MICHIGAN DEPARTMENT OF TRANSPORTATION

2019-2023 FIVE-YEAR TRANSPORTATION PROGRAM

Approved by the State Transportation Commission on October 18, 2018

Dear Reader:

I present to you the 2019-2023 Five-Year Transportation Program, a detailed accounting of the Michigan Department of Transportation's (MDOT) stewardship of the highway, bridge, public transit, rail, aviation, marine, and nonmotorized programs. This transportation program represents $11 billion in multi-modal transportation investments over the next five-year timeframe.

The 2019-2023 Five-Year Transportation Program utilizes all available federal and state funding in order to progress toward the vision and goals set forth in the 2040 MI Transportation Plan, the state long-range transportation plan. Despite greater certainty about future investment levels, decision-makers will need to be strategic in the future, as funding levels continue to lag the overall needs across transportation modes. Future investments will also need to take into account rapidly changing vehicle and infrastructure technologies that may alter the transportation system as we have known it.

MDOT annually updates its Five-Year Transportation Program, which provides information on multi-modal revenues available, expected investments, performance measures, and a list of planned road and bridge projects. Projects presented within this program are within MDOT's jurisdiction, which includes all state-owned roads/highways with an I, M or US designation (for example: I-94, M-21, and US-23). For the other modes presented (public transportation and aviation), the majority of the assets are owned, managed and operated by other entities. Therefore, the federal and state funding represented in this document may be only a portion of the total investment.

MDOT consistently works to deliver the program in the most effective and efficient way possible. MDOT is determined to provide the highest quality integrated transportation services for economic benefit and improved quality of life in the safest and most efficient way possible. The department is always striving to be better, faster, cheaper, safer, and smarter. Read more about MDOT policies and programs on the department's website at www.michigan.gov/mdot.

Thank you for your interest in the Five-Year Transportation Program.

Sincerely,

Kirk T. Steudle

Table of Contents

Celebrating 20 Years of the Five-Year Transportation Program (5YTP) 5

Introduction 5

Mobility Innovation, Technology and Infrastructure 10

Connected and Automated Vehicles (CAV) 10

Highlighting Future or Ongoing Major Projects 13

Gordie Howe International Bridge 13
Lafayette Bascule Bridge 14
I-94 Jackson Area 14
I-75 Monroe County 15
I-94 Kalamazoo County 16
I-196 Grand Rapids 17
Bus Rapid Transit and Regional Transit Planning 18
Airport Updates in Grand Rapids and Kalamazoo 19
I-75 Modernization in Oakland County 21
I-94 Modernization in Detroit 22
Marquette Township US-41/M-28 Roundabouts and Share-Use Path Tunnel Project 23
Project Identified by the 21st Century Infrastructure Report 24
21st Century Pilot Update 25

Public Comments 26-27

Five-Year Transportation Program Process 28

Revenue Assumptions and Investment Strategies 29

Overview 29
Highway Program Revenue Assumptions 30
- Highway Investment Program FY 2019-2023 32
Multi-modal Programs 34
Public Transportation Revenue Assumptions 35
Aviation Revenue Assumptions 38
Public Transportation Investment Strategies 39
Aviation Investment Strategy 42

Highlighting Upcoming FY 2019 43-46

Performance Measurement and System Condition 48

MDOT Performance Measurement 48
Highway Pavement Condition Goal 48
Federal Performance Measures 49
Bridge Condition Goal 50
Safety Goals 51
Multi-Modal Performance Measures 52

Economic Impacts of Transportation Investments 57

Highway Economic Impacts 57
Public Transportation Economic Impacts 58
Aviation Economic Impacts 60

Regional Service Areas 61

Road and Bridge Project Lists 62

Bay Region 62
Grand Region 64
Metro Region 66
North Region 71
Southwest Region 73
Superior Region 75
University Region 77

MDOT Region Contact Information 80

Acronyms and Definitions 81

5 Year
Road & Bridge
Program
1999 to 2003
MDOT
Michigan Department of Transportation
MDOT
5 Year
Road & Bridge
Program
Vol IV - 2002 to 2006
MDOT
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Transportation
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2011-2015
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2014-2018 FIVE-YEAR
TRANSPORTATION PROGRAM
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MICHIGAN DEPARTMENT OF TRANSPORTATION
2017-2021 FIVE-YEAR
TRANSPORTATION PROGRAM
MDOT

CELEBRATING 1999-2019 YEARS

For the past 20 years, the Michigan Department of Transportation's (MDOT) Five-Year Transportation Program (5YTP) has served as an innovative communication tool designed to ensure an open, transparent, and optimized transportation asset management process.

MDOT proudly celebrates the 20th anniversary of the 5YTP and its recognition in the transportation industry as a key resource for statewide planning and asset management. Today, all transportation departments across the United States are working to incorporate new federal Transportation Performance Management plans to align with the federal government's guidance, while at MDOT our business practices have incorporated performance standards and capital investment strategies since the first 5YTP drafted in 1998.

Gov. John Engler, holding first 5YTP, 1999-2003

Gov. Rick Snyder and Director Kirk Steudle

Further guiding MDOT's investment decisions are department goals established by the State Transportation Commission (STC) for state-owned transportation infrastructure. The 5YTP has allowed the department to prioritize projects using a goal-oriented, performance-based approach rather than a "worst first" approach.

Since its inception, the 5YTP has optimized project delivery and has provided the STC, the Michigan Legislature, partnering agencies, and the public with a list of transportation projects planned for the next five years that are in alignment with the established goals of the department. This plan reports on the road and bridge projects expected to be delivered, and also includes information on major projects, funding

" For the first time in MDOT history, we have mapped out our long-term investment strategy, complete with a list of the specific road and bridge improvements we are planning each year between 1999 and 2003. The prioritized plan benefits our customers, especially businesses, who will be able to plan for interruption and inconveniences."

James R. DeSana, MDOT Director 1997-2001

issues, investment strategies, performance measures, and the economic benefits of investments in all modes of transportation.

Over the years, the 5YTP has ushered through important legislative road funding packages at the state and federal levels, including Build Michigan, Jobs Today, Preserve First, the American Rebuilding and Recovery Act (ARRA), and the most recent fuel and registration changes for the benefit of transportation improvements. One major challenge of long-term planning is that transportation funding is largely subject to an annual appropriation, meaning that transportation funding can fluctuate annually, requiring adjustments across the board. However, the 5YTP has, for 20 years, remained a platform to clearly report MDOT's planned highway, aviation, bus, marine, rail, and nonmotorized projects several years in advance to the greatest degree possible.

A Multi-Modal, Collaborative Process

In 1973, the Michigan State Highway Department became the Michigan Department of Transportation, signaling the beginning of what would come to be a total transportation agency. From that point forward, the department would begin to plan for all modes of transportation, including highway, nonmotorized, passenger and freight rail, local and intercity transit, aviation, and ferry systems. All are inextricably linked, connecting workers, consumers, businesses, and economic markets throughout our state, supporting Michigan's economy and the people who live here.

The goal for an integrated transportation network is logical and desirable, but implementation of such an undertaking is complex. To begin with, there are four federal departments that require coordination, including the Federal Highway Administration, the Federal Transit Administration, the Federal Aviation Administration, and the Federal Rail Administration.

Director Kirk Steudle and Gov. Jennifer Granholm

In addition, the 5YTP includes the review of all potential road and bridge projects to determine how the planned treatments will impact asset conditions and performance targets. It requires coordination among the many areas of the department involved in project selection, including safety, bridges, and operations. Candidate projects are discussed with local road agencies, metropolitan planning agencies, and rural task forces, where input opportunities are offered to the public. Partner agencies and the public are encouraged to review the plan early within the project development process prior to including the selected projects in the Statewide Transportation Improvement Program (STIP). While the project selection process has been tweaked over the past 20 years, it remains designed to allow the public to be informed of changes in cost, scope, or project schedules. This is no small feat for a statewide program that delivers, on average, more than $1.5 billion per year in reconstruction and repair projects.

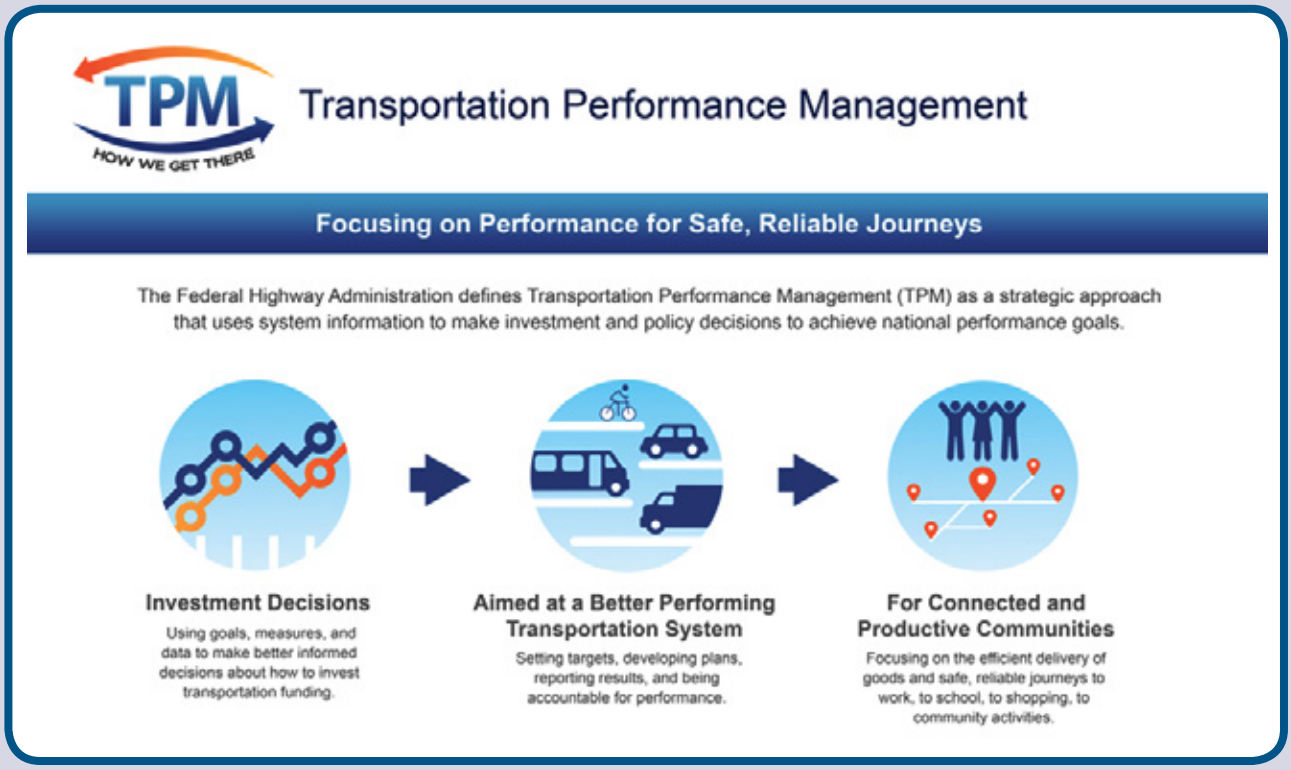
In addition to the highway portion of the program, the 5YTP addresses aviation programs utilizing federal, state and local funds, providing the public information on investment strategies, goals, and

accomplishments from this sector. Aviation, both commercial and general, serves a vital role in addressing business and personal mobility needs throughout the state and provides access to the global transportation system.

