transportation</i>	
Strategy 2	Consider plans, programs, and policies that accommodate all road users	
Why?	An effective, integrated multi-modal transportation system can reduce congestion and costs by enhancing alternatives to automobile travel and reducing the need for road capacity expansions and on-going maintenance costs. Considering the transportation network in a multi-modal context in local plans and policy decisions can help improve the efficiency, connectivity, and safety of the network for all users.	
Actions	Consider enacting or adopting Complete Streets, plans, policies or resolutions	Consider zoning amendments that require sidewalks or other non-motorized pathways in all new residential developments
	Consider mixed-use or form-based zoning that result in greater multi-modal connectivity among residential areas, schools, employment centers, shopping, and transit	Develop corridor plans to guide and coordinate transportation improvements with growth and development along commercial corridors
Tools & Resources	<i>A Framework for Our Future Action Guide</i>	<i>Planning for Pathways: An Implementation Resource of the New Designs for Growth Guidebook</i>

Strategy 3	Consider plans, programs, and ordinances that meet the region's air, rail, and freight needs	
Why?	Roads, air, rail, and water transportation choices are critical for business, tourism, and industry. Addressing the needs of these transportation choices in community policies will integrate this infrastructure into larger transportation and community development decisions, ensuring an efficient and well-connected transportation network.	
Actions	Consider land use planning initiatives around airports to minimize public safety hazards while supporting airport operations	Conduct feasibility studies to explore opportunities for passenger rail service
	Develop freight plans to identify and review regulatory and institutional barriers to efficient truck travel, adequate truck routes, and solutions to accommodate truck access and traffic	
Tools & Resources	<i>Getting Back on Track: Uncovering the Potential for Trains in Traverse City</i>	
Strategy 4	Consider plans, programs, and policies that enhance transit access and service	
Why?	To be effective, transit infrastructure must be coordinated with site design and land use policies. However, bus stops and other transit infrastructure are often addressed after the fact, often resulting in inefficient and unsafe designs. A proactive approach to incorporating transit infrastructure into site design can enhance efficiency, safety, and connections.	
Actions	Develop local guidelines for transit stops and development review	Consider zoning changes to require consideration of transit stops in site plan review
	Consider zoning changes to require consideration of transit stops in commercial and higher-density residential development	
Tools & Resources	<i>A Framework for Our Future Action Guide</i>	
Strategy 5	Consider plans, programs, and policies that enhance pedestrian and non-motorized access	
Why?	The form, density, and design of the built environment impacts opportunities for safe biking and walking. Plans, policies, ordinances, and other initiatives that proactively address and integrate non-motorized transportation in the development process can result in a more efficient, safe, and connected non-motorized network.	
Actions	Develop plans identifying and prioritizing bicycle and pedestrian facilities	Work to identify safe bicycle and pedestrian routes that improve connectivity and access to residential areas, schools, employment centers, shopping, and transit
	Consider zoning amendments that require sidewalks or other non-motorized pathways in all new residential developments	Work with MDOT to define and/or develop a consistent set of requirements for commercial corridor pedestrian crossings of state highways
Tools & Resources	<i>A Framework for Our Future Action Guide</i>	<i>Planning for Pathways: An Implementation Resource of the New Designs for Growth Guidebook</i>

Transportation: Financing & Incentives

Ensure continued and enhanced financial support for transportation network improvements and connections

Strategy 1	Work to assure adequate funding for infrastructure maintenance	
Why?	An efficient, well- maintained road network is vital in a society that depends on roadways for access to homes, jobs, businesses, industry, schools, services, and shopping centers. However, state and federal funding is limited, while maintenance needs are high. Adequate funding for upkeep is important to preserving the functionality and sustainability of the infrastructure.	
Actions	Explore options for establishing a region-wide program to fund roadway improvements and reconstruction	Advocate for greater flexibility in the use of state and federal formula funds toward system maintenance purposes
	Explore and establish local or regional trust funds to provide matching dollars or funds for transportation grants and improvements	Resolve challenges between transportation and recreation funding sources for bicycle trails/pathways
	Support change in state gas tax indexed to price rather than flat tax per gallon	Continue to support local funding mechanisms to support transit
Tools & Resources		
Strategy 2	Develop & support investment strategies based on broad transportation management principles	
Why?	Transportation network needs are diverse, and improvements to meet those needs are often costly and time consuming. With limited transportation funding, communities and transportation stakeholders must increasingly prioritize projects based on the vision, goals, needs, and priorities in order to use funds in ways that get the highest returns.	
Actions	Develop project prioritization criteria that helps to ensure that transportation funds are being invested wisely	Seek and support financing for multi-modal freight activity
	Explore funding opportunities for a local government incentive program for multi-modal transportation alternatives and land use initiatives	
Tools & Resources		

