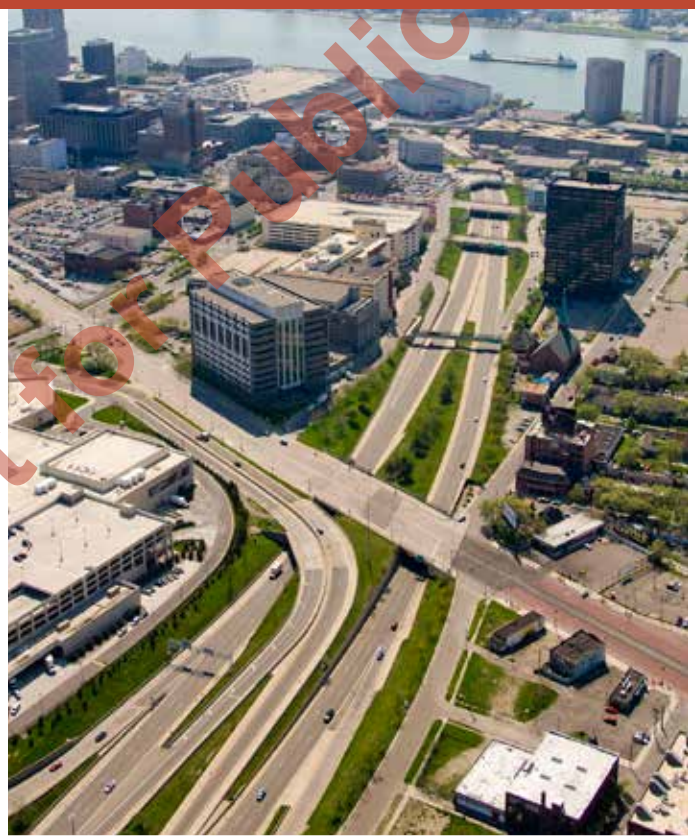
MDOT
Michigan Department of Transportation

MI Transportation Plan

Moving Michigan Forward

2040
State Long-Range
Transportation Plan



MI Transportation
MICHIGAN LONG RANGE TRANSPORTATION PLAN

Overview

Moving Michigan Forward

2040
State Long-Range
Transportation Plan

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Lynn Afendoulis, Commissioner
Ron Boji, Commissioner
Michael D. Hayes, Commissioner
George K. Heartwell, Commissioner
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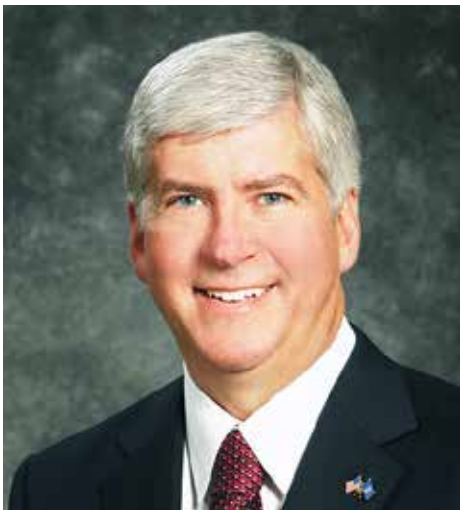


Rick Synder
Governor

Kirk T. Steudle
Director

2040 MI Transportation Plan

> ***MI Transportation Plan focuses on the important link between transportation and Michigan's economic vitality and quality of life. It presents options to achieve Michigan's goals for the future by providing an efficient, integrated transportation system.***
>
> MI Transportation Plan:
> Moving Michigan Forward
> 2005-2030 State Long-Range
> Transportation Plan

What is the MI Transportation Plan?

The MI Transportation Plan is the state long-range transportation plan for Michigan. *The 2040 MI Transportation Plan (2040 MITP*) is an update and extension to both the *2005-2030 MI Transportation Plan: Moving Michigan Forward (2030 MITP)* and the *2035 MI Transportation Plan (2035 MITP)*. The 2040 MITP consists of all of these documents, which provide both an overview of the findings and a high-level summary of the current assessment of key trends, demographic changes, and key initiatives that will guide the selection of transportation projects through 2040.

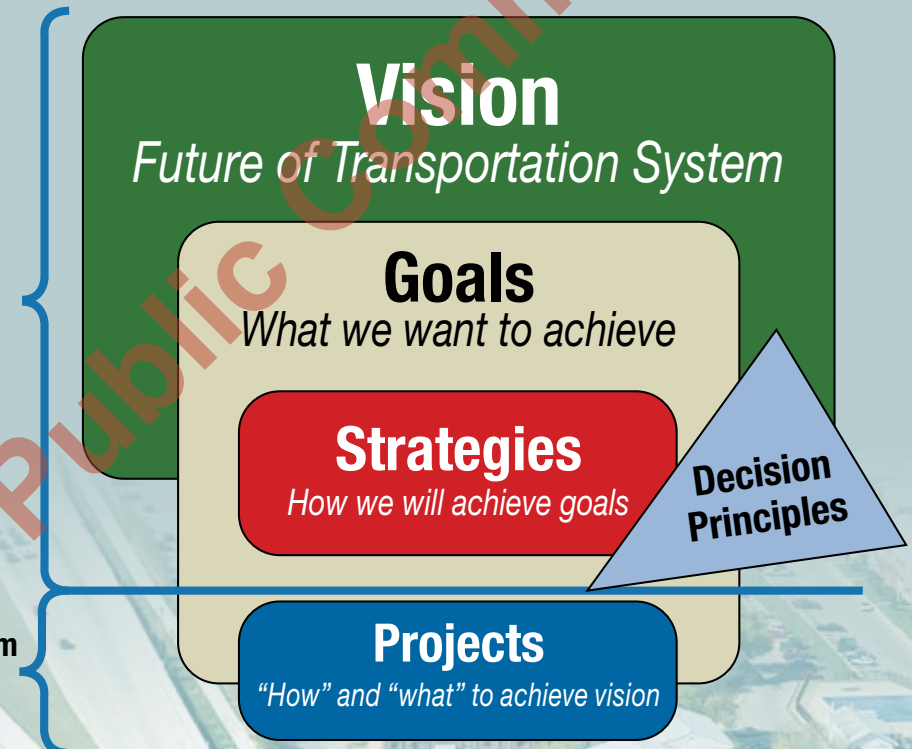
The MITP also includes a number of technical and strategic reports published in conjunction with the *2030 MITP* and 23 revised or new white papers developed as part of this revision. The initial technical and strategic reports should be referred to for details on specific goals, objectives, strategies, and decision principles of the MI Transportation Plan, while the white papers should be referred to for current assessments of key trends and demographic changes; status updates of initiatives that were discussed in detail in the initial technical and strategic reports; and descriptions of new initiatives that have been launched to further the goals and objectives of the state long-range transportation plan.

2040 MI Transportation Plan Vision Statement

Michigan's 2040 transportation system is a safe, efficient, resilient and integrated multimodal system and serves as the foundation of the state's economic vitality and quality of life and support for its residents. Transportation providers throughout the state will work together to address the system's diverse needs. The entire system will be maintained, preserved and protected as one of the state's most important physical assets.

The State Long-Range Transportation Plan for Michigan

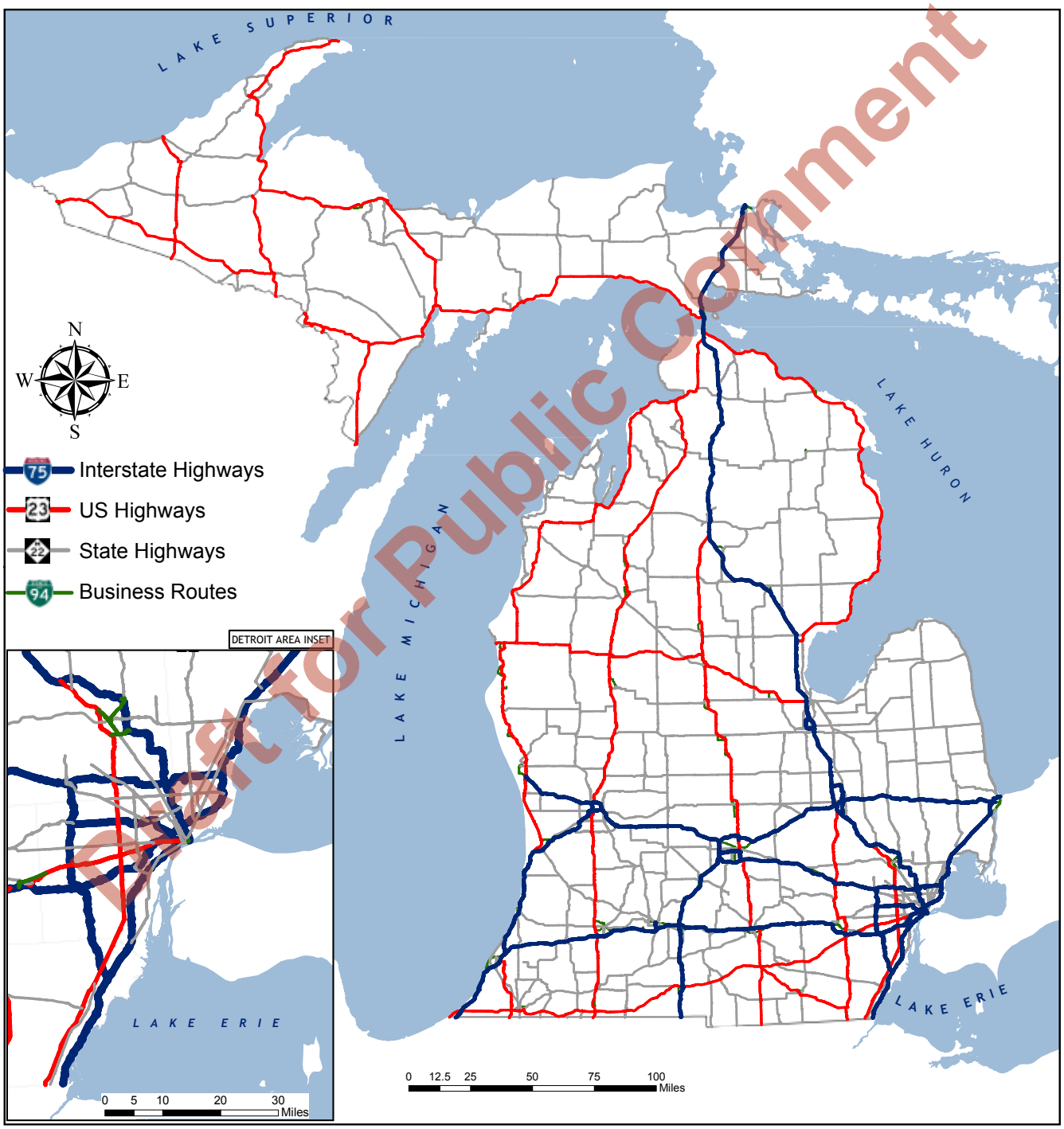
State Transportation Improvement Program
Five-Year Transportation Program



This plan covers all infrastructure that the Michigan Department of Transportation (MDOT) has jurisdiction over

Michigan-Owned Highway Trunkline System

MDOT is responsible for all I, US, and M routes throughout Michigan, which includes 9,669 route miles of pavement, over 4,700 highway, railroad and pedestrian bridges and all adjacent infrastructure (i.e., carpool parking lots, rest areas, noise barriers).



MDOT is responsible for 665 miles of state-owned railroad lines (out of approximately 3,600 total miles of railroad lines) in Michigan.

MDOT is responsible for four state-owned airports (Romeo, Linden, Plymouth-Canton, and Houghton Lake) and four intercity/intermodal terminals (Benton Harbor, Detroit, Pontiac, and Southfield).

Michigan-Owned Rail Lines and Airports

Summary of the 2040 MI Transportation Plan

The *2040 MITP* reaffirms the policy framework of the *2030 MITP* and the *2035 MITP*, MDOT's vision of a fully integrated transportation system, and readopts the goals, objectives, strategies, and decision principles guiding MDOT's program development. The most recent forecasts for population and employment were used to update the assumptions made in the *2030 MITP* and the *2035 MITP.* The highlights of these changes are included in this summary.

MDOT's vision includes new technologies and innovations that will transform the way transportation agencies deliver services to meet the ever-changing needs of 21st century accessibility and mobility. New technologies have implications for planning the future transportation system, but technology is just one of a host of factors that will affect the functional requirements of the state's infrastructure. The Vision White Paper provides a greater depth on the integration of new technologies into MDOT's processes.

Like the *2035 MITP*, this revision was initiated as an interim step to keep the state's long-range transportation plan current and followed a more streamlined approach than a complete update. The *2040 MITP* builds on the extensive public and stakeholder involvement process of the *2030 MITP* that spanned two years and resulted in contacts with more than 3,000 individuals, 2,600 participants online and another 3,600 households interviewed by phone. Since the *2030 MITP,* MDOT has interviewed 6,100 households, conducted two webinars and held 20 public meetings during the 30-day public comment period for this revision.

This revision extends the planning horizon year to 2040 to maintain consistency with regional and metropolitan planning processes. MDOT embarked on this revision in July 2015 to maintain the 20-year planning horizon required by federal transportation planning regulations, found in 23 CFR 450 Subpart B.

Federal Planning Requirements

The state long-range transportation plan development process is guided by federal regulations and statutes. This includes a series of factors that each state planning process should consider, as well as the identification of basic plan components. In previous transportation-authorizing legislation, metropolitan and statewide planning processes were enhanced to incorporate performance goals, measures, and targets into the process of identifying needed transportation improvements and project selection. In the most recent federal transportation authorization, two additional planning factors were added (resiliency and reliability, and travel and tourism).

Each of the required planning factors were considered in the development of the white papers that are part of this *2040 MITP.* The 10 planning factors are listed below, along with some of the white papers that address them:

The Goals, Objectives and Performance Measures Report (developed as part of the *2030 MITP*) establishes the linkage between MDOT's mission and the original eight planning factors.