Although the majority of Michigan's passenger transportation program is delivered locally, state funds are appropriated each year at the program level and used by MDOT to support local transit operation and capital projects. The investment strategies laid out in the 5YTP help to guide annual state funding requests and demonstrate that each appropriation request is supported by an STC-approved investment plan.

Despite challenges in coordinating projects and goals among a large number of stakeholders, the public expects that their government will do so without question and with careful stewardship of limited resources. The 5YTP remains a critical tool used in the coordination of projects early in the planning process to ensure government accountability and the ultimate success of selected projects.

The 5YTP serves as an essential communication and public relations tool for everyone - those within the department, stakeholders, the STC, and the public. It reflects the priorities of the department, identifies funding available, and establishes the timetable for project delivery. It is truly an integral part of this organization and provides the information pipeline for our business from project development through to delivery. Without the 5YTP, MDOT would not be the effective and efficient organization it is today. We look forward to celebrating another 20 years of successful five-year plans.



FHWA Transportation Performance Management from www.fhwa.dot.gov/tpm

Q&A with MDOT Senior Chief Deputy Director Mark Van Port Fleet

How has the 5YTP improved asset management at MDOT?

The 5YTP, along with our condition forecasting tools, has allowed the department to drive projects that are focused on a system condition approach versus a worst first approach. By having the projects selected to achieve system condition improvement be public facing, it has become harder for changes not consistent with an asset management strategy to gain priority and slow our progress to better asset conditions. It has created a strong public expectation that the projects in the program will be delivered. We have maintained strong control over a program driven to improve asset condition.

How does having five years of projects planned into the future benefit the agency?

Having five years of projects defined has provided more certainty in what our resources are developing and delivering. Resource planning and consultant contracting can be better planned and executed. We are better able to balance the impacts of large or impacting projects in the program and to advance or delay work as needed with the assurance that we will still use all available funding for the right purpose.

How does having five years of projects planned into the future benefit the public?

What gets planned gets done. The public benefits from knowing when road work is coming and can plan appropriately. It provides for the needed time for public input and program adjustments to make projects more context-friendly. It helps businesses plan to better respond to traffic adjustments of construction. It makes MDOT more accountable to the public.

Q&A with Chief Administrative Officer Laura J. Mester

What do you think is the most important contribution the 5YTP has made?

It has provided immense stability in our program and it retains project/program decision-making with MDOT, where it should remain.

How has the 5YTP improved the asset management process at MDOT?

The department has been disciplined in selecting projects that meet specific criteria based on a mix of fixes. The 5YTP provides a look at all potential projects and whether the treatment will impact conditions and targets. It has also fostered better coordination between the various bureaus and offices involved in project selection and execution of the plan.

How does having five years of projects planned into the future benefit the agency?

The plan helps the department demonstrate how it will pay for planned projects and the timetable it will follow. In addition, it provides flexibility, if needed, to move projects from one year to the next within a

constrained financial environment. In addition, it communicates to everyone involved in project selection and execution the priorities of the department.

How does having five years of projects planned into the future benefit the public?

It can be used by local communities to coordinate their projects with MDOT's planned projects. In addition, it demonstrates how the department is utilizing its resources for specific capital projects across the state.

What do you think is the most important contribution the 5YTP has made?

The 5YTP plan serves as a great communication and public relations tool for everyone – those within the department, the STC, and the public. It reflects the priorities of the department, identifies funding available and establishes the timetable for project delivery.

Comments from Bureau of Transportation Planning Director David Wresinski

In 1999, MDOT published the first 5YTP. The identification of five years of MDOT projects was first conceived by then-State Transportation Director James R. DeSana. The tradition continued through all subsequent directors, including current director Kirk Steudle. It was Director DeSana's belief that communities should not have to guess what and where MDOT would be working on the trunkline system and for the last 20 years MDOT has removed the guesswork by publishing a rolling 5YTP. Today, we are pleased to present the 2019-2023 5YTP.

I remember the drafting of the first 5YTP well, as I was working in a position in a temporary capacity and was charged with determining the road and bridge project commitments that would be conveyed in the first edition of the document. I recall hand-coloring projects in various template categories to differentiate "capacity projects" from "new road projects" and "system preservation" projects. Technology at that point had not caught up with Director DeSana's vision.

The MDOT Bureau of Transportation Planning (BTP) has had the responsibility for developing the 5YTP for the past two decades. It is an effort that involves individuals from across the organization but the fine work of assembling the document occurs in the BTP and we are proud of the effort and the outcome. The 5YTP has been instrumental in aligning MDOT funding and staffing resources and significantly improved transparency regarding project activities and program priorities. State legislation now requires that MDOT annually publish a 5YTP.

Typically, I don't provide commentary within these documents but this year marks two milestones: the release of 20th anniversary document and my last year as BTP director. Later this year, I will retire with 33 years of service to this fine organization and I look back with many great memories and accomplishments. I take great pride in both and I look forward to the release of subsequent 5YTPs that will occur under new leadership of the BTP.

Mobility Innovation, Technology, and Infrastructure

The state of Michigan has always been a pioneer in transportation and automotive innovation. This section of the Five-Year Transportation Program highlights connected vehicle technologies and reviews major trunkline infrastructure projects.

$8 Million Michigan Mobility Challenge

On May 30, 2018, Gov. Rick Snyder announced the $8 Million Michigan Mobility Challenge grant initiative to address core mobility gaps for seniors, persons with disabilities, and veterans across the state. MDOT will distribute $8 million to fund multiple innovative pilot transportation projects of varying size based on pilot submissions and proposed service areas in urban, rural, and suburban communities. This effort is a collaboration between MDOT, the Michigan Economic Development Corp., Michigan Department of Health and Human Services, Michigan Department of Military and Veteran Affairs, and Michigan Department of Civil Rights.

Connected and Automated Vehicles

PlanetM is a mobility program initiated by Gov. Snyder to support research and development of connected and automated vehicles (CAV) and infrastructure in Michigan. The program involves collaboration among the automobile industry, universities, and all levels of government. The following paragraphs discuss efforts that are underway to ensure that the state of Michigan continues to be a leader in CAV technology.

Many newer vehicles already have systems that warn the driver to stay in their lane, or even stop the vehicle, if the driver is distracted before an incident occurs. These systems exemplify the early stages of CAV technology. Whether mandated by the government or demanded by consumers, MDOT must be ready for the changes these technologies will bring to the use and maintenance of the road network.

planetM

What's the difference between connected and automated vehicles?

Connected vehicles and automated vehicles are two different technologies that are both developing and will have fundamental impacts on transportation.
A connected vehicle is a car or truck that is equipped with dedicated short-range communication devices, primarily two-way radio frequencies reserved by the federal government for transportation safety purposes. This allows the car to either communicate with other vehicles on the roadway or with roadway infrastructure, such as traffic lights. This communication is often referred to as vehicle-to-vehicle (V2V) or vehicle-to-infrastructure (V2I) and is already being incorporated into new vehicles and roadway infrastructure. MDOT is focused primarily on V2I testing and implementation, as this technology is dependent on infrastructure outfitted with sensors and communication devices.

Examples of MDOT efforts in this field, which involve infrastructure communicating with the vehicle or operator, include:

- By 2019, 350-plus miles of major arterials in southeast Michigan will be equipped with V2I technology, allowing equipped vehicles to communicate with infrastructure such as intersections, traffic lights, and other roadway elements.
- In west Lansing, nine intersections of Saginaw Highway are equipped with smart signals that can broadcast the "phase" of the traffic light. For example, a car equipped with this technology would receive a warning that the light is about to change from green to yellow or yellow to red. The driver would be alerted to the change in phase, especially if it appears the vehicle will not be able to stop in time at its current speed. This is a technology called Signal Phase and Timing, or SPaT, intended to reduce crashes and reduce congestion.
- Similar to SPaT, there are also work zones equipped with road side units (RSUs) that can broadcast construction zone information to equipped vehicles, alerting drivers to the need to slow down and change lanes.
- There are also RSUs at road weather information system (RWIS) sites that can alert vehicles to the presence of ice or hazardous conditions, giving the driver the information they need to slow down or change driving behavior. This technology is also being used to alert drivers to the length of wait times at the border, allowing commercial vehicles to choose their routes or otherwise plan their schedules appropriately.

Automated vehicles, also known as autonomous vehicles, are cars or trucks that sense their surroundings with such techniques as radar, light detection and ranging technology, global positioning systems (GPS), and computer vision. The vehicle uses these technologies to identify its location in the environment, thereby determining an appropriate navigation path and keeping itself on the road while avoiding obstacles. This potentially can allow the passenger in the car to be just that: a passenger and not an operator, although this technology is still in its very beginning phases.

CAV Technology Strategic Plan

MDOT's mission is to "Provide the highest quality integrated transportation services for economic benefit and improved quality of life." This mission has been applied to CAV and intelligent transportation systems (ITS) in the Connected and Automated Vehicle Technology Strategic Plan, a high-level guidance document that MDOT uses to incorporate CAV/ITS technology department-wide. The plan can be found online at www.michigan.gov/its. It lays out the design for aligning MDOT's long-term transportation plans with recent advances in technology and policy regarding CAV. A core element of the plan centers on the inclusion of rapidly developing technologies in the digital communications and vehicle-embedded automated systems. MDOT strategies must account for changes in these important technologies, in addition to traditional communication and ITS technologies.