Strategy 3	Support and facilitate improved partnerships and coordination among transportation stakeholders	
Why?	Partnerships are an important mechanism for building and sustaining the financial resources and capacity needed to improve the region's transportation network. They bring together diverse skills and resources for more effective outcomes that address the multi-faceted issues facing the transportation network, while eliminating duplicative services. By making the best use of these resources, partnerships can improve results and add capacities to existing organizations.	
Actions	Build, maintain, and sustain diverse partnerships and coalitions to implement transportation improvements	Connect communities to resources and stakeholders that can provide technical assistance
	Identify and coordinate grants with transportation partners and stakeholders	Develop a regional transit pass or other fare coordination policies
	Identify innovative funding sources and opportunities to leverage transportation investments	Use cost allocation models to develop budgets and negotiate cost and revenue allocations
	Work with businesses or employers to sponsor a bus or other transportation improvements	
Tools & Resources		

Transportation: Development & Implementation

Ensure a well-maintained and connected transportation network for all vehicles, pedestrians, bicyclists, and transit riders

Strategy 1	Maintain and improve existing road system	
Why?	A, safe, efficient, and well-maintained roadway network is one of a community's most fundamental infrastructure components. Sustaining this infrastructure helps to enhance residents' quality of life while supporting new growth and investment.	
Actions	Implement Transportation Improvement Plan	Identify traffic safety concerns and resolve in a timely manner
	Institute traffic calming measures on cross-town high-speed routes	Encourage shared access and drives along roadways
	Minimize life cycle costs/follow an affordable investment schedule	Consider public/private partnerships and competitive service contracts for maintenance and operations
	Monitor road surface conditions with effective pavement management systems that can assist in evaluation, analysis, and prioritization of maintenance and rehabilitation needs on local streets	
Tools & Resources		
Strategy 2	Increase public transportation services between regions and cities	
Why?	Transit is increasingly important for the economy: a growing senior population, high transportation costs, and worsening traffic congestion all contribute to a growing need for and interest in transit. However, large geographies and limited funding restrict transit services: limited schedules and long travel times discourage the use of transit for accessing employment or services. Improving coordination of and support for transit will provide important mobility options and access that in turn can help to reduce traffic and congestion.	
Actions	Implement a Regional Transit Network to coordinate transit across system boundaries	Expand and enhance service times and hours based on need and demand
	Improve transit access and accessibility	Improve bus stop infrastructure
	Develop a regional guaranteed ride home program	Integrate transit service with the tourism economy
	Coordinate with intercity bus service (Indian Trails, Greyhound)	Encourage employers to provide transportation and vanpool programs
	Support non-emergency medical transportation and improve transit and supplemental transportation services for medical appointments	
Tools & Resources	Grand Vision Mobility Management Plan	

Strategy 3	Increase use and efficiency of rail, air, and water travel and freight	
Why?	Roads, air, rail, and water transportation choices are critical for business, tourism, and industry. Ensuring that these transportation choices are efficient and cost-effective allows communities to serve visitors and to import and export a variety of products needed for business and industry.	
Actions	Support waterway trail systems and land/water infrastructure	Explore the development of port facilities to accommodate cruise ships
	Explore opportunities and funding to improve rail infrastructure	Support ferry services and other water transportation options that enhance travel and tourism in the region
	Consider funding opportunities, partnerships, and other initiatives to provide passenger rail service within and to the region	
Tools & Resources		
Strategy 4	Expand, enhance, and improve pedestrian and non-motorized infrastructure	
Why?	Non-motorized facilities are an important and desired quality of life and economic development amenity that enhance recreation opportunities and provide important transportation options to the many residents throughout the region that can't or don't drive. However, despite their importance to all parts of the community, they are often treated primarily as recreation assets that don't receive the same level of funding priority as other transportation options, complicating the development process and creating funding hurdles for new trail or sidewalk connections or development.	
Actions	Adopt and implement Complete Streets programs	Improve disabled access in crosswalks and intersections
	Connect residential, employment, shopping, services, recreation, and tourism assets with non-motorized and transit options	
	Develop, enhance, or improve sidewalks or non-motorized pathways in and near higher-density residential developments to ensure non-motorized connections with nearby amenities	
	Incorporate sidewalks and bike lanes where appropriate into planned transportation improvements	
	Improve crosswalks and intersection crossing	
Tools & Resources	UpNorthTrails.org	<i>Planning for Pathways: An Implementation Resource of the New Designs for Growth Guidebook</i>
	Land Information Access Association Trail Towns: <i>Capturing Trail-Based Tourism – A Manual for Communities in Northern Michigan</i>	

References

1. Smart Growth America, 2013. Grand Vision Mobility Management & Coordination Strategies
2. U.S. Forest Service, The Economic Benefits of Recreational Trails
3. Northwest Michigan Council of Governments; 2002. *Preserving Options: Maintaining Rail Corridors in Northwest Michigan*.
4. Michigan Land Use Institute, 2014. *Getting Back on Track: Uncovering the Potential for Trains in Traverse City*.