Planning Factors	White Papers	
Support the economic vitality of the United States, the states, metropolitan areas, and non-metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.	Freight Metropolitan Planning Organizations/ Regional Planning Agencies	Regional Prosperity Initiative Rural Task Force Socioeconomic
Increase the safety of the transportation system for motorized and nonmotorized users.	Connected and Automated Vehicles and New Technologies	Highway Safety Nonmotorized
Increase the security of the transportation system for motorized and nonmotorized users.	Connected and Automated Vehicles and New Technologies	Security
Increase accessibility and mobility of people and freight.	Aviation Corridors and International Borders Freight Highway-Bridge	Intercity Bus Service Intercity Passenger Rail Service Nonmotorized Transit
Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.	Environmental Finance Land Use Metropolitan Planning Organizations/ Regional Planning Agencies	Nonmotorized Regional Prosperity Initiative Revenue Gap Rural Task Force Transit
Enhance the integration and connectivity of the transportation system, across and between modes throughout the state, for people and freight.	Aviation Corridors and International Borders Highway-Bridge Intercity Bus Service Intercity Passenger Rail Service	Freight New Policy Initiatives and Transportation Intermodal Integration Nonmotorized Transit
Promote efficient system management and operation.	Connected and Automated Vehicles and New Technologies	Corridors of Highest Significance – Performance Metrics
Emphasize the preservation of the existing transportation system.	Aviation Corridors and International Borders Environmental Finance Freight Highway-Bridge Intercity Bus Service	Intercity Passenger Rail Service New Policy Initiatives and Transportation Intermodal Integration Nonmotorized Revenue Gap Transit
Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.	Environmental	Security
Enhance travel and tourism.	New Policy Initiatives and Transportation Intermodal Integration	Nonmotorized

Michigan's Transportation Goals

The transportation planning process historically defines goals and objectives, identifies problems, generates alternatives, evaluates alternatives, and develops plans. The goals and objectives of the *2030 MITP* and *2035 MITP* reflect the public's vision for Michigan's transportation system and are reaffirmed in the development of the *2040 MITP*.

The following table describes the four goals, and the objectives and performance measures within each goal. The goals and objectives come directly from the *2030 MITP*. Objectives under each goal area are associated with three categories: Integration, Economic Benefit, and Quality of Life. Each category provides a connection between the MI Transportation Plan and MDOT's mission statement.

MDOT has actively implemented performance-based program development and asset management since 1997, when the State Transportation Commission (STC) established state trunkline pavement and bridge goals. The Goals, Objectives, and Performance Measures White Paper provides a summary of MDOT's process for the development of performance measures.

MDOT tracks the measures through a number of tools and reports. MDOT also has developed the Transportation System Condition Report to provide data on the condition and performance of Michigan's publicly owned transportation system. The measures in this report support and are organized around the four major goal areas of the MI Transportation Plan: Stewardship, Safety and Security, System Improvement, and Efficient and Effective Operations.

> ***"Providing the highest quality integrated transportation services for economic benefit and improved quality of life."***
>
> Michigan Department of Transportation Mission Statement

Goals	Objectives	Performance Measures
System Improvements Modernize and enhance the transportation system to improve mobility and accessibility.	• Expand intermodal connectivity and the number of modal options for freight and passengers. • Address system bottlenecks and weakness to reduce congestion, enhance continuity, and improve modal connections. • Improve travel time reliability and predictability for passengers and freight. • Modernize facilities to accommodate the efficient movement of people, goods, and services. • Address congestion to reduce its cost to businesses and the state's economy. • Respond to unique transportation needs of economic development opportunities. • Expand transportation system access. • Reduce delay. • Employ context sensitive solutions to respond to the values that the public places on aesthetics, cultural resources, and natural landscapes.	• Increase percent of route miles along corridors of national/international significance having acceptable level of service (LOS). • Expand MichiVan access.
Efficient and Effective Operations Improve the efficiency and effectiveness of the transportation system and transportation services, and expand MDOT's coordination and collaboration with partners.	• Improve existing system capacity through the application of new technologies and strategies. • Coordinate transportation services supplied by both public and private sector providers. • Address institutional barriers to inter-jurisdictional cooperation. • Collaborate with providers to deliver programs and services better, cheaper, and faster. • Manage highway access to balance capacity and development considerations. • Collaborate with private sector to improve the efficiency of intermodal freight and passenger transfers. • Enhance the transportation experience through better, timelier travel information. • Operate systems to ensure the public has an adequate set of transportation choices.	• Reduce delays. Minimize disruption to mobility resulting from incidents.

Goals	Objectives	Performance Measures
Safety and Security Continue to improve transportation safety and ensure the security of the transportation system.	• Reduce fatality, injury, and crash/incident rate on all modes. • Reduce the vulnerability of transportation facilities and its users to terrorist attacks, natural disasters, and other risks. • Reduce economic losses due to transportation crashes and incidents. • Manage risks and responsiveness to ensure transportation system and border crossing continuity for passengers and freight. • Provide a safe environment for transportation users through engineering, enforcement, and education activities.	• Reduce crash severity on all roadways, statewide. • Reduce crash severity on the state trunklines. • Reduce crash severity on the local roadways. • Ensure that safety projects provide the maximum return for funding dollars. • Enhance and increase projects to provide the maximum return for funding dollars. • Enhance and increase protective measures and implement effective border continuity.
Stewardship Preserve transportation system investments, protect the environment, and utilize public resources in a responsible manner.	• Preserve the quality and condition of all transportation system elements. • Conduct sound asset management practices to optimize the benefits of preservation investment. • Leverage transportation funding to maximize transportation investment. • Maximize the benefits of transportation investment to the Michigan economy. • Minimize negative externalities and maximize the positive impacts that transportation has on the physical and human environment. • Improve coordination between transportation decision-making and land use planning.	• Improve and sustain 95 percent of all freeways bridges in good or fair condition. • Sustain 85 percent of all non-freeway bridges on the trunkline system in good or fair condition. • Reduce the number of trunkline bridges that are structurally deficient. • Improve or sustain 90 percent of trunkline pavement in fair or better condition based on sufficiency. • Improve or sustain 90 percent of trunkline pavements in fair or better condition based on International Roughness Index. • Improve or sustain 90 percent of trunkline pavements with a remaining service life value of three years or higher. • Increase the percentage of trunkline railroad crossings that are rated in fair or better condition. • Maintain 100 percent of all Tier 1 airport primary runway pavement in good or better condition. • Minimize the portion of the rural transit and the specialized transit fleet that is operating past its useful life. • Preserve existing intercity passenger rail transportation services. • Preserve existing rural intercity bus access. • Preserve existing local bus services including specialized transit services. • Maintain 90 percent of all trunkline carpool parking lot pavements in good or fair condition.

Strategies to Achieve the Goals

> ***The 2040 MITP continues the use of a high-level corridor approach for program development and investment.***

The *2040 MITP* continues to employ key strategies identified in previous plans to help Michigan achieve its transportation goals:

- Focus improvements on Corridors of Highest Significance (COHS)
- Measure performance for all modes
- Integrate the transportation system
- Encourage Context Sensitive Solutions (CSS)
- Avoid, minimize or mitigate for adverse impacts
- Identify appropriate funding

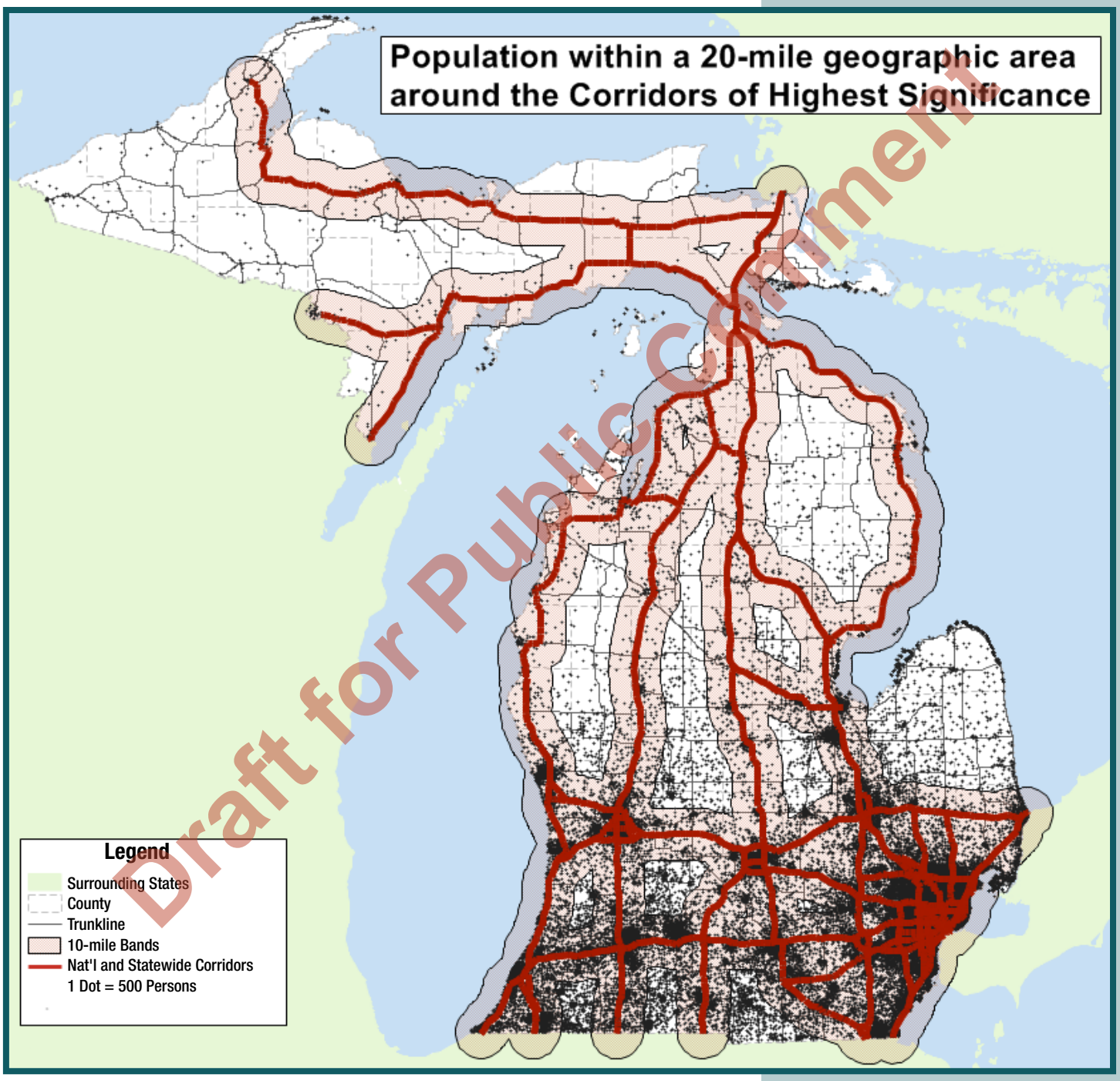
Focus Improvements on Corridors of Highest Significance

The *2040 MITP* continues the use of a high-level corridor approach for program development and investment. Passengers and freight travel should be able to pass seamlessly along geographic corridors on multiple modes between locations or activity centers within and outside Michigan. The corridor-based analysis conducted during the *2030 MITP* and *2035 MITP* development focused on specific corridors that serve and support specific economic sectors. The 2040 MITP reaffirms this.

The 11 national/international and eight statewide COHS support both the state's population and its economy. By improving these specific corridors, the people, businesses and industries dependent on them will be strengthened, as will Michigan's economic competitiveness.

Populations around Corridors of Highest Significance

93.2 percent of Michigan's population and 98.7 percent of Michigan's employment are located within a 20-mile wide geographic area centered on a COHS.



Source: Michigan Department of Transportation Statewide and Urban Travel Analysis Section
2015 U.S. Census 2010 block data

Measure Performance for All Modes

The MITP goals and objectives continue to guide MDOT's performance-based planning and programming, as well as management decisions. MDOT uses these performance standards and measures to guide and evaluate its annual multi-year investment in the transportation system.

MDOT has used performance-based program development and asset management since 1997, when the STC established state trunkline pavement and bridge goals. MDOT's long history with performance measurement has enabled the department to develop robust measurement capabilities. In 2011, MDOT began sharing the performance data with the public through the Michigan Transportation System Condition Report and the Michigan Transportation Scorecard.

MDOT is also actively involved in the review of proposed federal rules for performance measures. In particular, a new federal focus on the performance of the National Highway System may impact MDOT decision-making in the future. For further information on the overall performance of MDOT's infrastructure, see the Corridors and International Borders White Paper and the Corridors of Highest Significance – Performance Metrics summary report.

Integrate the Transportation System

There has been significant and consistent progress in the intermodal integration of Michigan's transportation systems. The desire to improve Michigan's economy, along with state and federal policy shifts, have furthered MDOT's efforts in this area. Some of the major initiatives undertaken since the last MITP update are listed below; each of the department's new initiatives are discussed in more detail in the New Policy Initiatives and Transportation Intermodal Integration White Paper.

Statewide Transportation, Distribution and Logistics Strategy: MDOT and the Michigan Department of Agriculture and Rural Development are part of a statewide effort led by the Michigan Economic Development Corp. (MEDC) to transform Michigan into a Midwestern gateway for global intermodal freight shipments. Michigan has significant assets that allow it to serve global intermodal freight traffic, including two of the country's busiest international border crossings, four Class I railroads, several interstate routes, the St. Lawrence Seaway, several commercial port facilities, and Willow Run and Detroit Metropolitan Wayne County airports.

Michigan Freight Plan: The Michigan Freight Plan was developed and adopted in 2013 as a supplement to the 2035 MI Transportation Plan. The most recent federal authorization now requires states to have a freight plan in order to receive federal funding for freight projects. The plan provides a comprehensive multi-modal overview of Michigan's freight infrastructure assets, needs, and challenges.

Michigan Rail Plan: In 2011, MDOT developed the Michigan Rail Plan to guide the future improvement of Michigan's rail system for both passenger and freight rail over the next 20 years. The plan identifies current and future system needs and makes recommendations to encourage ongoing rail investments. The plan meets the requirements established by the federal Passenger Rail Investment and Improvement Act of 2008, which positions the state to receive additional federal funding for rail projects.

Complete Streets: The STC approved a Complete Streets policy on July 26, 2012. The Complete Streets Policy is designed to improve mobility and access for all legal users of the roadways under MDOT's jurisdiction, and applies to projects undertaken or permitted in MDOT right of way. Michigan currently has 100 local complete streets policies, second in the nation after New Jersey.