Implementation and Test Facilities

MDOT is amid a major reconstruction and modernization project on a 17.7-mile section of I-75 in Oakland County. As part of the project, connected infrastructure was installed to support construction activities and long-term operational needs in the corridor. Temporary connected vehicle technology will broadcast work zone messages to support the testing of work zone information and safety applications. Permanent connected vehicle infrastructure will be installed at each construction segment of the project. Using leading roadway solutions from 3M, the current I-75 modernization project work zone in Oakland County will be transformed to improve safety for drivers and to test advanced V2I technologies on the CAV of the future. 3M will be providing MDOT with advanced all-weather lane markings, retroreflective signs with smart sign technology and dedicated short-range communication (DSRC) devices for V2I communications. The updated, modern materials will allow for redundancy and greater machine vision, as well as improved driver safety on the roadways.

The U.S. Army Tank Automated Research, Development, and Engineering Center (TARDEC) and MDOT collaborated to test automobile and mobility technologies on real-world environments using Michigan roads. Testing of DSRC systems between roadside radios and TARDEC convoy vehicles was conducted on I-69 in St. Clair County. These tests are an important step toward future testing of platooning and automated technologies and furthering the automobile research and development focus in Michigan.

American Center for Mobility
CONNECTED. AUTOMATED. VALIDATED.

American Center for Mobility

The American Center for Mobility (ACM) is a testing and product development facility for CAV technology at the 335-acre historic Willow Run in Ypsilanti Township. The ACM will allow automotive industry and government agencies to test vehicles, roads, and infrastructure and communication systems in a variety of physical and weather environments. The facility offers unique real-world features such as a highway test loop where vehicles can travel at highway speeds. This nonprofit facility is a collaborative effort with MDOT, the Michigan Economic Development Corp., the University of Michigan, Business Leaders for Michigan, and Ann Arbor SPARK. The ACM helps support the PlanetM initiative for Michigan to be a leader in transportation and automotive innovation. ACM also offers an opportunity for larger-scale research, development, and testing due to both the size of the facility and more diverse infrastructure. ACM has the potential to be the last stop of testing before vehicles are on the road, as well as the potential to be a place where vehicle certification could happen in the future.

Michigan recently enacted several pieces of legislation intended to keep Michigan at the forefront of autonomous vehicle testing, research, and deployment. Among other features, this legislation enables on-road testing of technology, commercial vehicle platooning, and establishes the ACM.

American Center for Mobility located at Willow Run.

Highlighting Future or Ongoing Major Projects

Gordie Howe International Bridge

The Gordie Howe International Bridge (GHIB) project is a new freeway-to-freeway border crossing system between Detroit, Michigan, and Windsor, Ontario, that will improve the flow of international trade between the United States and Canada at the busiest border crossing between the two countries.

The project has three primary elements: a new Detroit River crossing (bridge), new state-of-the-art border inspection areas on each side of the river for the U.S. and Canadian border services agencies (plazas), and direct connections to highway systems in each country (I-75 in the United States and Highway 401 in Canada via the new $1.4 billion Rt. Hon. Herb Gray Parkway).

On June 15, 2012, an interlocal Crossing Agreement was signed by Gov. Rick Snyder and Canadian officials to provide a framework for a Canadian Crossing Authority, now known as the Windsor-Detroit Bridge Authority (WDBA), to implement the new crossing under the oversight of a jointly established International Authority. Design, construction, financing, operation and maintenance of the GHIB will be performed by a private entity through a public-private partnership (P3) agreement.

The WDBA is managing the procurement process for the design, construction, operation and maintenance of the new bridge through a P3. In July 2015, the procurement process was launched with the issuance of a request for qualifications for the P3 concessionaire. Six North American and international respondent teams submitted responses that were evaluated by WDBA officials and partner organizations under the supervision of an independent fairness monitor. On Jan. 20, 2016, the WDBA announced three short-listed respondents that would move forward in the competitive procurement process. On Nov. 10, 2016, the WDBA issued the Request for Proposals (RFP) inviting proponents to submit formal proposals to design, build, finance, operate and maintain the GHIB project. The WDBA will oversee the work of the P3, manage the concession agreement and payments, and set and collect tolls.

Almost all pre-construction activities in Canada, including land acquisition, demolition and the construction of the parkway that will connect Highway 401 to the GHIB, have been completed. The WDBA has retained numerous consultants, including an Owner's Engineer in April 2018, to support them through design review, providing technical advice and monitoring and overseeing the construction activities of the private-sector partner through inspections, compliance reviews and audits. MDOT has retained land acquisition, demolition, and environmental consultants to assist its efforts to acquire properties located in the GHIB footprint on the U.S. side. Utility relocations to accommodate the new U.S. Port of Entry are underway, including the relocation and replacement of several siphons and combined sewer crossings as part of the I-75 inlay project.

The WDBA announced it's preferred proponent in July 2018 as planned, selecting Bridging North America to design, build, finance, operate, and maintain the structure. Construction began in October 2018 and is expected to take six years to complete. Implementation of this project will be complex, lengthy, and must comply with the Crossing Agreement. The GHIB will be publicly owned by the State of Michigan and the Government of Canada.

Lafayette Bascule Bridge

The Lafayette Bascule Bridge was constructed in 1938 and carries traffic on M-13/M-84 (Lafayette Avenue) over the east channel of the Saginaw River in Bay City. The 456-foot structure is comprised of two approach spans and a 185-foot rolling lift span, allowing for navigation of maritime traffic. More than 8 million vehicles travel across this structure every year, with an average of 443 bridge openings per year during the navigational season.

At nearly 80 years old, the Lafayette Bascule Bridge is considered to be in poor condition due to the superstructure rating. A comprehensive feasibility study was performed in 2013 to evaluate superstructure repair versus replacing the structure. Replacement was recommended due to the scour criticality of the existing structure, the age of the existing substructure, and constructability issues requiring specialized and highly complex repairs.

The proposed cross section of the new structure will consist of two 12-foot driving lanes, an auxiliary 12-foot lane to use during maintenance operations, a 14-foot multi-use pathway to accommodate US Bicycle Route 20, and a 5-foot sidewalk for pedestrian traffic. A full detour will be required while the existing bridge is demolished and the new bridge is constructed. It is estimated that this detour will be in effect for 24 months.

This project has been selected to use the construction manager/general contractor (CMGC) delivery method. Contractors will be required to show experience with the specialized construction unique to movable bridges. This type of contract will also give designers more certainty in determining which construction methods will be most advantageous. Additionally, there is opportunity to develop a shared-risk approach for work items that carry the most uncertainty. The total investment on this project is estimated to be $49 million.

The Lafayette Bridge when constructed in 1938.

The Lafayette Bridge today.

I-94 Jackson Area

The I-94 Freeway Modernization Study was completed in 2007 and includes recommendations to modernize and upgrade a 9-mile section of I-94 from M-60 to Sargent Road in Jackson County. The recommended project includes:

- Constructing an additional travel lane in each direction.
- Replacing bridges to meet current design standards, including underclearance requirements.
- Redesigning seven interchanges.
- Improving operations and safety.

A phasing strategy was developed for the entire I-94 Freeway Modernization Study and was included in the Final Environmental Impact Study. The project was divided into three phases. Phase 1 has been completed with the reconstruction of the Hawkins Road bridge in 2007 and the Dettman Road bridge in 2008, and the reconstruction of the Sargent Road interchange and removal of the I-94 Business Loop bridge in 2012.

Starting in 2018, MDOT will continue making improvements to I-94 in Jackson County, including:

- Reconstructing 1.4 miles of freeway between Lansing Avenue and Elm Road;
- Resurfacing 3.5 miles between Lansing Road and M-60 and resurfacing 4 miles between Elm Road and Sargent Road.
- Rebuilding and redesigning the I-94/Cooper Street interchange, including the addition of new roundabouts on each side of the new bridge and reconstructing each of the ramps.
- Replacing and widening the bridge over the Grand River.
- Providing a merge/weave lane between the Cooper Street and Elm Road interchanges

As part of the 2018 project, I-94 will be shifted approximately 60 feet south of its current location. The widening of the Cooper Street bridge and the bridge reconstruction over the Grand River will require right-of-way acquisition primarily on the south side of I-94. The bridge over the Grand River and the Cooper Street bridge will be built wide enough and long enough to accommodate the future traffic needs for this corridor.

In 2020 and 2021, the I-94 interchanges at M-60 and Elm Road will be reconstructed. These projects have been programmed, and an environmental clearance reevaluation is underway. The interchanges will be built to accommodate the future capacity and operational needs for I-94.

I-75 Monroe County

I-75 in Monroe County was originally constructed in 1956 as a four-lane interstate freeway. It was widened to three lanes in each direction in 1977, and the pavement was reconstructed in 1988. I-75 is a vital link to Detroit and to the rest of the state for vehicular travel and commercial freight. On average, it carries 15,500 commercial vehicles per day. The route is also crucial for international trade as it provides a link to the Ambassador Bridge and the future GHIB. The Michigan Truck Tonnage map visually shows the importance of this link to freight and trade.

Much of the existing pavement is rated in poor condition. The base of this section of I-75 has been failing over the last 20 years, and the pavement has required annual concrete patching, which causes significant vehicular delay. Bridges in this area are also rated poor, and bridge under clearance needs to be improved to accommodate modern freight-haulers.

The I-75 reconstruction project in Monroe County will include reconstructing pavement from the Ohio state line north to Erie Road. The project also includes interchange improvements and the replacement of 11 bridges and two bridge superstructures. The adjacent table displays the location of the planned bridge work. The project is assembled into five phases. Construction in the first

phase was completed in 2016. Two southern sections are currently scheduled in 2019 and 2021. The four remaining phases include:

#2. Ohio state line to Erie Road, 2019 (estimated cost: $80 million).

#3. Erie Road to Otter Creek Road, 2021 (estimated cost: $75 million).