Multi-Modal Development and Delivery (M2D2): M2D2 is a comprehensive department effort to examine planning, design, construction, maintenance, and the operational needs of all potential modes of travel using MDOT right of way. Based on that analysis, MDOT will modify its practices, procedures, standards and guidance to help ensure that all modes are considered as projects are developed, and that they are safely served, where appropriate, based on the context and roadway function.

Pure Michigan Byways Program: In 2014, Public Act 445 was signed into law that officially changed the name of the Heritage Route Program to the Pure Michigan Byways Program. This action is part of a rebranding and reinventing of the program to align it with statewide travel and tourism initiatives. The rebranding of the program incorporates elements of the "Pure Michigan" campaign logo and the word "Byway," which is used nationwide in 45 other states.

Regional Pedestrian and Bicycle Committees: Regional committees were formed in 2013 by the department to help foster stakeholder engagement and encourage discussions between state and local road agencies, roadway users, and groups affiliated with walking and bicycling.

Iron Belle Trail: An initiative of Gov. Rick Snyder to create a hiking and bicycling route between Belle Isle in Detroit and Ironwood in the western Upper Peninsula. MDOT is a partner in the initiative, which is led by the Michigan Department of Natural Resources (MDNR). The hiking and bicycling routes of the Iron Belle Trail are described as "Two Routes-One Great Trail." For more information on the Iron Belle Trail, see the Nonmotorized White Paper.

Towards Zero Deaths (TZD): A new statewide safety campaign based on the National Strategy on Highway Safety intended to influence driver behavior and improve safety. With more than 35,000 fatalities occurring on U.S. highways each year, roadway safety - including the safety of bicyclists and pedestrians using the roadway - remains one of the most challenging issues facing Michigan and the nation. MDOT and the Michigan State Police (MSP) will be continuing the TZD statewide safety campaign in 2016. Please visit the TZD website for more information.

Transportation Systems Management and Operations (TSM&O): An integrated program to optimize the performance of existing multimodal infrastructure by implementing systems, services, and projects to maximize capacity and improve the security, safety, and reliability of the transportation system. MDOT employs TSM&O strategies and solutions to provide more efficient use of existing transportation resources by implementing strategies, deploying technologies, and integrating systems to address freeway and arterial congestion, improve safety and mobility, and encourage sustainability.

Older Driver Education and Safe Mobility Planning Strategy (ESMP): MDOT, in collaboration with public and private sector partners, began work on a statewide safe driving education and intervention strategy for Michigan drivers older than age 60, beginning in 2013. The Secretary of State introduced a webpage in 2015 dedicated to the ESMP Program. Design, testing and implementation will occur in 2016. Development of the program was made possible through a contract with the University of Michigan Transportation Research Institute. Please see the Smart Drivers Smart Options website for more information.

These are just a few of MDOT's efforts to better integrate the transportation system. Later in this document are specific descriptions of bus and rail passenger transportation efforts and freight transportation work that are also furthering progress on this strategy.

Encourage Context Sensitive Solutions

MDOT solicits dialogue with local governments, road commissions, industry groups, land use advocates, and state agencies early in project planning. A cooperative spirit and an awareness of community interests help achieve the ultimate goal: projects that fit their surroundings while effectively meeting transportation needs. Key initiatives that MDOT has undertaken over the last several years include:

Context Sensitive Solutions (CSS): MDOT's CSS policy was adopted by the STC in 2005. Since then, MDOT has provided or sponsored training in the CSS approach to project development for more than 1,000 staff, consultants, and local government officials. In 2011, MDOT was awarded national recognition by the Federal Highway Administration (FHWA) for its CSS program. CSS is an integral part of MDOT's Highway Call for Projects (CFP) process. In the CFP process, MDOT continues to engage stakeholders on multi-modal needs and accommodations in their projects, utilizing the CSS project development process and maintaining compliance with the principles and requirements under the STC policy on Complete Streets.

Avoid, Minimize or Mitigate for Adverse Impacts

As part of every project, MDOT works to avoid, minimize or mitigate for adverse environmental impacts, in keeping with federal and state requirements. However, MDOT's efforts do not stop with a minimum effort. Some of the additional efforts MDOT has undertaken to protect the environment include:

Collaboration with Agency Partners and Tribal Governments: MDOT works closely with federal, state, and local agencies and the 12 federally recognized tribal governments throughout the corridor and project planning processes to ensure appropriate stewardship and preservation of Michigan's cultural and natural resources.

Climate Change Vulnerability Risk Assessment: In partnership with FHWA, MDOT completed a vulnerability risk assessment pilot project focusing on risks to infrastructure from extreme weather and climate change. The study looked at available MDOT assets, such as culverts, pump stations, roads, and bridges to determine the level of risk these assets would face as climate changes. While several climate stressors were researched for this project, the findings led to a focus on impacts of increased intense precipitation events and increased number of days warmer than 95 degrees. Since the climate risk predictions can also be a proxy for impacts from extreme weather, MDOT intendeds to verify that the model shows similar results to what is observed by MDOT Operations staff. Future steps may involve using this information to support decision-making while scoping projects.

Planning and Environmental Linkages Studies (PELS): These studies combine the best of traditional transportation planning processes with National Environmental Policy Act (NEPA) decision-making. MDOT has successfully used these types of studies to refine transportation problem statements, develop alternative solutions, and identify a recommended alternative to move forward into further development. PELS also provide a way to engage communities in problem solving so they can have a stake in the financing and outcome of the proposal.

I-75 Pollinator: Pollinator plants are located along the I-75 right of way in Monroe County. A recent plant survey of the corridor identified nearly 30,000 rare native plants, many of which are Sullivant's Milkweed, an important source of nectar for butterflies and bees. MDOT will reconstruct this portion of I-75 over the next 20 years and has participated in a two-year conservation planning process, funded by the Strategic Highway Research Program, Part 2 (SHRP2) managed by FHWA and the American Association of State Highway and Transportation Officials (AASHTO), because of the unique environmental qualities of the roadside and the freeway's close proximity to Lake Erie. This process led to the relocation of 1,500 Sullivant's Milkweed plants from the freeway property to a nearby prairie restoration site in Sterling State Park prior to construction in 2015. For future construction projects, strategies include plant relocation, stockpiling of topsoil with the native seed stock for later use on the roadside, and collecting seeds from the plants for future use along I-75.

Identify Appropriate Funding

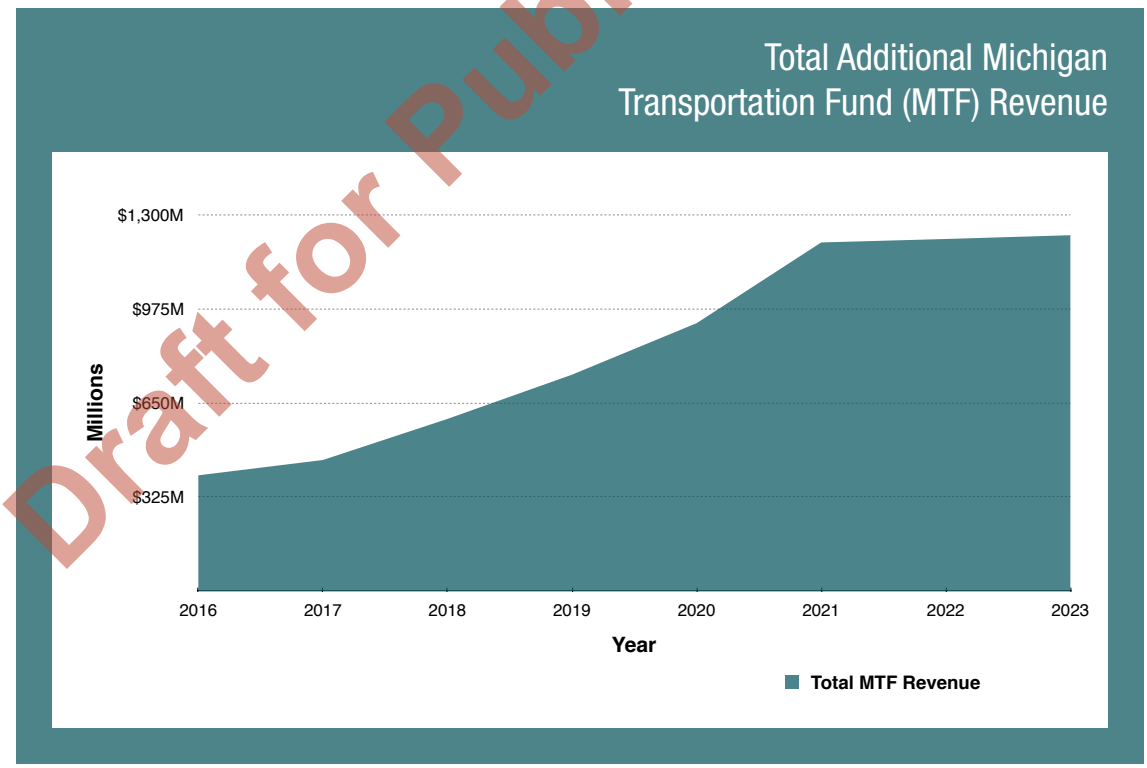
Fall 2015 was a very eventful time with the passing of a new state transportation funding revenue package and a five-year federal reauthorization bill. The Finance White Paper and the New Policy Initiatives and Transportation Intermodal Integration White Paper both explain the details and implications of these bills and their impacts to short-term and long-term funding in Michigan. The section below provides a summary of the highlights from each of these bills, and how state funding will be for the foreseeable future.

State Transportation Funding Package

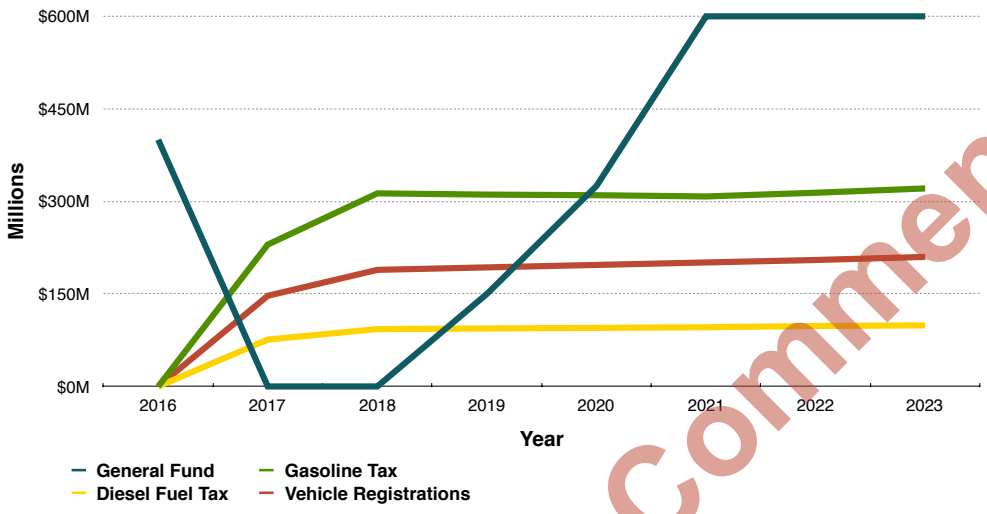
On Nov. 10, 2015, Gov. Snyder signed a package of transportation bills approved by the Legislature that represent the largest state investment in transportation in Michigan in the last 50 years. The new revenue will be distributed to MDOT, county road commissions, cities and villages, and the Comprehensive Transportation Fund (CTF) through the existing Act 51 formula (39 percent to MDOT, 39 percent to county road commissions, and 22 percent to local cities and villages). The planned additional $1.2 billion in yearly road and transit funding will be phased in over the next five years, beginning in 2017.

In the short term, the legislation will:

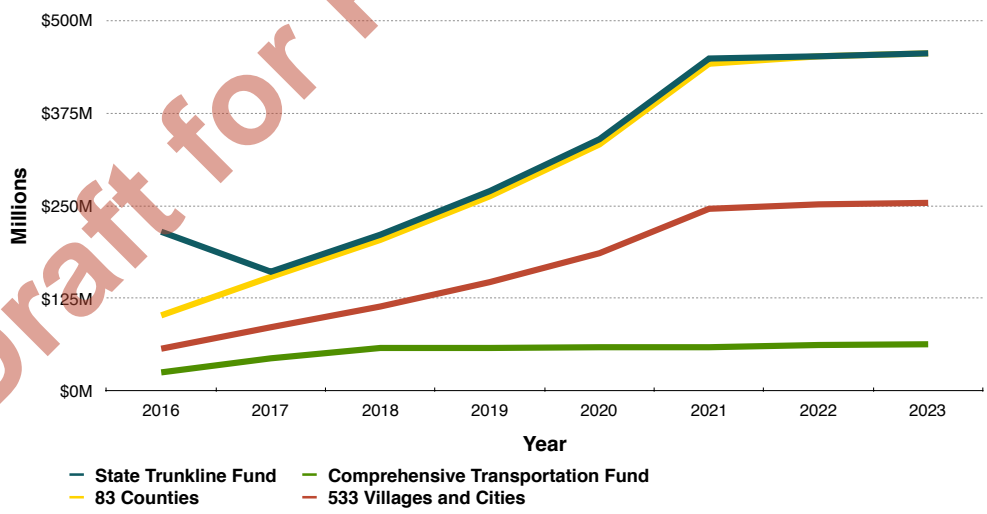
- Provide $410 million in additional fuel tax revenues, beginning in January 2017. The tax on gasoline and diesel fuel will rise to 26.3 cents at that time because the legislation also provides for diesel parity.
- Provide $190 million from a 20 percent increase in vehicle registration fees, also beginning in January 2017.