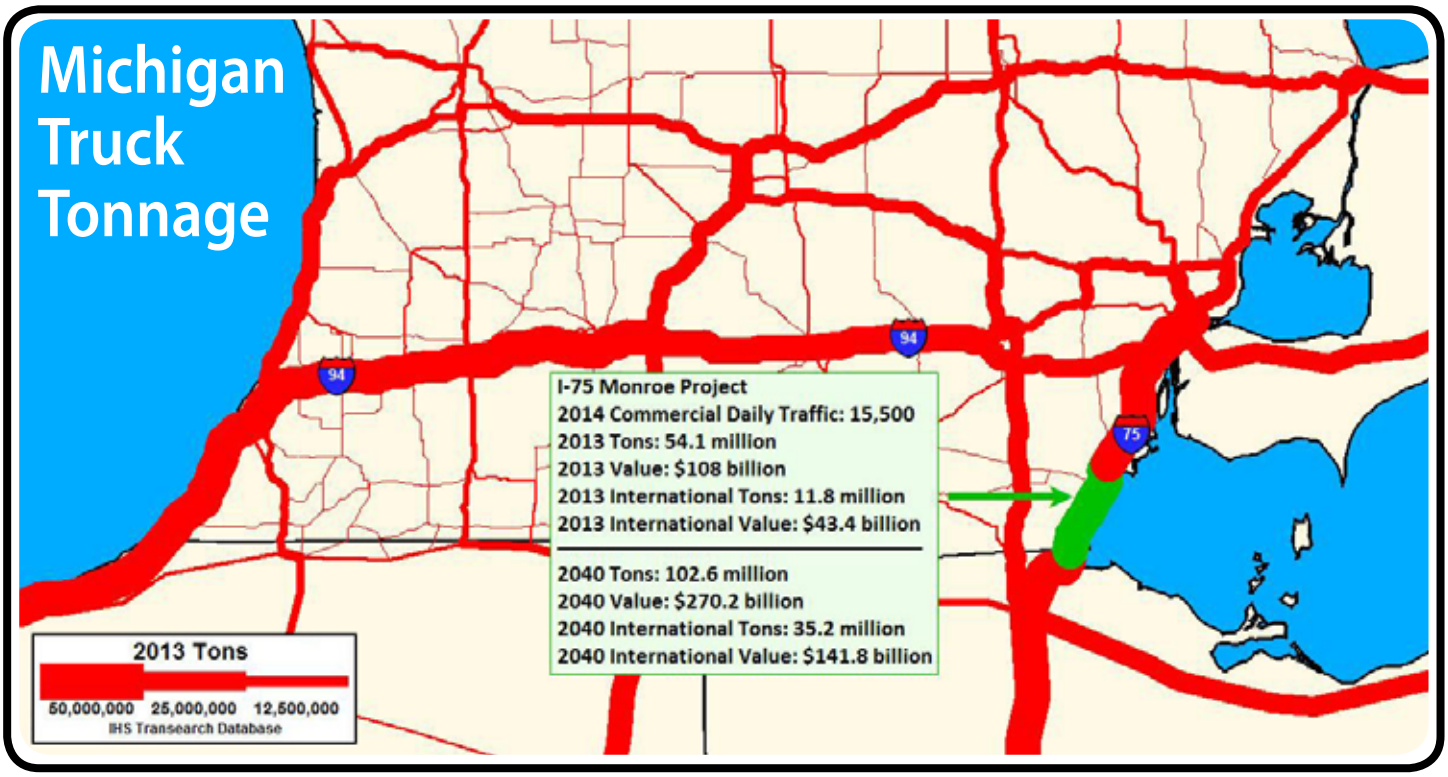
#4. Otter Creek Road to LaPlaisance Road, 2024 (estimated cost: $70 million).

#5. LaPlaisance Road to Dixie Highway, TBD (estimated cost: $160 million).

This segment includes reconfiguring the Elm Road and Front Street interchanges in the immediate vicinity of the River Raisin Bridge. The bridge will not be replaced as part of the project but will have some minor capital preventive maintenance (CPM) work performed in 2019. MDOT staff will begin the environmental review at the Elm Road and Front Street interchanges and identify impacts to the River Raisin, the surrounding floodplain and the River Raisin Battlefield National Park.

I-94 Kalamazoo County

The I-94 freeway project in Kalamazoo County is scheduled for construction in Fiscal Year (FY) 2020 and will address poor pavement and bridge conditions on I-94 from east of Lovers Lane to Sprinkle Road. The pavement within this area is composite, consisting of asphalt that has been placed over the original 1960s concrete. Ride quality of this road is poor due to the failed joints in the underlying concrete. The programmed work includes reconstructing and widening 2.5 miles of I-94, replacing five bridges, reconstructing the Portage Road interchange, and constructing noise walls.



I-196 Grand Rapids

Freeway reconstruction at the I-96/I-196 interchange in Grand Rapids involves replacing the bridge carrying westbound I-196 over eastbound I-96. While working through constructability, mobility/traffic control, and structure study portions of the development process for both projects, MDOT staff identified significant challenges with the proposed replacement of the westbound I-196 bridge over eastbound I-96 and associated adverse cost impacts. These challenges generated a conceptual look at bringing eastbound I-96 over westbound I-196 (essentially, flipping the overpass) to attain a much simpler bridge to both construct and maintain. This concept has proven beneficial when compared to other alignment changes required to achieve this while incorporating the original approved Environmental Assessment objectives related to construction and operational benefits.

By flipping this bridge, MDOT can take full advantage of the cost and impact savings to the motoring public while constructing significant improvements to both facilities in 2018 and 2019, bringing future congestion relief sooner. This concept provides separation for both eastbound I-196 and eastbound I-96 ramp movements to M-37/M-44 (East Beltline Avenue), as well as providing two through-lanes until eastbound I-196 merges with eastbound I-96 without the interaction of the existing merging traffic accessing the East Beltline Avenue off ramp. Overall, this concept is making significant mobility enhancements possible at a lower cost and impact given other regional projects currently in the Grand Region's program. It should be noted that these concepts will not cause the need for additional right of way and falls within the original footprint of construction originally proposed and cleared environmentally. Construction of this improvement includes the following:

- Constructing the eastbound I-96 bridge over westbound I-196, and raising the I-96 road profile to accommodate this bridge and construction of the eastbound I-96 roadway in the median to connect the existing eastbound I-96 roadway to the new alignment.
- Constructing the eastbound I-96 ramp to M-44/M-37 (East Beltline Avenue), including the construction of bridge(s) over eastbound and westbound I-196.
- Reconstructing westbound I-196 to provide three lanes of traffic and lowering the road profile to construct the eastbound I-96 structure over westbound I-196.
- Reconstructing westbound I-96 near the gore with westbound I-196 due to changes in the road profile of westbound I-196.

- Constructing the westbound I-96 inside lane/shoulder from the westbound I-196 split to the GRE Railroad bridge for maintenance of traffic, and a future transition lane from westbound I-96 to westbound I-196.
- Reconstructing eastbound I-196 from the Maryland Avenue bridge east to eastbound I-96. These two lanes will be carried beyond the Maryland Avenue bridge and past the eastbound M-44/M-37 (East Beltline Avenue) ramp then transition to one lane prior to merging with eastbound I-96 to separate through- and local traffic.
- Constructing a new M-44/M-37 (East Beltline Avenue) ramp from eastbound I-196 to the existing ramp.
- Reconstructing I-196 from Fuller Avenue east to I-96. Included in this project are the following work items:
  - Reconstructing the eastbound and westbound I-196 roadway from Fuller Avenue east to I-96. This portion of freeway reconstruction will begin at the terminus of the I-196 Fix project at Fuller Avenue
  - Reconstructing the I-196 bridges over Plymouth Avenue to accommodate three lanes of traffic in each direction.
  - Reconstructing/widening of the I-196 bridges over Plymouth Avenue.
  - Constructing a third lane on westbound I-196 from I-96 west to Fuller Avenue.
  - Reconstructing and extending the on ramp acceleration lane from Fuller Avenue to eastbound I-196.
  - Widening the westbound I-196 bridge over the Grand River. (Currently under construction.)

These projects will be coordinated, with most of the construction work and traffic impacts occurring in 2019 and 2020; some initial work for maintaining traffic and new construction in the median will begin in 2018.

Bus Rapid Transit and Regional Transit Planning

Bus rapid transit (BRT) is express bus service with minimal stops, enhanced by technology such as signal prioritization and express ticketing options at accessible bus stations/stops with entry-level boarding platform.

The Rapid (the Grand Rapids-area transit agency) moves into the fifth year of operations of their Silver Line, Michigan's first BRT line, that connects Grand Rapids, Kentwood, and Wyoming, mainly servicing the Division Avenue corridor with 33 stations along 9.6 miles. Their second BRT line - the Laker Line, designed to enhance the connection between Grand Valley State University's Allendale campus and downtown Grand Rapids - received a federal construction grant in FY 2017.

Regional transit planning is an important element in the quest to fill service gaps and improve transit options. Several urbanized areas are conducting studies to determine the best solutions for their regional transit needs.

In southeast Michigan, the Regional Transportation Authority of Southeast Michigan (RTA) is continuing its planning for the expansion of regional transit services in Wayne, Oakland, Macomb, and Washtenaw counties. The RTA completed a regional transit master plan and corridor study in 2016 and continues to work on implementing some elements, including regional funding initiatives and selecting service options for major corridors. The Woodward Avenue study has already led to the selection of a locally preferred alternative (LPA) - BRT along the 27-mile corridor that will operate within the existing right of way, servicing 26 stations primarily on Woodward Avenue through 11 communities in Wayne and Oakland counties - and environmental work is continuing.

Studies have been conducted for the Michigan and Gratiot Avenue corridors. The two studies evaluated alternatives for reliable, high-quality transit between Detroit and Mt. Clemens, along Gratiot Avenue to M-59, between Detroit and Ann Arbor, and access to the

Detroit Metropolitan Wayne County Airport. Service implementation will be dependent on securing federal, state and local funding.

In Ann Arbor, an alternatives analysis is completed, looking at options to improve and enhance public transit from northeast of town to south of town, including connections between the University of Michigan, downtown, the medical center, the train station, and commercial areas. The proposed service is being referred to as "The Connector" and is proposed to be one or two light rail/streetcar lines. Evaluation of the project is in process and if it is to move forward the next step will be completion of FTA's Project Development Process.

The Flint-area transit agency, the Mass Transportation Authority (MTA), has completed a study of the I-75 corridor between Bay City and Detroit, which included the I-69 corridor from Port Huron to Lansing, to determine the transit needs and how to best address them today and into the future. Based on the recommendations, Flint MTA is working with the Suburban Mobility Authority for Regional Transport (SMART) to connect their services.

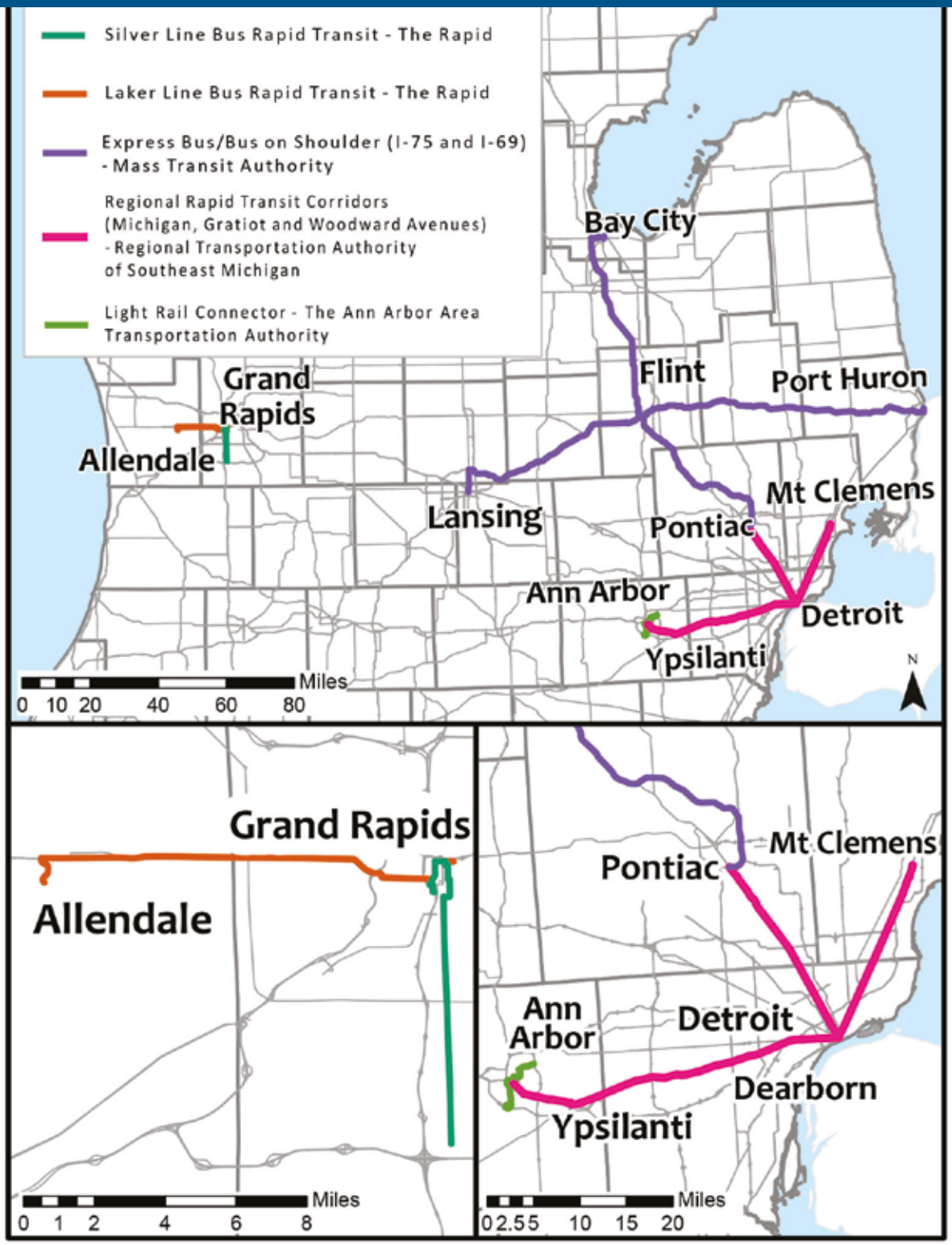
See map on the following page that shows planned transit projects across the state.

Airport Updates in Grand Rapids and Kalamazoo

The Gerald R. Ford International Airport (GRR) is a public-use commercial service airport located in Grand Rapids. In 2018 and 2019, the aircraft apron reconstruction project will be performed in seven phases. Major features will include: removal of the existing failing concrete pavement and replacement with 153,000 square yards of new concrete for future airport development and aircraft loadings; upgrades to the airport's deicing material recovery system; upgraded storm water drainage system and underground utilities to accommodate future airport development; and reducing energy usage by installing all-new LED apron lighting. The area outlined in red below shows the areas that will be a part of this project. This project includes $30.2 million in federal, state, and local funding.

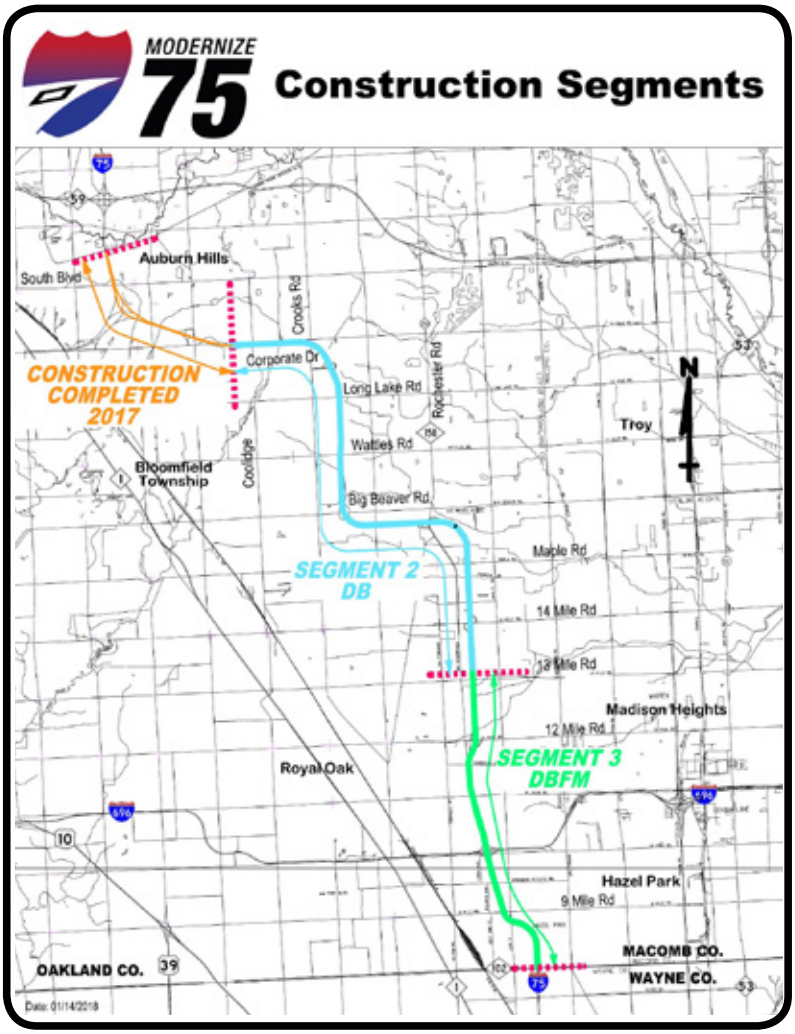
The Kalamazoo/Battle Creek International Airport (AZO) is a public-use commercial service airport located in Portage. In 2019, pavement repairs of Runway 17/35 are planned. The last repair project for this runway took place in 1997. The project is estimated at $6 million in federal, state, and local funding.

PLANNED TRANSIT PROJECTS ACROSS THE STATE



I-75 Modernization in Oakland County

The I-75 modernization project focuses on a 17.7-mile section from M-102 (8 Mile Road) to north of South Boulevard, which includes 11 interchanges and 16 road crossings through six communities within Oakland County. It carries daily traffic volumes ranging from 103,000 to 178,000 vehicles per day in the project area. Looking 3 miles to the east and west of I-75 within the project limits, this corridor supports 23,000 businesses and more than 339,000 employees.



The project began construction in 2016 with a design-build (DB) segment from north of Coolidge Road to north of South Boulevard, and included modernizing the Square Lake Road interchange with standard right on and off ramps without impacting right of way. This modification improved operations and safety at the interchange and, along with the entire I-75 corridor specifically, reduces sideswipe and rear-end crashes. It improves the merge/weave traffic movements. This segment opened to traffic on Sept. 1, 2017.

Since this project's inception, MDOT has been considering various delivery alternatives to speed up construction and minimize stakeholder inconvenience, which, under the prior financial plans, extended construction through 2034. Through consideration of a variety of construction delivery methods, financial analysis and consultation, MDOT has decided to advance the project using a two-segment approach, with both occurring concurrently (see adjacent map). Segment 2, extending from Coolidge Road to 13 Mile Road, is planned to be delivered as a DB project, and then Segment 3, extending from 13 Mile Road to M-102 (8 Mile Road), is planned as a design, build, finance and maintain (DBFM) project. These options will allow MDOT to realize the full economic benefits of the infrastructure modernization more than a decade sooner, wrapping up the major construction by 2023. Reducing the construction time will significantly reduce disruption to and negative economic impact on users and communities. It will also allow innovation, with construction and lifecycle efficiencies (e.g., economies of scale, better coordination of activities, and reduction in mobilization costs), and in transferring long-term risks and maintenance while taking advantage of the historically low cost of private financing.

Construction of the remaining segments 2 and 3 will begin in late fall 2018 for segment 2 and possibly spring 2019 or spring 2020 for segment 3, depending on the proposed schedule from the designated developer team. The I-75 Oakland County projects section at the end of this document reflects these revised schedule changes.