Additional MTF Revenue by Source



Additional MTF Revenue Allocations

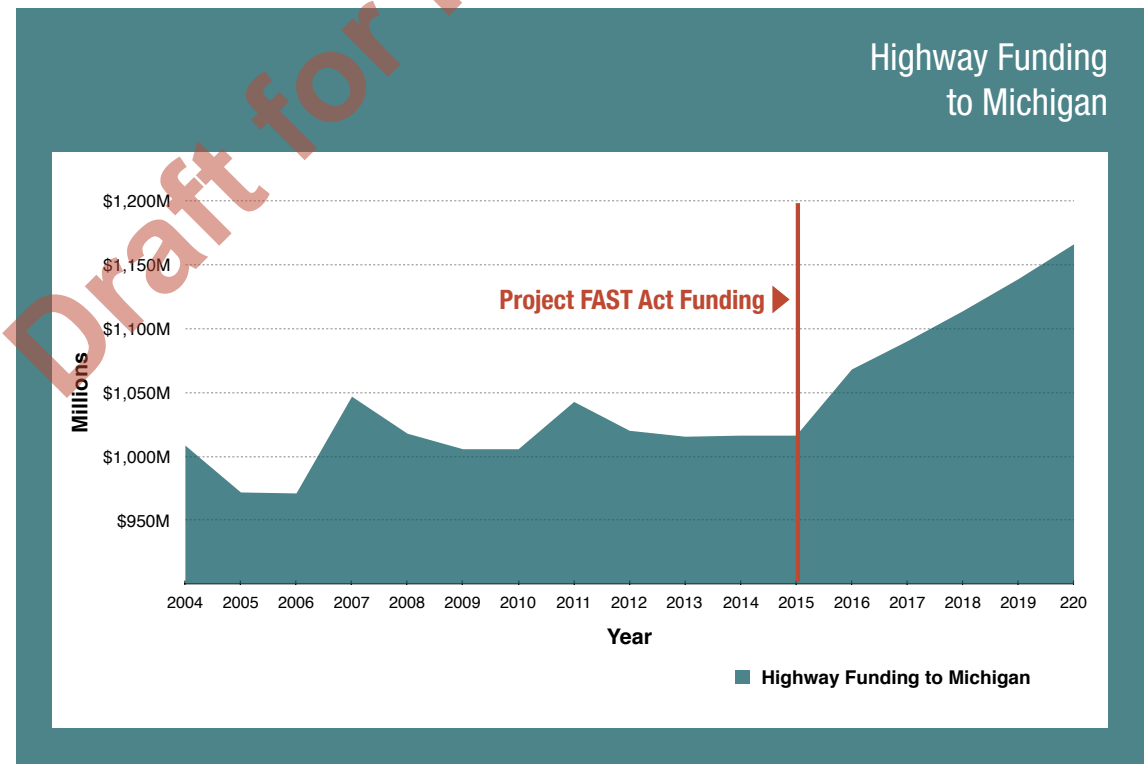


Federal Funding

During the *2040 MITP* revision process, new federal legislation was passed, called the "Fixing America's Surface Transportation Act" (FAST Act) (P.L. 114-94), authorizing funding for highway, transit, and rail programs through fiscal year (FY) 2020. The bill follows closely on the heels of the last surface transportation authorization bill, Moving Ahead for Progress in the 21st Century Act (MAP-21), which made a number of transformative changes to the federal program, many of which have not yet been fully implemented. This includes transitioning highway and transit programs to become performance-oriented and placing new emphasis on studying, planning for, and facilitating the movement of freight. It is important to note that with few exceptions, provisions in the FAST Act do not repeal or replace the changes made by MAP-21. Rather, the FAST Act affirms and improves many of the reforms made by MAP-21. The FAST Act continues to focus on freight by creating two new programs aimed at better directing resources to projects that will enhance the efficient movement of freight along the surface transportation system. It also directs resources to assist and equip states, metropolitan planning organizations (MPOs), and transit agencies in their efforts to adjust to the framework for a national system of performance management.

The FAST Act also will be providing an increase in federal funding for highways to Michigan over the five fiscal years covered by the legislation. The table below shows how the projected FAST Act funding increases compared to the actual funding levels Michigan has experienced over the past decade.

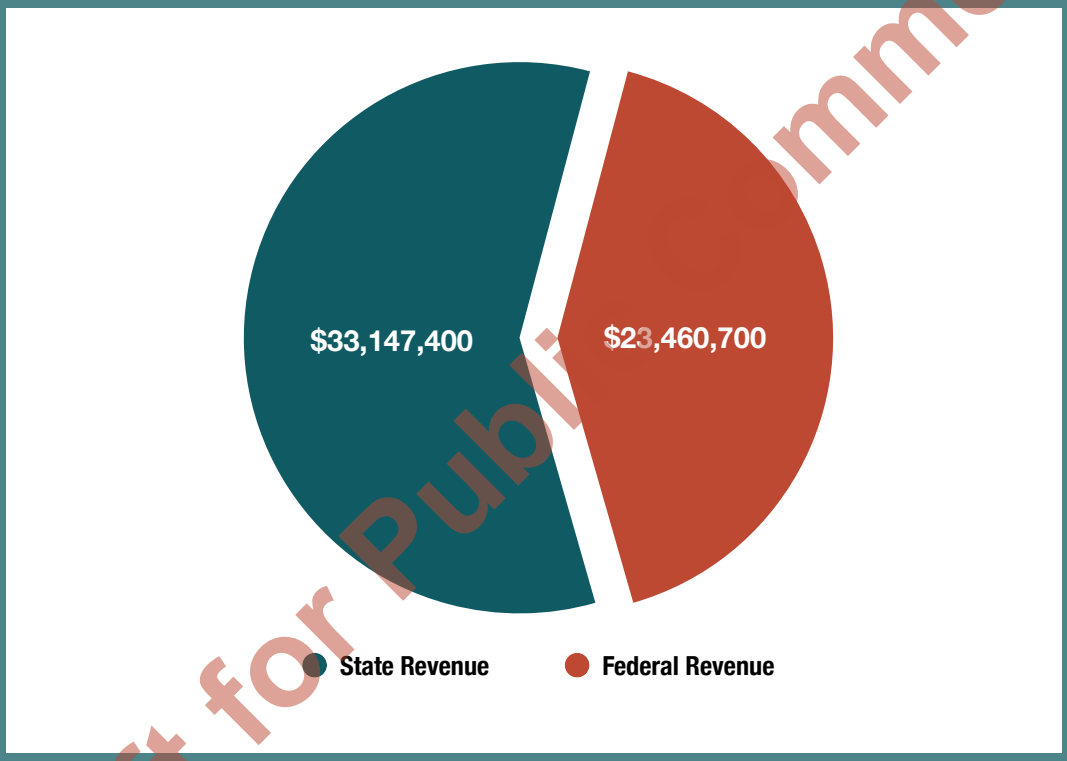
The projected funding increases to Michigan under the FAST Act appear in stark contrast to the trend in funding over the past 11 years, which has been flat (or up and down) with no discernible growth. The funding increase depicted in the following chart shows a 5 percent increase in FY 2016, and roughly 2 percent increase per year for the next four fiscal years. The funding increase appears dramatic due to years of no significant financial increases.



State and Federal Revenue Projections

The following chart shows the total MDOT transportation revenue projections for the Highway, Public Transportation, and the Aeronautics programs from 2016 through 2040. Revenue is before capital and non-capital uses.

Total MDOT Transportation Revenue
Forecasted for FY 2016-FY 2040 (in millions)



Michigan's Transportation Challenges

Major Socioeconomic Changes

Since the adoption of the *2035 MITP*, Michigan has begun to climb out of a deep economic recession where overall employment rebounded after a 2005-2010 decline, and population growth emerged after a 2005-2011 decline. Although economic growth is expected in the future, the economic and population forecast for the *2040 MITP* analysis is lower than that used in the *2030 MITP*.

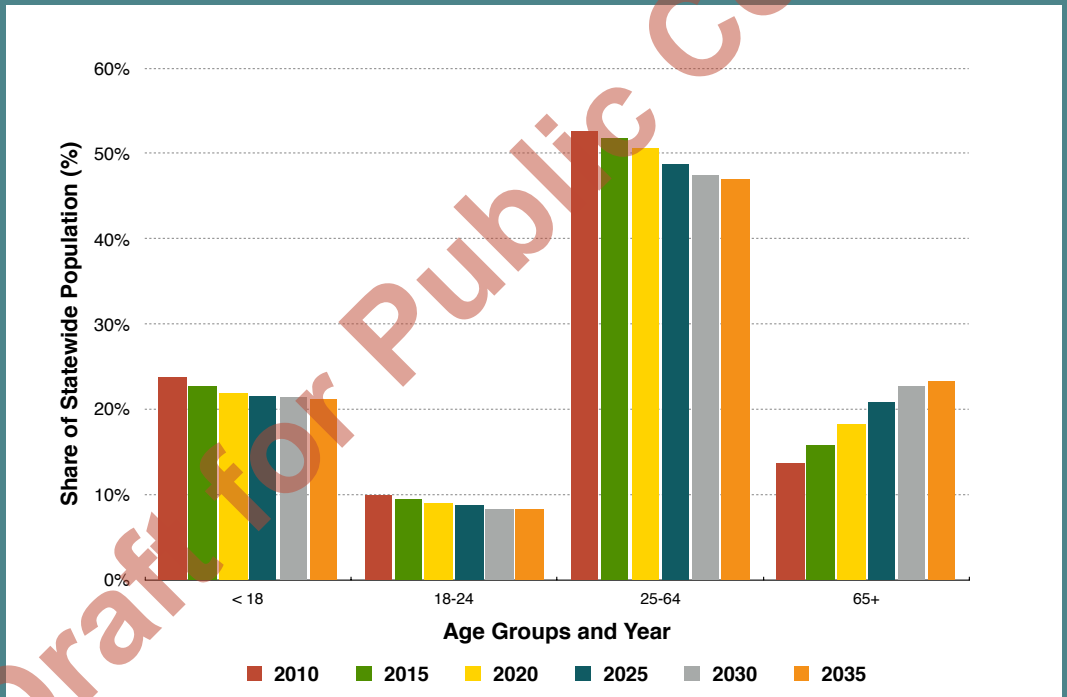
A very brief summary of the major socioeconomic trends facing Michigan, and their potential transportation impacts, are included on the following pages. For more comprehensive information on these trends, please visit the Socioeconomic White Paper.

> ***Although economic growth is expected in the future, the economic and population forecast for the 2040 MITP analysis is lower than that used in the 2030 MITP.***

Continued Population Growth: Michigan's population is expected to grow at a slower rate through the year 2040, but the population will still increase in that time. This may lead to increased congestion in urban and suburban regions and longer trip lengths that may extend peak commuting periods.

Aging Population: The dominant socioeconomic change in Michigan remains the expected dramatic increase in aging and retired populations. Access to transportation for health, recreation, and other activities will increase in importance as this segment of the population leaves the daily commute for retirement living.

Population Distribution by Age (2010-2040)

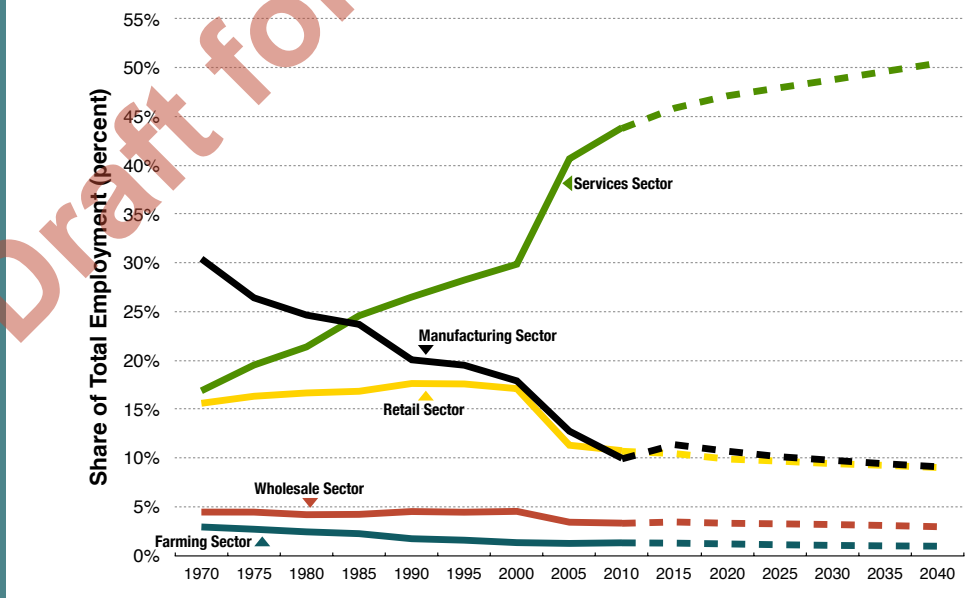


More Households, Smaller in Size: The number of households is projected to increase 8.9 percent from 2010 to 2040, but the average household size in Michigan has declined significantly, from about 3.3 persons in 1970 to about 2.55 persons in 2010. This historical trend generally mirrors what has occurred nationally. Average household size is expected to continue to decline long-term, largely due to the aging of the population and the tendency of older residents to have smaller households. Expected increases in the number of households will increase the number of vehicle trips. It is also associated with a rise in per-capita auto ownership and lower vehicle occupancy.

Land Use Changes: Smaller households suggest the potential for reduced population density and longer trips, as with suburban empty-nest baby boomers. Smaller households in a growing downtown (such as Grand Rapids or Mid-Town Detroit), however, could increase population density and infill development. In any case, the character and density of neighborhoods, zoning, and the preferred living arrangements for one- and two-person households will significantly impact the amount of vehicle travel and the viability of transit, walking, and other modes.

Employment Growth: Continued overall employment growth (though at slower-than-historical rates) is expected to increase overall trip attractions, leading to associated increases in travel. However, with the overall tightening of the labor force, it is also possible that employers will relocate for better proximity to localized labor pools, further altering regional travel patterns and levels. As Michigan's employment continues to decentralize, the length of commutes will likely increase, resulting in longer work trips, increased traffic, and congestion. Providing efficient transit service also becomes more difficult with decentralized employment and travel patterns.

Employment Distribution by Sector (2010-2040)



Shift to Service Economy: The continuing shift to a more service-oriented economy will generate more trips between offices, clients, and customers. This will increase off-peak travel volumes, potentially exacerbating congestion in urban-suburban regions of the state. Service establishments also often run on more flexible schedules, employ a smaller number of people per establishment than large factories, and attract customers. The continuing shift to a service-oriented economy could change trip lengths and their origins or destinations, spread commuting peaks throughout the day, and increase the use of other modes.

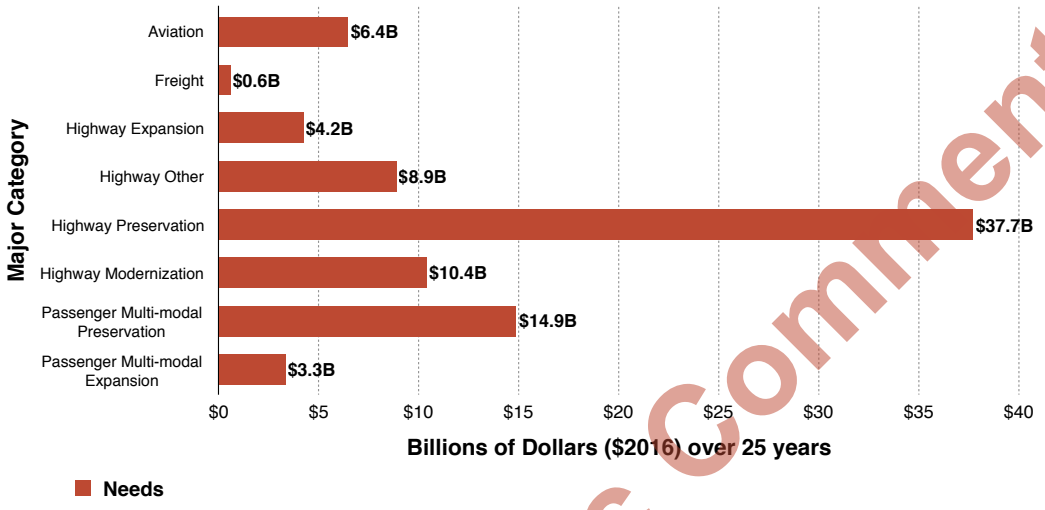
Effects of Immigration: The key element of changes in the state's migration patterns is the expected and continuing growth of international migrants, which is off-setting the continued out-migration of Michigan's workforce-age population. Expected increases in international migration will require the state to communicate with more diverse segments of the population. Road signs, travel advisories, and other transportation system information may need to be designed using multiple languages. Transportation providers may need to revise customer service staffing policies by hiring workers with multilingual skills to better serve these increasing immigrant segments of the population. Furthermore, foreign-born immigrants are used to a greater variety of modal choices and may rely, to a greater degree, on modes such as transit or bicycles.

Revenue and Gap

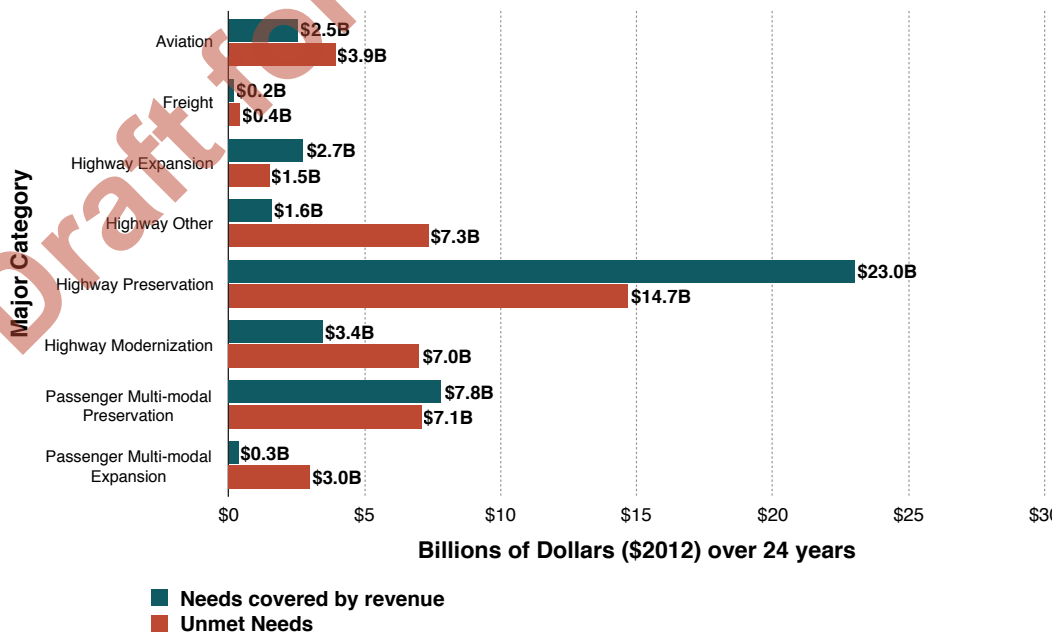
This plan provides a forward-looking assessment of state transportation revenues, needs and gaps under MDOT's current revenue and investment trends. It delineates the state's transportation needs against the available revenues, based on trends in the growth of revenues and on how transportation programs are currently funded. The distribution of these needs by categories is shown in the Statewide Long-Term Transportation Needs chart. The categories represent groups of state transportation programs. The Revenue Gap chart shows the gaps between revenue and need, grouped into the eight categories. Over the 25-year plan (2016-2040), the state has a significant gap in transportation revenues, compared to transportation needs. The revenues available (in 2016 dollars), are estimated at on ly $41.6 billion, while the needs are estimated at $86.5 billion, which leaves a revenue gap of approximately $44.9 billion.

The Revenue Gap White Paper includes more detailed information on the performed analysis.

Statewide Long-Term Transportation Needs by Major Category



Revenue Gap by Major Category



Highways and Bridges

The Highway-Bridge White Paper provides an overview of Michigan's pavement and bridge condition goals, and MDOT's strategies and methodologies for implementing these goals. A summary of these methods follow.

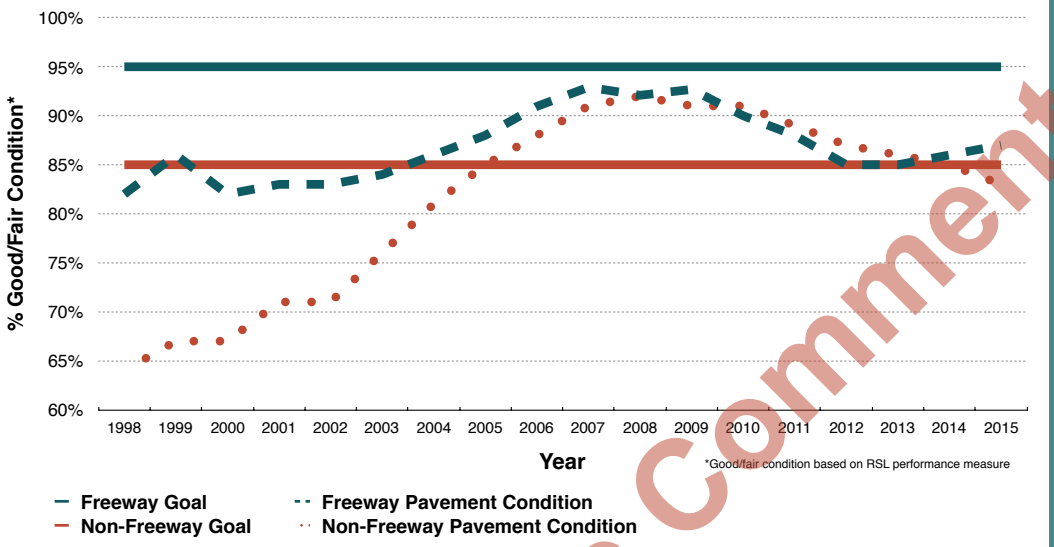
Pavement Condition Goal

The performance measure used for Michigan trunkline pavement is remaining service life (RSL). RSL is the forecast estimate of time until reconstruction or a major repair treatment will most likely be more cost-effective than preventive maintenance for a segment of pavement. MDOT's current pavement condition goals are to maintain 95 percent of pavement in good or fair condition on the freeway system, and 85 percent good or fair on the non-freeway system. Based on 2015 actual pavement condition, the freeway system is at 87 percent good or fair condition, and the non-freeway system is at 82 percent good or fair condition.

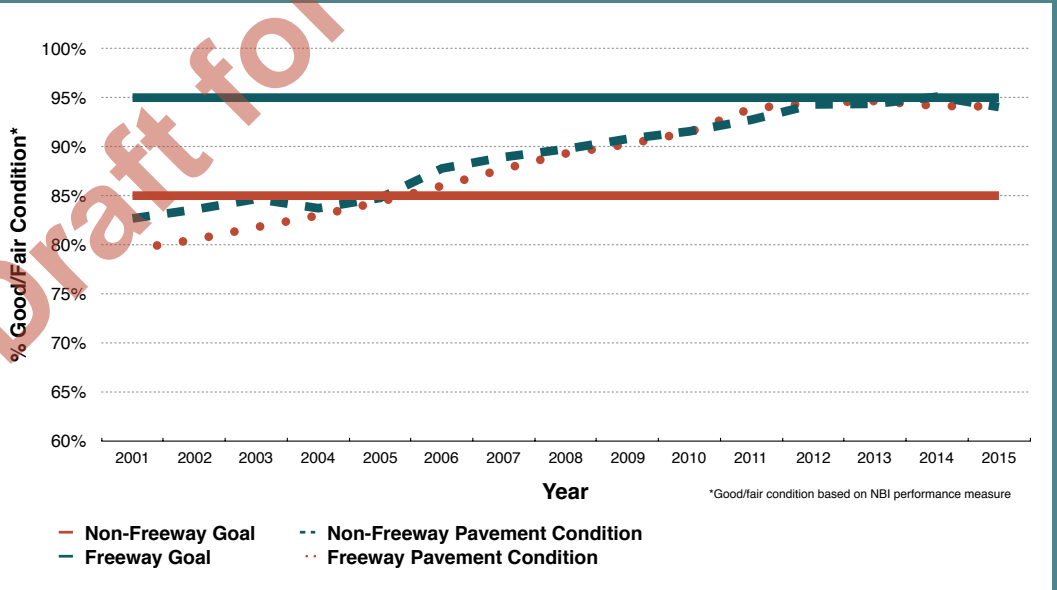
Bridge Condition Goal

The performance measure used for Michigan trunkline bridges is the National Bridge Inventory (NBI) rating scale. MDOT's bridge condition goals are to maintain 95 percent of the bridges in good or fair condition on the freeway system and 85 percent on the non-freeway system. In 2015, the freeway and non-freeway bridges are both at 94 percent good or fair condition.

Historical Pavement Condition Trend



Historical Bridge Condition Trend



Connected and Automated Vehicle Program

MDOT's vision for its connected and automated vehicle program provides the foundation for the development of a connected and automated future for the department and the citizens of Michigan. The work conducted by MDOT supports the improvements to safety and travel efficiency that this technology will provide. In partnership with numerous auto manufacturing companies, technology companies, and Michigan universities, MDOT aspires to lead the nation in advancing a safe and connected future. A few of the many initiatives the department is currently working on are:

- Vehicle-to-infrastructure deployments: MDOT's fleet vehicles are testing communication between the vehicle and sensors in the roadway.
- Mcity: A partnership between MDOT and the University of Michigan to test autonomous vehicles in a closed research environment.
- Southeast Michigan Connected Environment: An area bounded by the major freeways in southeast Michigan where new connected and automated vehicle technology can be tested in real-life environments.
- Truck Parking Information Management System (TPIMS): A system of sensors and visual displays along I-94 in west Michigan that communicates to truck operators the availability of parking spaces at private and public facilities.
- The American Center for Mobility (ACM): A joint initiative with supporters including MDOT, the Michigan Economic Development Corp., the University of Michigan, Business Leaders for Michigan, and Ann Arbor SPARK. The center, located in Ypsilanti Township, will help accelerate advanced mobility vehicle development safely and support the development of a potentially transformative industry in Michigan. ACM offers an opportunity for larger-scale research, development, and testing due to both the size of the facility and more diverse infrastructure.

The Connected and Automated Vehicles and New Technology White Paper includes more information on these initiatives as well as further initiatives currently under way.

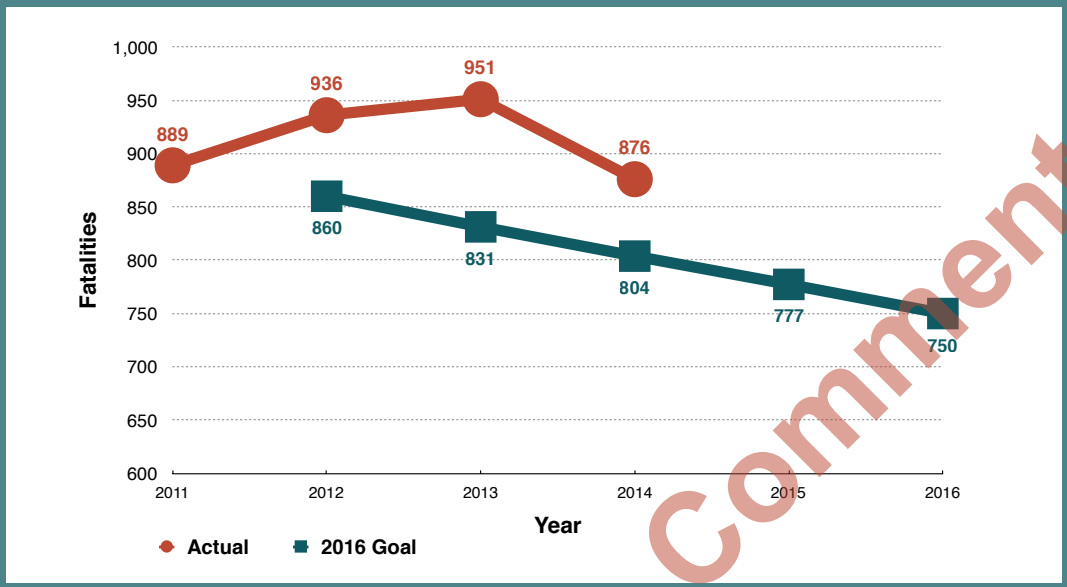
Highway Safety

The safety of Michigan's existing transportation system remains one of MDOT's highest priorities.