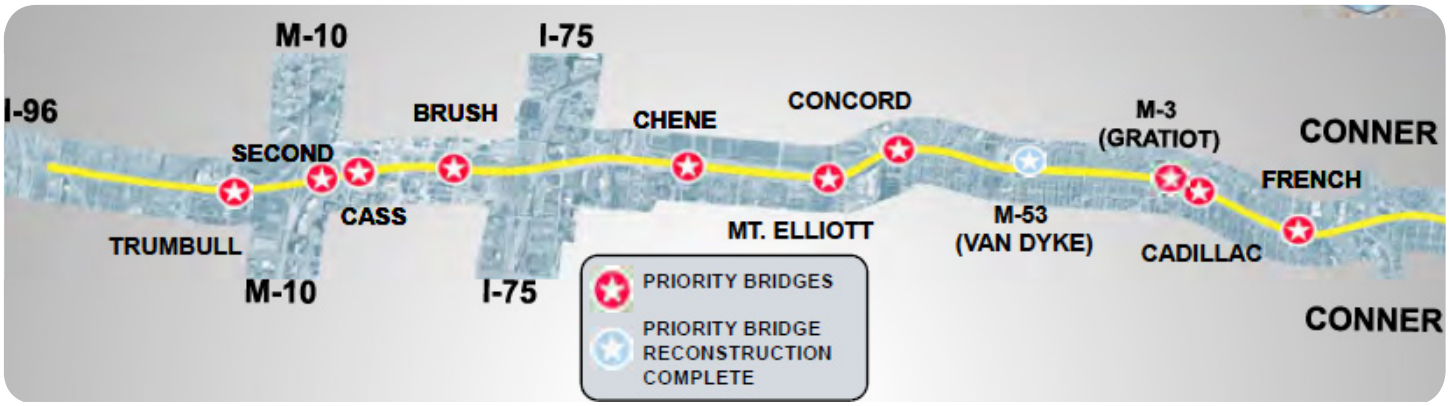
I-94 Modernization in Detroit

The I-94 modernization project involves reconstructing 6.7 miles of I-94 from east of the I-94/I-96 interchange to east of Conner Avenue in Detroit. This section of I-94 through midtown Detroit is on the books to be reconstructed to improve safety, traffic flow, pavement and bridge condition, freight mobility, and local access to the freeway.

In addition to reconstructing the I-94 roadway, the project currently includes rebuilding 67 bridge structures and six railroad overpasses. It also involves local access improvements, including linking the east/west I-94 services drives, and reconstructing and modernizing the ramps and interchanges, including the elimination of freeway left-lane exits and entrances. Work to improve several bridges over I-94 is currently underway. The new Van Dyke Avenue bridge at I-94 has been completed.

In 2015, the Woodward Avenue overpass was completed and built to accommodate M-1 RAIL. In 2016, the new Trumbull Avenue bridge was completed. The design of the remaining eight priority bridges at Gratiot Avenue, Second Avenue, Cass Avenue, Chene Street, Brush Street, Mt. Elliott Street, Concord Avenue, Cadillac Avenue, and French Road is underway and will be constructed from 2018 to 2021. Construction of the eastern portion of the project on I-94 (Chene Street to Conner Street) is expected to begin in 2021.

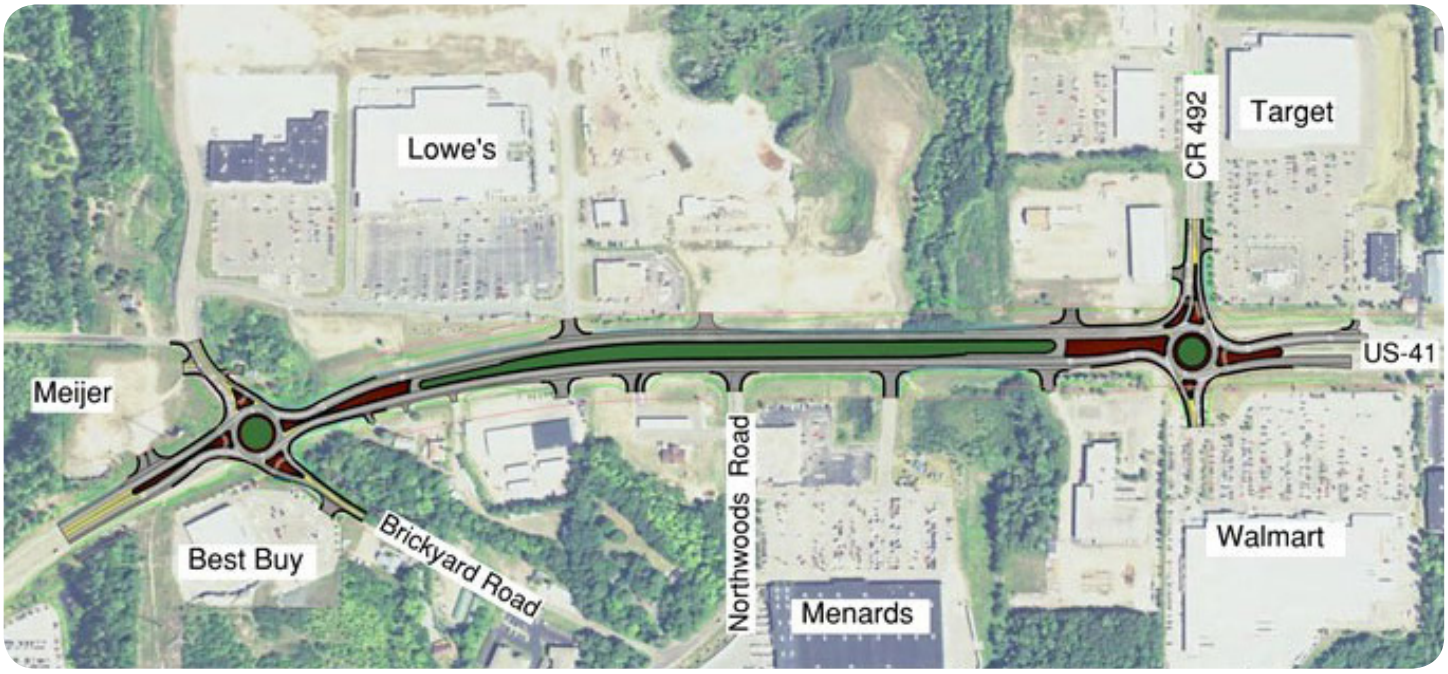
An additional group of advanced bridges has been identified and will be designed in 2018-2019 with construction beginning in 2020. Those bridges are East Grand Boulevard, Grand River Avenue, Frontenac Street, Burns Avenue, and two Conrail Railroad bridges over I-94, along with Milwaukee Avenue over I-75. In response to stakeholder comments, the preparation of a limited supplemental environmental impact statement has begun to study proposed modifications to the project related to the service roads and bridges.



Marquette Township US-41/M-28 Roundabouts and Shared-Use Path Tunnel Project

MDOT, in partnership with Marquette Charter Township, will construct a shared-use pathway tunnel under US-41 and M-28, and a shared-use pathway from the Iron Ore Heritage Trail to County Road 492. This project is the first phase toward connecting to a previously funded Safe Routes to School project and is part of a larger plan to connect the 48-mile-long regional Iron Ore Heritage Trail to residential neighborhoods and the Noquemanon Trail.

This project will be paired with an MDOT road reconstruction project in 2019; that project includes constructing two new roundabouts, further enhancing safety and access to the commercial business along this corridor. The tunnel will improve safety by providing pedestrians, bicyclists and snowmobilers with a separated grade crossing of this busy commercial corridor and the rapidly developing retail and entertainment district. The successful implementation of this project is being achieved because of meaningful partnerships and financial participation from Marquette Township and local contributions. Additionally, the project secured grant funds through the Federal Transportation Alternatives Program and Michigan Department of Natural Resources Natural Resources Trust Fund.



Project Identified by the 21st Century Infrastructure Report

Soo Locks

The Soo Locks are a critical part of the freight transportation infrastructure of the Great Lakes region. Located on the St. Mary's River between Michigan and Ontario, the Soo Locks are owned and operated by the U.S. Army Corps of Engineers and provide a vital link between Lake Superior, the other Great Lakes, and the rest of the world. Nearly 4,000 American, Canadian, and foreign flag vessels pass through the locks annually, carrying more than 65 million tons of iron ore, stone, low-sulfur coal, grain, cement, and other cargoes. Approximately 80 percent of the raw materials used by U.S. steel manufacturers, as well as much of the low-sulfur coal used by regional electric utilities, pass through the locks. The 50-year-old Poe Lock is the only lock capable of accommodating the largest Great Lakes vessels that carry 86 percent of all cargo passing through the locks and account for 3.2 percent of the total U.S. GDP (U.S. Department of Homeland Security, October 2015; Kowall 2016). This critical reliance on a 50-year-old single lock is unwise and unsustainable.

The U.S. Department of Homeland Security recently completed an analysis of the impacts resulting from a six-month unscheduled closure of the Poe Lock. The findings are staggering: there would be a complete shutdown of Great Lakes steel production; 75 percent of U.S. integrated steel production would cease; 80 percent of iron ore mining would cease; and nearly 100 percent of North American appliance, auto, construction equipment, farm equipment, mining equipment, and railcar manufacturing would cease. There would be 11 million job losses in the U.S., plus more in Canada and Mexico, and a $1.1 trillion decrease in GDP (U.S. Department of Homeland Security, October 2015). This would likely result in widespread bankruptcies and a recession.

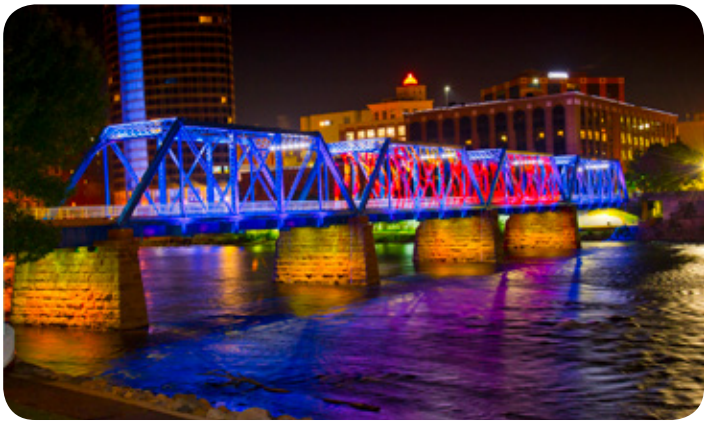
Today, the construction of the new lock has been and remains stalled. In 1986, Congress authorized construction of a second large lock equal in size to the Poe Lock in order to provide the necessary capacity and redundancy. The new lock will be constructed on the site of two obsolete locks built during World War I that are now permanently closed. Except for some limited preliminary construction in 2009-2010, the project has stalled due to lack of federal funding. A remaining obstacle is a low benefit-to-cost estimate for the project, the result of flawed assumptions in the original methodology. The U.S. Army Corps of Engineers is currently conducting an economic reevaluation based on more accurate assumptions. The study is scheduled to be released in June 2018 and is expected to produce a significantly higher benefit-to-cost ratio, which will allow the chief of engineers to formally advance the project to Congress for funding.