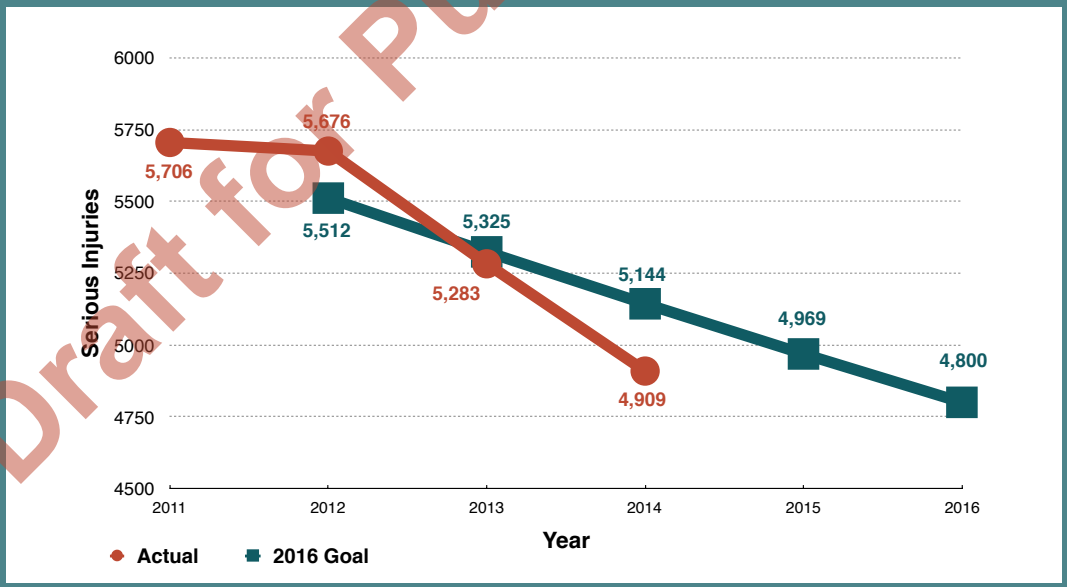
The safety of Michigan's existing transportation system remains one of MDOT's highest priorities. Since the publication of the Highway Safety Technical Report in 2006, the implementation of safety-related efforts has been in alignment with the State of Michigan Strategic Highway Safety Plan 2013-2016 (SHSP).

The vision of SHSP is that "All roadway users arrive safely at their destinations." The most recent version of the SHSP, published in 2012, includes updated goals for a more meaningful objective of an incremental reduction in the frequency of fatalities and serious injuries. The revised goals address both fatalities and serious injuries; the previous SHSP addressed only fatalities. The 2012 goals were to reduce traffic fatalities and serious injuries from 889 and 5,706 in 2011 to 750 and 4,800 in 2016. According to the most recently published data, Michigan is on track to meet the goal for serious injuries. Progress toward the SHSP goals of reducing statewide fatalities and serious injuries can be found in MDOT's Transportation System Condition Report. A detailed breakdown of crashes is available in the Michigan Traffic Crash Facts.

Statewide Fatalities



Statewide Serious Injuries



With the advancement of the rumble strips and cable median barrier initiatives on MDOT's trunkline system, the amount of crashes has been reduced significantly. To date, 5,700 miles of centerline rumble strips and 1,700 miles of shoulder rumble strips have been placed, resulting in a 50 percent reduction of all crashes along these roads. In addition, 333 miles of cable median barriers have been installed, resulting in an 87 percent reduction in crossover crashes along these roads. For more specific information, please see the Highway Safety White Paper and the Highway Safety Improvement Program annual report.

Public Transit and Intercity Passenger Services

Public transit continues to be an important mobility and accessibility option in Michigan.

Public Transit Remains an Important Mobility Option

Public transit in Michigan is a compilation of local, public and nonprofit service providers. Agencies may be a department of a city or county, private nonprofit organization, or an authority that has its own board and local taxing authority. Funding is a mix of federal and state assistance, local millage or general funds, contracts, farebox, and other sources of revenues such as the sale of maintenance or advertising.

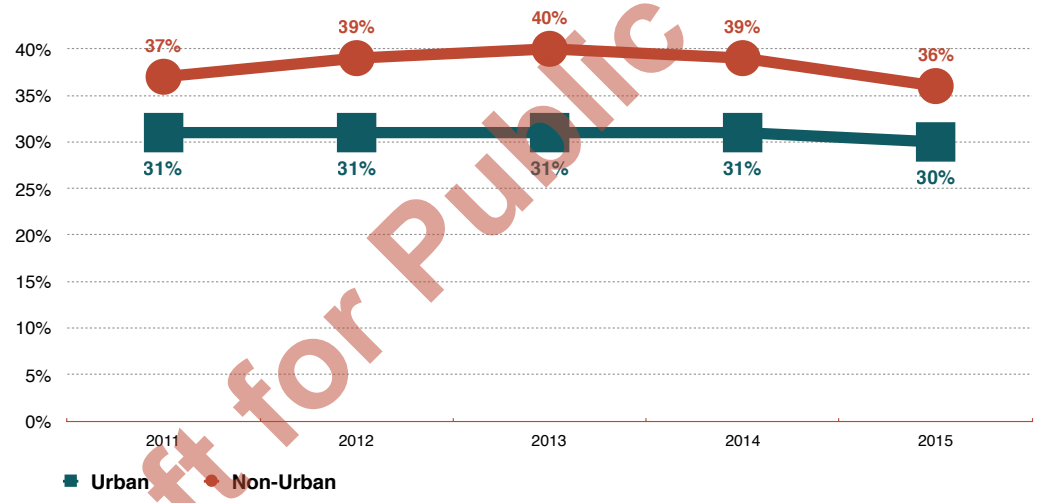
Public transit continues to be an important mobility and accessibility option in Michigan. It helps remove barriers to economic activity by connecting workers, consumers and businesses to key activities and markets supporting Michigan's economic vitality. It also provides a means of transportation to persons who may otherwise not be able to get to needed medical appointments, shopping, work, school or recreational activities.

Transit services in Michigan remain relatively stable. All 83 counties continue to have some form of public transportation, although service is still limited in some counties. Since 2005, local transit ridership has increased 3.8 percent while service hours increased 6.0 percent and miles 5.6 percent. The 2015 "Attitudes and Perceptions" survey suggests that the public is moderately satisfied with the level of local transit services available to them and, for those who have used the service, they are satisfied with its quality.

State Comprehensive Transportation Funds

The largest state program supported with revenues from the Comprehensive Transportation Fund (CTF) remains the Local Bus Operating (LBO) program that provides state assistance in the form of reimbursement, as a percentage of eligible operating expenses. From FY 2006 to FY 2014, the annual appropriation for the LBO program remained static at $166.6 million per fiscal year with a slight increase to $167.4 million beginning in 2015. During this time, the state's share of operating expenses has declined (see table below). The decline is largely a function of total expenses increasing each year while the LBO appropriation has remained relatively static.

State Operating Assistance
2011-2015



Since the 2035 MITP was developed, several advancements in transit have occurred statewide. These include the following:

Regional Transit Authority (RTA) for Southeast Michigan: The RTA was created by state law in 2012 to coordinate, oversee and improve transit for Macomb, Oakland, Washtenaw, and Wayne counties, including Detroit. This group is charged with developing a single master transit plan for the region, the implementation of regional funding initiatives and the selection of service options for major corridors based on alternative analysis recommendations. Current studies include:

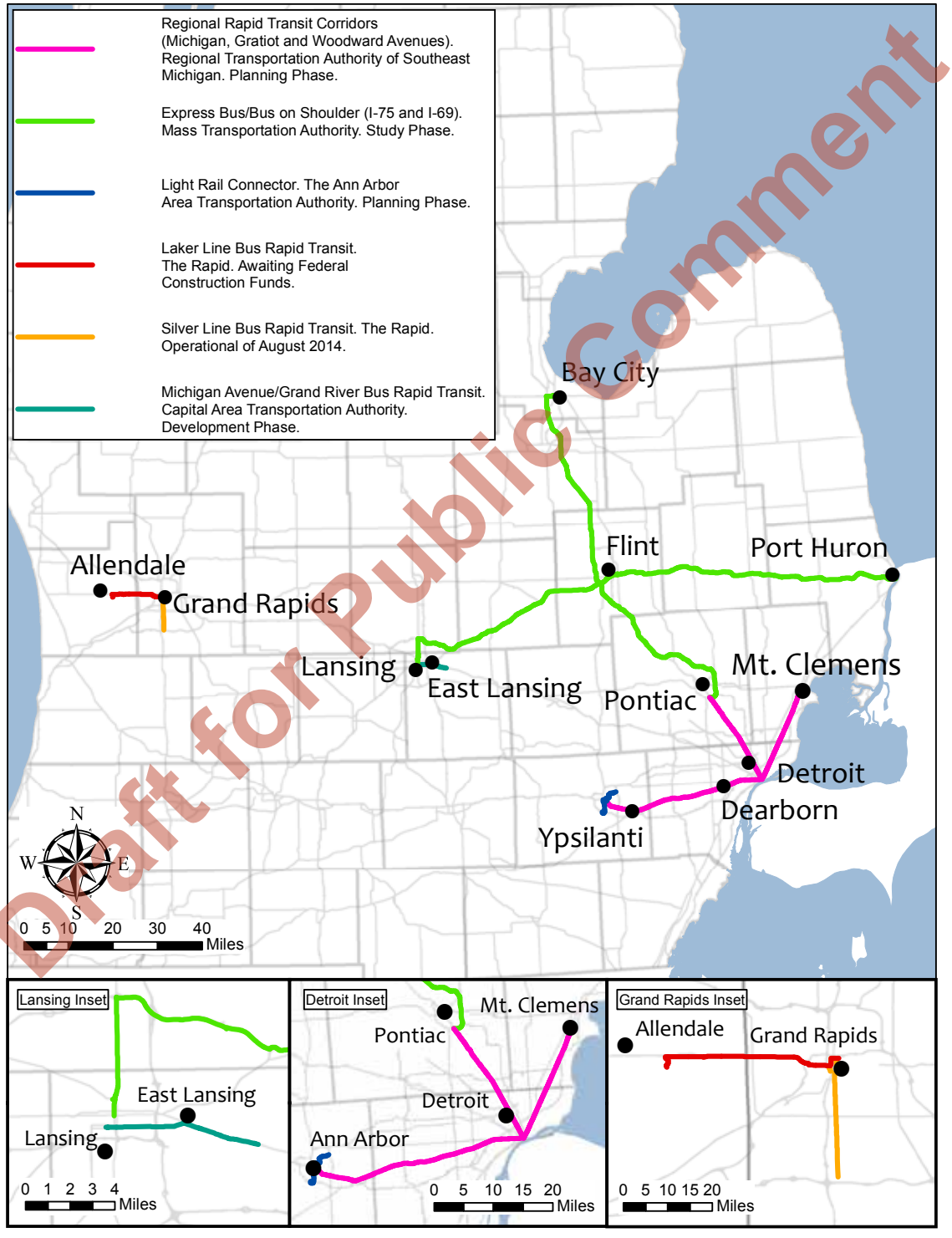
- Woodward Avenue corridor between Detroit and Pontiac
- Michigan Avenue corridor between Detroit and Ann Arbor
- Gratiot Avenue corridor between Detroit and Mt. Clemens

Detroit – M-1 Rail, or QLine: This project is a nonprofit-managed public/private partnership streetcar project. This rail system will connect destinations along the Woodward Avenue corridor beginning north of Grand Boulevard and ending just north of Jefferson Avenue in downtown Detroit. Construction, railcar manufacture, and testing are under way as the project advances towards the April 2017 opening. Next steps include complete construction, vehicle and route testing, and completing operational and readiness reviews. For further information, see the M-1 Rail website.

Bus Rapid Transit (BRT): BRT has become a popular choice for enhanced transit services along major corridors in the urban areas of Michigan. MDOT is in support of all these local initiatives:

- **Grand Rapids-Silver Line:** Grand Rapids is the home of the first BRT corridor in Michigan. It opened in 2014, connecting downtown Grand Rapids and the city's Medical Mile with the adjacent cities of Wyoming and Kentwood via Division Avenue.
- **Future Proposed BRT Routes:**
  - **Grand Rapids-Laker Line:** additional line going west from downtown to Grand Valley State University in Allendale.
  - **Lansing-East Lansing:** line linking downtown Lansing to Michigan State University and East Lansing.
  - **Southeast Michigan:** line on I-75 corridor between Bay City and Detroit, and on the Woodward Avenue corridor between Detroit and Pontiac.

Rapid Transit Corridors In Operation or Under Development



Intercity Bus

Michigan is served by two principal intercity bus carriers: Greyhound Lines, Inc. and Indian Trails, Inc. Subsidized bus service in Michigan has emerged in response to carrier service reductions. As carrier decisions are made, MDOT reviews the affected routes and determines whether to provide a subsidy for the service, based on the state's objective to maintain community access to the national intercity bus network, and subject to the availability of federal and state resources. These two carriers, through a combination of contracted services and subsidized capital, provide the majority of intercity bus service in Michigan. The contracted services and subsidized capital work together to form the intercity bus network in Michigan. Several of the intercity bus routes also serve as thruway connections to the nation's intercity passenger rail system.

Michigan's Intercity Bus Program consists of five contracted routes providing operation and capital funding to routes in the northern Lower Peninsula and Upper Peninsula that the marketplace has abandoned. In addition to the contracted routes, capital funding is provided as a subsidy for all routes in the southern portion of the Lower Peninsula. Ridership along contracted routes has decreased by about 10 percent from 2012 to 2015. Decreased ridership increases the subsidy required to operate the routes. Funding requirements increased from $1.7 million in 2012 to $2 million in 2015.

Michigan's Intercity Bus System

MDOT and the Wisconsin Department of Transportation (WisDOT) created a partnership to provide joint funding for a rural intercity bus route between Ironwood, Michigan, and Duluth, Minnesota. The success of this effort is monitored by MDOT and WisDOT with the plan of entering into a second agreement for a similar operation between Escanaba, Michigan, and Milwaukee, Wisconsin, which is scheduled to start in June 2016.