The 21st Century Transportation Commission Report called upon the Michigan Legislature to pass a resolution to urge the federal government to expedite completion of the Economic Reevaluation Report currently being prepared by the U.S. Army Corps of Engineers and to provide the necessary funding to construct the new lock. The current estimated investment needed is approximately $922 million of federal funding invested over several years.

21st Century Pilot Update

One of the primary recommendations of the 21st Century Infrastructure Commission was the development of a statewide comprehensive database of infrastructure assets and their condition. In 2017, Gov. Snyder's administration selected Prosperity Regions 10 and 4 to lead pilot projects to identify the approach and data components for such a data base. Region 10 in southeast Michigan provides the opportunity to implement the pilot in a densely populated urban environment with much older infrastructure, while Region 4 on the west side of Michigan is a sprawling mix of urban areas and very rural areas that present different infrastructure data challenges. The pilot studies are complete and local participation in both areas was tremendous.

The pilot report that was generated through Gov. Snyder's office was issued in late April and it will provide the blueprint for statewide rollout and implementation. Legislation in support of the 21st Century effort has been drafted, creating the Michigan Infrastructure Council (MIC), Water Asset Management Council (WAMC), and modifications to existing Transportation Asset Management Council (TAMC) legislation. The 21st Century Infrastructure initiative will expand asset management practices to various assets within the road right of way, improve coordination between asset owners, and provide the roadmap for infrastructure management and investing to meet the long-term needs for the state of Michigan.



Public Comments

The public review and comment period for the preliminary draft of the MDOT 2019-2023 Five-Year Transportation Program was July 23 - Aug. 21, 2018. On July 23, MDOT placed the document on the MDOT website and issued a news release and e-mail notification to invite comments. The website containing the document and the interactive maps received about 3,865 visits and the document was downloaded 947 times within the comment period. MDOT received 56 public comments on the draft 2019-2023 Five-Year Transportation Program from 46 different individuals, including respective comments from the Battle Creek Area Transportation Study, Blair Township, City of Morenci, Eagle Harbor Township, Lake County Economic Development Alliance, Region 2 Planning Commission, and Richland Township. Many of the comments were highly substantive and are included in the following categorized listing. If a person provided more than one comment, each comment was included in the following review.

Information and comments received were directed to appropriate MDOT project areas or MDOT region planners. Responses were sent to individuals to acknowledge a comment. Local road comments were forwarded to the appropriate local offices in order to provide a more detailed response.

Statewide Comments

Safety/Road Conditions

- One comment is concerned about security threats to connected and autonomous vehicles and suggests that MDOT address the issue.
- One comment wants MDOT to improve pavement condition on the freeways statewide.
- One comment thought MDOT can improve the way roads are constructed and maintained.

Congestion Issues

- One comment would like to see the flex routes as seen on US-23 implemented on freeways statewide.

Other Issues

- Three comments want MDOT to prioritize nonmotorized transportation.
- One comment wishes for the expansion of commuter rail across the state.
- One comment wants high-speed rail from Detroit to Chicago.
- One comment is opposed to public transportation investment.
- One comment suggested public transit ridership should prioritize getting seniors from their homes to transit stops.
- One comment inquired if any road work was occurring near specific locations across the state.

Bay Region Comments

Congestion Issues

- One comment is concerned that the recently completed project on M-20 in Midland will increase congestion.

Grand Region Comments

Safety/Road Conditions

- One comment suggests the construction of a merge lane on westbound I-196 between Lane Avenue and Lake Michigan Drive in Grand Rapids to increase safety.
- One comment expressed safety concerns over the US-131/ Wealthy Street interchange in Grand Rapids.
- One comment would like to see the road condition on I-196 in Allegan County improved.

Congestion Issues

- One comment suggests US-131 in Grand Rapids should be reconstructed with increased capacity.
- One comment suggests additional lanes on M-11 in Wilson due to congestion.
- One comment believes road investment in the Grand Region should increase.
- One comment suggested adding lanes on US-10 from Reed City to Ludington.

Other Issues

- One comment is pleased about upcoming roadwork near the I-96/I-196 interchange in Grand Rapids.

Metro Region Comments

Safety/Road Conditions

- One comment would like pavement condition addressed on all "Mile" roads in Metro Detroit.

- One comment stated that Telegraph Road is in poor condition from Taylor to Woodhaven in Wayne County.
- One comment reported the poor condition of the I-696 bridge at Belanger Street, two bottlenecks on I-696 at Orchard Lake and 10 Mile/Halstead roads, and requested better maintenance of road shoulders and fence lines.

Other Issues

- One comment suggested that the Dequindre Cut nonmotorized pathway in Detroit should have been a light rail project.

North Region Comments

Safety/Road Conditions

- Four comments would like to see traffic signals installed at M-37/Vance Road and M-27/Blair Townhall Road in Grand Traverse County to address safety and congestion concerns. In addition, more than 400 people signed an online petition for installation of the signal.
- Four comments were concerned about pedestrian safety in Traverse City and would like to see improvements.
- One comment suggests a speed limit of 25 mph on all Traverse City roads.
- One comment suggests installing post-mounted traffic signals in Traverse City to enhance safety.
- One comment expressed safety concerns about the pedestrian crossing at the US-31/Meijer entrance intersection in Grand Traverse County.
- One comment suggests a lowered speed limit and traffic signals with turn arrows at the US-31/Long Lake Road intersection in near Interlochen.
- One comment is concerned with pedestrian safety on M-66 in Lake City due to commercial vehicle traffic.

Congestion Issues

- Two comments suggest a turn lane on Front Street in Traverse City.
- One comment suggests adding a turn lane on Division Street in Traverse City.
- One comment suggests that two upcoming projects on M-37 should be scheduled to avoid conflicting with the local fair in Traverse City.
- One comment suggests reconstructing and adding a turn lane on M-31 from Interlochen to Chums Corner in Grand Traverse County.
- One comment suggests adding a turn lane on M-37 near the West Mill Road intersection in Grand Traverse County.

Southwest Region Comments

Safety/Road Conditions

- One comment expressed concern about road conditions on I-94 Business Route (BR) and M-139 in Berrien County.

Other Issues

- One comment offered minor corrections regarding upcoming projects in Calhoun County.
- One comment requested the status of an upcoming project on M-43 in Kalamazoo County.

Superior Region Comments

Safety/Road Conditions

- One comment suggests the culvert on M-26 in Eagle Harbor should be replaced due to safety concerns.

Other Issues

- One comment is pleased that Soo Lock improvements are mentioned in the document.

University Region Comments

Safety/Road Conditions

- One comment suggests additional traveling lanes on eastbound M-14 in Washtenaw County to reduce the number of crashes.
- One comment is concerned about road conditions on M-156 in the city of Morenci.
- One comment would like MDOT to address the pavement condition on US-127 from the Jackson/Hilldale county line to the Michigan/Ohio state border.
- The City of Ann Arbor is pleased about the upcoming US-23 BR project. They wish to work with MDOT on the project to improve safety and congestion issues while using a context sensitive approach that addresses all transportation modes.
- One comment wants the I-96 improvements project from Chilson Road to Dorr Road in Livingston County to be prioritized to improve pavement condition.

Congestion Issues

- One comment suggests expanding the flex route on US-23 from the I-96 interchange to M-36 in Livingston County.
- One comment is concerned about congestion on US-23 near the I-96 interchange and opposes the flex route.
- One comment would like additional lanes on I-96 from M-59 to US-127 in Livingston and Ingham counties.
- One comment does not want road capacity reduced following the upcoming US-23 BR project in Ann Arbor.

Five-Year Transportation Program Process

The Five-Year Transportation Program is an essential part of the governor's plan for economic growth for Michigan, and includes planned investments for highways, bridges, public transit, rail, aviation, marine, and nonmotorized transportation. Investments in all of these transportation modes provide important jobs to the Michigan economy, accessibility to urban and rural development, improved safety and efficiency of the transportation network, and enhanced quality of life for Michigan citizens.

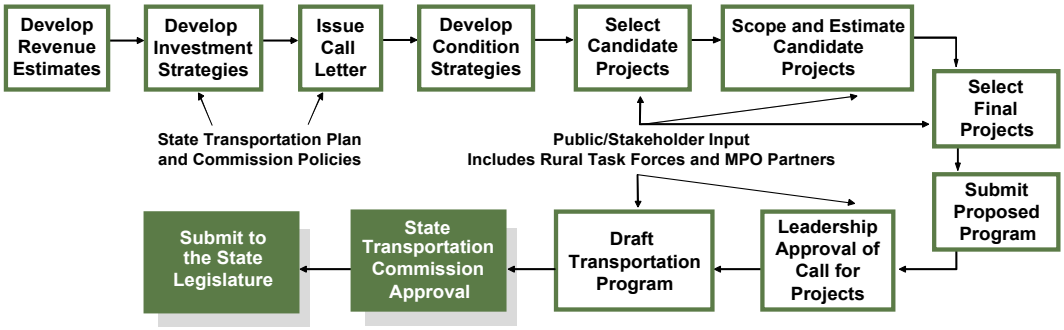
The highway portion is a rolling program; each year, the first year is implemented, a new fifth year is added, and program/project adjustments are made to the other years. This document only pertains to that portion of the programs that MDOT delivers. It does not account for programs delivered locally with state and federal funds that are directly controlled by local agencies, such as transit agencies or county road commissions.

The Highway Program development process is a yearlong, multi-stage process as shown in the following flowchart.

MDOT strives to continually involve the public and stakeholders in development of its programs and projects. The Five-Year Transportation Program process is an important opportunity to implement the vision that citizens and businesses have for Michigan. Transportation projects are often many years in the making, so it is important to engage stakeholders early so that public participation can help shape mutually desired outcomes.