Intercity Passenger Rail

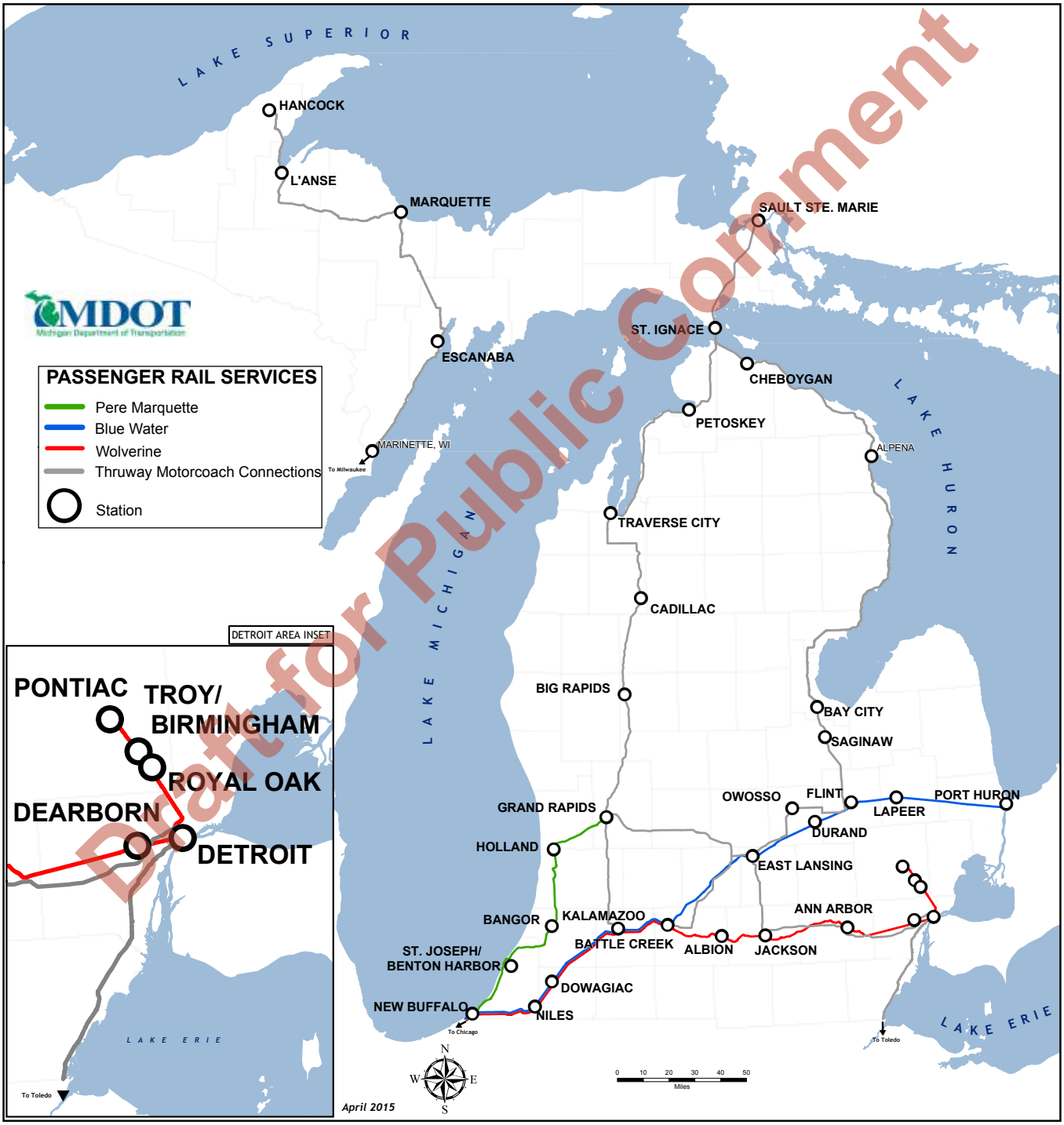
Michigan is served by one principal intercity passenger rail service provided by the National Railroad Passenger Corp. (Amtrak), established by Congress with the passage of the National Railway Passenger Service Act of 1970. Amtrak operates a nationwide rail network that serves more than 500 destinations in 46 states, on about 21,000 miles of routes. It is both a business and a public enterprise that relies on funding from Congress. Amtrak initiated service in Michigan in 1971 as part of its nationwide system. The Wolverine line began in the Detroit-Chicago corridor and was extended to Pontiac in 1994. The Blue Water line, between Port Huron and Chicago, was initiated in 1974. Service between Grand Rapids and Chicago began in 1984 as the Pere Marquette line.

Michigan is one of 18 states that contract with Amtrak for the operation of trains that supplement the national Amtrak network by extending the reach of passenger rail services, or increasing frequencies on national routes. The STC has adopted a policy that acknowledges intercity rail passenger service (including high-speed rail) should be an integral part of the transportation system now and in the future. MDOT recognizes that intercity passenger rail is most effective in high-volume travel corridors and performs best with high ridership.

Kalamazoo-Dearborn Acquisition and Corridor Enhancement (Federal grant amount: $346.5 million) has been a key accomplishment in the advancement of intercity passenger rail service in Michigan. In 2012, MDOT purchased 135 miles of railroad between Kalamazoo and Dearborn on the Chicago-Detroit/Pontiac corridor from Norfolk Southern Railway and entered into an operating and maintenance agreement with Amtrak. Construction to enhance this segment of the corridor for accelerated speeds up to 110 miles per hour is under way and will be completed by fall 2016. In addition, stations along this route are also being upgraded.

For more information on MDOT's involvements in Intercity Passenger Rail, please see the Intercity Passenger Rail White Paper.

Michigan's Intercity Passenger Rail System



Nonmotorized

> *Over the last decade, the ease of mobility for people to travel by foot or by bicycle has greatly improved.*

Multi-modal transportation options, particularly in urban areas, extend beyond transit and light rail: and include walking and bicycling. Over the last decade, the ease of mobility for people to travel by foot or by bicycle has greatly improved. Infrastructure serving the needs of pedestrians and bicyclists is owned and managed by a broad array of agencies, including cities and villages, parks departments, nonprofit organizations, road commissions, the MDNR and MDOT.

This arrangement of ownership and management requires coordination between agencies to ensure network connectivity. The 2010 Complete Streets Legislation (Public Act 135) and MDOT's 2012 Complete Streets Policy are intended, in part, to improve this infrastructure coordination and fill network gaps. Since passage of the statewide legislation, more than 100 local agencies have adopted complete streets policies. Integrating sidewalks, bicycle lanes, shared-use pathways or other infrastructure supporting pedestrians and bicyclists into road construction projects results in both efficiency and opportunities to improve safety for all users of the roadway. Including paved shoulders into planned roadwork provides room for pedestrians and bicyclists to travel outside the travel lane; statewide, more than 3,160 miles of MDOT Trunkline has wide paved shoulders. In urban areas, striped shoulders serve bicyclists in communities where lane reductions (road diets) are implemented to improve traffic safety. In urban areas, MDOT trunkline now includes 44 miles of marked bike lanes as of October 2015.

This shoulder and bicycle lane network complements the MDNR and locally owned and maintained rails-to-trails and shared-use pathway networks consisting of more than 2,300 miles open to the public. The vision and plans for expanding these transportation networks is captured in local and regional transportation plans, including MDOT's Nonmotorized Transportation Plans, which will cover all MDOT regions by 2017. These plans help identify existing and proposed regional corridors for both on-road and off-road bicycle or shared-use facilities.

For those traveling greater distances, Michigan has three U.S. Bicycle Routes designated by the American Association of State Highway and Transportation Officials (AASHTO). These routes enable long-distance touring bicyclists to navigate their way across a state or region, similar to the interstate highway system. The U.S. Bicycle Route system is, in its most basic definition, a numbering designation for continuous roads, highways, and shared-use pathways that are considered suitable for experienced long-distance touring bicyclists who are comfortable riding with traffic.

For more information on bicycling in Michigan, visit the MDOT bicycling webpage.

U.S. Bicycle Routes in Michigan

November 20, 2014

Aviation

The Michigan Airport System has remained stable both in capacity and condition.

The Michigan Airport System has remained stable both in capacity and condition. The number of airports in the system and services provided are relatively unchanged. The system of airports remains a vital part of Michigan's transportation link to national and global markets.

The condition and overall safety of the aeronautical infrastructure has been well monitored and maintained through an asset management concept described in the Michigan Airport System Plan (MASP 2008) and the All-Weather Airport Access Plan. These plans provide the guidelines for maintenance and future development through a "system approach." This approach takes into consideration state, national, and local goals for safety and access to pertinent markets, all in an effort to provide "Better, Faster, Cheaper, Safer and Smarter" aeronautical access in Michigan.

State Policy and Plans

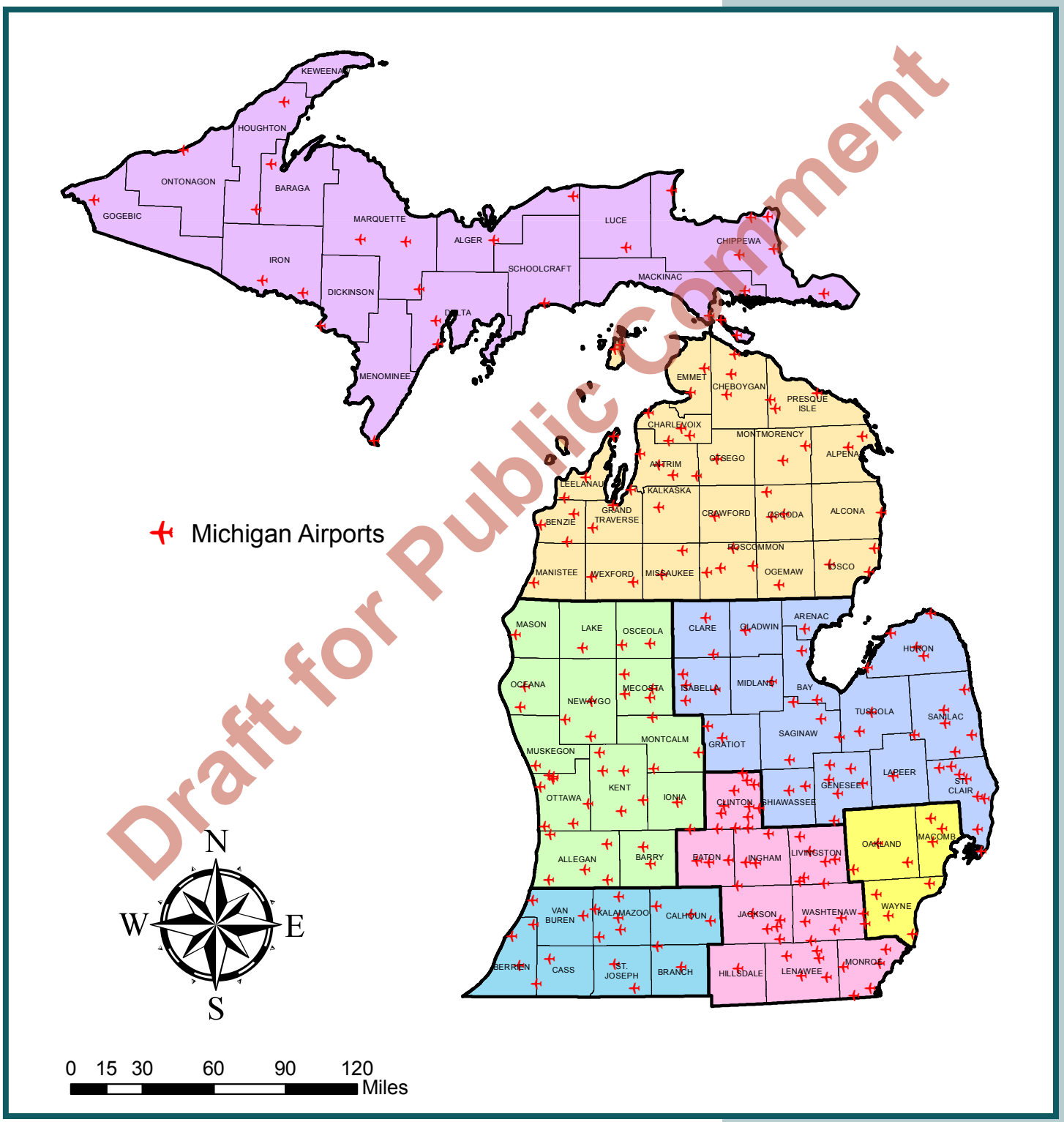
The authorities, responsibilities, and functions of the Michigan Aeronautics Commission (MAC), as well as the associated legislative authorizations, have remained essentially unchanged. The programs of the MAC are administered by the MDOT Office of Aeronautics (MDOT/AERO).

MASP 2008 is the current aviation system plan that updated the former MASP 2000 plan. An updated MASP is being developed for approval in 2017. This plan is comprised of both system-wide and individual facility goals to provide optimal facilities to communities based on the type of activity center they serve. The plan divides all public use airports into Tier 1, 2, or 3, based on the relative importance to the activity center that they serve. This approach has allowed MDOT/AERO to focus available investment funds on the safety needs at all public use airports, as well as prioritizing those dollars for service enhancement at facilities that provide the most value to the system.

The Policy Plan for Michigan Air Service was updated in 2015 and remains the guidance document for the administration of the Air Service Program for MDOT/AERO. The Air Service Program is intended to advance system goals and focus development to encourage and support commercial air service to Michigan communities. This program has been unfunded for much of the period between FY 2005 and FY 2016. However, some minimal funding was provided for the program for 2011, 2012, 2014, and 2015. Funding challenges have reduced the program, but proposed new revenue could restore it beginning in 2017.

The Aviation White Paper provides greater details about Michigan's airport system.

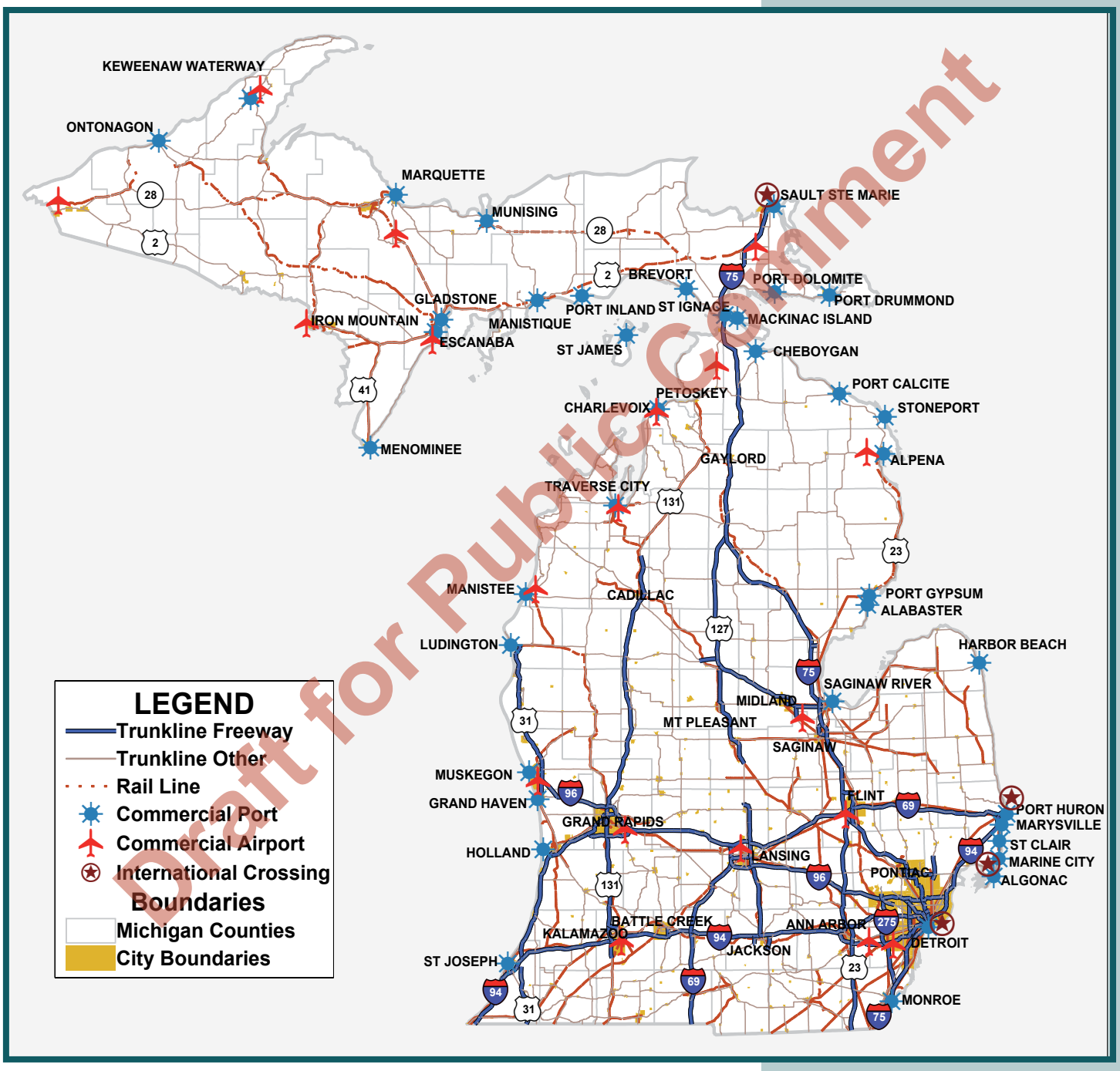
Michigan's Airport System



Freight

All forecasts are calling for continued growth in freight movements.

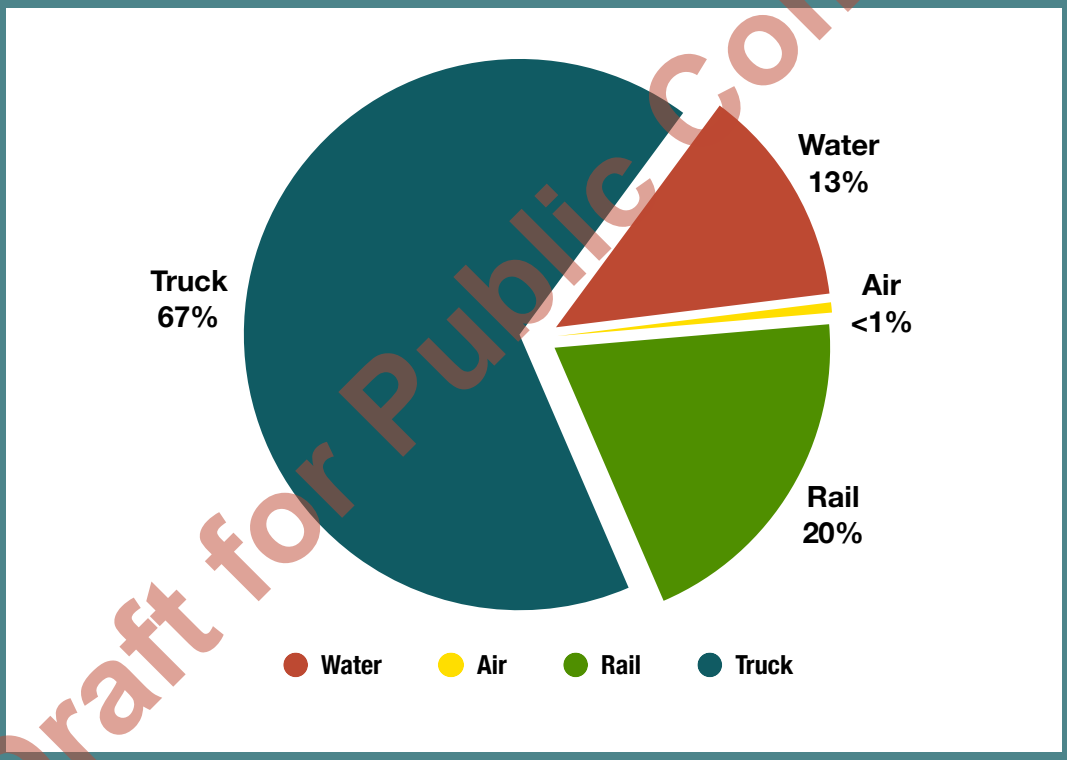
In the years since the recession, freight tonnage moved has increased for all modes. All forecasts are calling for continued growth in freight movements. The mix of commodities moving by each mode has stayed relatively the same, with manufacturing production the major driver of Michigan freight totals. The auto industry continues to play a crucial role in the overall totals of freight movements in the state. Two of the major freight-related projects in the state, the Detroit Intermodal Freight Terminal (DIFT) and the Gordie Howe International Bridge, have made progress and should alleviate congested infrastructure.



Source: MDOT, SUTA Section

The tonnage moved throughout the state has increased substantially since 2009. The total tonnage moved to, from, within, and through Michigan in 2013 was more than 505 million tons. This is about 70 million tons more than 2009, an increase of 16 percent. The modal shares remained largely the same. While all modes saw an increase in overall tonnage, water increased the least relative to 2009, leading to a decrease in share from 14 percent to 13 percent. This was met by an increase in rail from 19 percent in 2009 to 20 percent in 2013.

Mode Share of all Michigan Freight Movements by Tonnage 2013



Source: IHS Global Insight Transearch Database

The overall increase in freight tonnage is a direct result of the economy rebounding from the recession. Michigan lost nearly half of its manufacturing employment from 2000 to 2010, mostly in the automobile sector. Starting in 2010, the state has been slowly adding these jobs back. The Bureau of Labor Statistics shows a job growth from 2009 to 2014 of 24 percent in the manufacturing industry, including a 39 percent increase in the automobile manufacturing sector. Overall tonnage moving in Michigan is forecasted to increase about 80 percent by 2040, up to around 900 million tons.

Starting with MAP-21, and then continuing to the recent FAST Act, the use of performance measures in planning could be determined as the future means to distributing funds for freight projects. This will alter MDOT's approach to analyzing projects by putting more emphasis on freight movement. Once these measures have been identified and adopted, MDOT will aim to coordinate its collection of freight data to comply with federal standards. The department is researching the FHWA-suggested approaches to bottleneck analysis and linking volumes to congestion, as well as analyzing the National Performance Measure Data Set for travel time reliability. MDOT maintains several databases that are suitable for use in performance measurement.

The Michigan Freight Plan and the Freight White Paper provide additional information on freight activities in Michigan.

Public Involvement

The *2040 MITP* is more than just an extension of the planning horizon for the state long-range transportation plan. It provides the vision and goals under which MDOT's programs and projects are implemented. In accordance with federal and state regulations and MDOT procedures, an outreach program was designed and implemented to encourage participation from stakeholders and the public throughout the revision process. MDOT used the input, opinions, and suggestions obtained through this process to develop the *2040 MITP*. Comments received from stakeholders, tribal governments, resource agencies and the public on this revision will be carried forward into the next full update. The *2040 MITP* is a reaffirmation of the vision, goals, objectives, strategies, and decision principles guiding program development of the 2007-adopted plan. The *2040 MITP* White Papers supplement all the technical and other reports previously developed.

Photos Coming

Since the *2030 MITP* was adopted, MDOT has monitored the attitudes and perceptions of the public. Surveys have been conducted, with the last being completed in August 2015. MDOT's 2015 Attitudes and Perceptions of Transportation survey found that the vast majority of Michigan residents continue to support the components of the MITP. The percentage of respondents from the latest survey who say the vision is "very" important has increased in the past four years from 62 to 66 percent. The Preferred Public Vision is a transportation system that is oriented toward choices, access, integration, and regional sensitivity. The public sees transportation as fundamental to economic development and quality of life in Michigan. Although the public perceived the importance of the goals to be slightly less in 2015 than in 2011, very solid majorities continue to see a need for improvement on the goals individually and as a group. In addition, Michigan residents are quite divided over which of the goals is the most important, suggesting that the variety of goals is necessary for a comprehensive vision for the entire state.

MDOT also conducted a Shippers and Carriers survey in 2015. The 2015 Survey of Michigan Freight Carrier and Shipping Businesses explores the opinions and experiences of freight carrier and shipping businesses in Michigan regarding the performance and quality of the state highway system. This is the second such survey, the first being conducted in 2013. One notable difference between the two surveys is that the 2013 survey was based on individual truck drivers, while in 2015, trucking businesses were surveyed. There is considerable consensus (85 percent) that pavement condition of Michigan highways is worse than in other states, with 36 percent saying it is much worse. A key finding is that by a 2-to-1 majority, shipper and carrier businesses want the state to drop the differential speed law. They feel that pavement condition and universal speed limits are the two most important changes MDOT can make to improve things for their businesses.

Tribal governments were also consulted as the plan was developed. Tribes reaffirmed their emphasis on six common transportation issues and expectations that they identified in previous long-range plan consultations, which are listed in the 2007 Government-to-Government Consultation with Native American Tribes report:

- Developing funding and partnering arrangements
- Economic development
- Safe and quality transportation system
- Pedestrian safety
- Access to rural transit
- Land use and cultural preservation

> ***"Since the 2030 MITP was adopted, MDOT has monitored the attitudes and perceptions of the public."***

Over the past four years MDOT has actively engaged tribal governments in specific planning activities designed to make tribal history and culture an available part of the travel experience for roadway users. These planning activities focus on development of displays related to tribal history on designated scenic byways and at MDOT Welcome Centers, rest areas and roadside parks. Examples of completed projects include the Sault Tribe of Chippewa Indians's leadership in developing written and video material for travelers on the M-123 Tahquamenon Scenic Byway, and installation of informational signs on M-55 and US-31 in Manistee County identifying the ancestral homelands of the Little River Band of Ottawa Indians. Additional planned projects include leadership by the Match-E-Be-Nash-She-Wish Band of Pottawatomi to complete a corridor management plan for the M-179 Chief Noonday Trail Scenic Byway in Allegan and Barry counties, and plans with the Little Traverse Bay Bands of Odawa Indians to develop a history and information display at the Mackinaw City Welcome Center.

Other transportation stakeholders also reaffirmed their previous emphasis areas. When asked, "Which of the following should receive the highest priority to best serve your community?", the number one response was "Maintain/preserve the existing transportation system."
Other priorities include:

- Better integration of transit services into the transportation system
- Incorporation of freight needs into the transportation system
- Support regions and MPOs by providing adequate funding and staff

For freight stakeholders, enhanced multi-modal connections, as well as reliability and predictability of the existing system, are prime issues. That MDOT needs to improve its coordination and collaboration with both the public and private sectors beyond individual project development was cited as an issue by freight stakeholders who completed the survey.

Conclusions

> ***An efficient and well-maintained transportation system provides the backbone for all Michigan's economic activity.***

The *2040 MI Transportation Plan* offers a clear and publicly supported vision for Michigan's transportation future: a safe, efficient, resilient and integrated transportation system supporting Michigan's quality of life and economic growth. The vision provides strategic direction for the investment of limited dollars to preserve and integrate the system, and improve its performance. The plan provides goals, strategies and performance measures to continue to implement that vision in the years to come.

An efficient and well-maintained transportation system provides the backbone for all of Michigan's economic activity. As the state's economy continues to improve, the role of transportation will become increasingly important, but the challenges will also rise, including greater congestion, increased truck traffic, more demand for multiple modes, a greater need for multi-modal accommodations and connections, and increased safety concerns. These issues will be most critical in Michigan's COHS, which serve some 93 percent of the population, as well as businesses accountable for more than 98 percent of Michigan's employment. Multi-modal accommodations and connections are also essential in urban areas where mode choice is critical to a balanced transportation system and can help manage congestion.

With new legislative action at both the state and federal levels, Michigan can now anticipate five stable and predictable years of transportation funding (2016-2020), which has not been the case for nearly a decade. Greater certainty about future investment levels, despite still limited funding, means that decision-makers will need to make strategic investment choices to preserve Michigan's transportation systems most effectively, to enhance safety, and to modernize or improve systems that can have the greatest impact on the state's economy and quality of life.

Michigan's transportation system will continue to evolve in the years to come. An increased emphasis on safety and efficient operations, coupled with the use of new technologies, can potentially impact the transportation system in ways that are not yet clear. The work MDOT, along with its partners and stakeholders, undertakes today to accomplish the vision of this *2040 MITP* will be a legacy for future generations.

For more information on the *2040 MITP* go to, *www.michigan.gov/slrp* or reference the White Papers.

Aviation

Connected and Automated Vehicles and New Technology

Corridors and International Borders

Corridors of Highest Significance – Performance Metrics

Environmental

Finance

Freight

Goals, Objectives, and Performance Measures

Highway-Bridge

Highway Safety

Intercity Bus Service

Intercity Passenger Rail Service

Land Use

Metropolitan Planning Organizations/ Regional Planning Agencies

New Policy Initiatives and Transportation Intermodal Integration

Nonmotorized

Regional Prosperity Initiative

Revenue Gap

Rural Task Force

Security

Socioeconomic

Transit

Travel Characteristics

Vision

MDOT
Michigan Department of Transportation

Providing the highest quality integrated transportation services for economic benefit and improved quality of life.