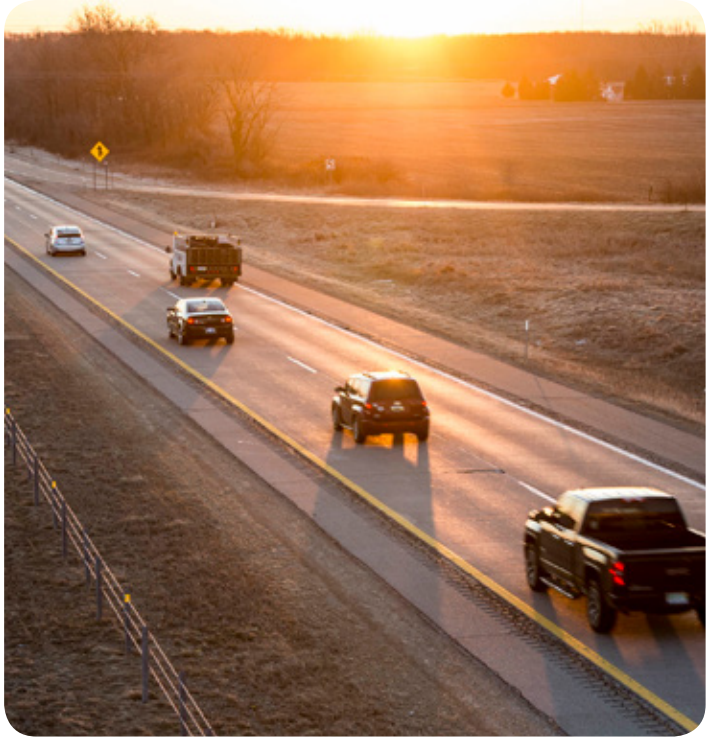
The Five-Year Transportation Program creates a continuous, interactive dialogue with the users of the state transportation system to anchor MDOT's project development and delivery systems. MDOT's seven region offices, 22 Transportation Service Centers (TSC) and statewide planning staff work throughout the year to share project lists with local agencies, stakeholders and the public. Information is presented at rural elected officials meetings, TSC transportation summits, rural task force meetings, region prosperity meetings, and meetings with legislators. In addition to formal presentations, MDOT staff members informally discuss individual projects with economic development and tourism agencies, the Michigan Department of Natural Resources (MDNR), the Michigan Economic Development Corp. (MEDC), rural planning agencies, metropolitan planning organizations (MPOs), road commissions, local officials, tribal governments, businesses, local nonprofit groups, and the public. MDOT staff also field questions from local governments and the public regarding upcoming projects in the future, partnering on projects with other stakeholders, or coordinating when the project will be delivered.

Public participation in MDOT's Five-Year Transportation Program feeds into the State Transportation Improvement Program (STIP). The Five-Year Transportation Program serves as an opportunity for the public to be notified and provide local input to the upcoming STIP. The road and bridge projects proposed in the Five-Year Program are incorporated into MDOT's STIP. Michigan is required to complete this planning process to receive federal transportation funding.



Follow MDOT on *Facebook* and *Twitter* or contact your local MDOT region office to be best informed about upcoming projects in your area.

Revenue Assumptions and Investment Strategies

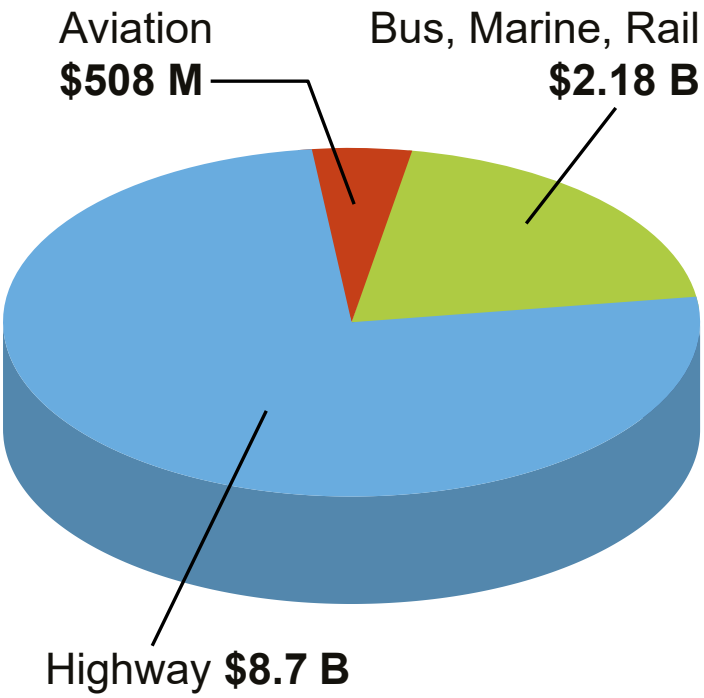


Overview

Enhancing economic development by preserving and maintaining a safe transportation system remains MDOT's highest priority. This Five-Year Transportation Program invests about $11.3 billion in MDOT's transportation system. This includes investments in the Highway, Aviation, Bus, Rail, and Marine programs. A total of $8.7 billion (including routine maintenance) will be invested in the 2019-2023 Highway Program. Over these five years, $508 million will be invested in the Aviation Program and $2.1 billion will be invested in Bus, Rail, and Marine/Port programs (see the following pie chart).

The Highway Program focuses on system preservation through the repair, operation and maintenance of Michigan's roads and bridges. The majority of the Multi-Modal Program concentrates on system preservation as well. Investments in Michigan's transportation system focus on a comprehensive safety program and increased emphasis on mobility, reliability and expanded work zone safety efforts. The Five-Year Transportation Program documents that MDOT's investments in the state transportation system directly benefit Michigan citizens by providing them with expanded options, mobility, and access.

Total - $11.3 Billion



Highway Program Revenue Assumptions

Federal Funding

FY 2018 will mark the third year of the five-year surface transportation bill known as the Fixing America's Surface Transportation Act, or the FAST Act. The legislation was signed into law in December 2015 and authorized federal transportation programs and funding for the period covering the 2016-2020 fiscal years. The FAST Act authorizes the investment of $305 billion in federal funding in the nation's surface transportation system over its duration.

The FAST Act provided a modest increase in overall funding for the federal highway program. The legislation also created two new freight programs to better target investments to projects that promote efficient movement of freight. Funding for these two new programs essentially account for most of the increased funding provided by the FAST Act. Beyond the new freight programs, funding for the remaining federal highway programs grew by roughly the expected rate of inflation.

The new freight programs in the FAST Act build on the reforms included in the previous surface transportation authorization bill, the Moving Ahead for Progress in the 21st Century Act, or MAP-21. MAP-21 directed agencies to think more about freight by interacting more closely with stakeholders and engaging in specific freight planning efforts. MAP-21 also transformed federal highway and transit programs through the establishment of a performance-based approach to decision-making. The FAST Act supports this initiative by funding efforts to collect and manage data for performance analysis, and to improve capacity of transportation agencies to better link investments with outcomes.

Reliance on non-transportation revenue to support investments in surface transportation is continued in the FAST Act. It transfers $70 billion from the federal General Fund into the federal Highway Trust Fund (HTF) to ensure that all the investments in highways and transit during the next five fiscal years are fully paid for. This brings the total amount of non-transportation revenue that has supported investments from the HTF during the past seven years to nearly $145 billion.

The FY 2019-2023 federal-aid revenue estimate is based on FAST Act estimates of federal funding available for Michigan. Federal funding is assumed to grow about 2 percent per year for the entire Five-Year Program time period. It is projected that $4.3 billion in federal funding will be made available to the Highway Program for this Five-Year Transportation Program.

State Funding

On Jan. 1, 2017, the gasoline tax increased from 18.7 to 26.3 cents per gallon, and the diesel fuel tax increased from 15.0 to 26.3 cents per gallon. The motor fuel tax was also applied to natural gas (CNG) as well. Fuel tax rates will be tied to inflation beginning in 2022 to remedy the decline in purchasing power of the fuel tax. Registration fees for most cars and trucks were also increased by 20 percent on Jan. 1, 2017. New electric car fees of $100 per year, and $30 for plug-in hybrid cars, attempt to equalize road-user fees for vehicles that use little or no taxed fuel. The user-fee increases are estimated to generate an additional $600 million per year for the Michigan Transportation Fund. Starting Oct. 1, 2018, income tax revenues will be appropriated for roads, increasing from $150 million to $325 million in FY 2020 to $600 million in 2021. An estimated $600 million in income taxes are forecasted to continue to be distributed into the MTF continuing in FY 2022 and 2023. The income tax revenues will be distributed to roads agencies only, under the usual Act 51 formula.

The state revenue estimate is based on MDOT's share of the Michigan Transportation Fund (MTF), as estimated by consensus with the Department of Treasury, Economic and Revenue Forecasting Division. Future state revenue is forecast using a long-range forecasting model managed by MDOT's Statewide Transportation Planning Division. It is estimated that $4 billion in state revenue will be available for MDOT's Highway Program. Private contractor funding for the I-75 Oakland County Segment 3 DBFM contract will be utilized to offset project costs through the construction of the Segment 3 project.

Funding Distribution

Public Act 51 of 1951 (Act 51) mandates how transportation funds are distributed and spent between MDOT and local entities. The intent of Act 51 in regard to federal highway aid is to distribute approximately 25 percent of federal aid to local jurisdictions for use on federal-aid-eligible local roads. The remainder is to be used by MDOT. The funds collected from state fuel tax and vehicle registration revenues are deposited into the MTF, the distribution fund for transportation revenues. MDOT receives approximately 39 percent of this fund (known as the State Trunkline Fund, or STF), county road commissions receive 39 percent, and cities receive about 22 percent.

Highway Program Investment Strategy

The State Transportation Commission (STC) establishes policies, goals, and objectives that provide the basis for highway funding allocation decisions. MDOT developed an investment strategy process to accomplish the effective use of financial resources on the state trunkline Highway Program. The process allocates an investment amount to various program categories (bridge, road, safety, etc.) annually, based on program improvement strategy, goals, and statewide priorities. It sets the level of funding to achieve highway improvement priorities and provides a tool to constrain the overall statewide program against available revenues.

MDOT has a pavement preservation formula that allocates funding to its seven regions. The formula weighs four overall factors: pavement condition, eligible lane miles for pavement reconstruction and repair work, usage (average daily traffic volumes), and regional cost. These factors form the basis for how pavement preservation funds are distributed to each region. The formula is updated annually with current pavement condition, traffic, cost and eligible lane miles.

Bridge funding is distributed to MDOT regions using the bridge preservation allocation formula. It uses the deck area of bridges in each National Bridge Inventory condition to allocate funds to each MDOT region. Funding is split into investment targets for replacement, repair, and preventive maintenance work.

The table on the following page provides the Highway Program investments strategy for FY 2019-2023.

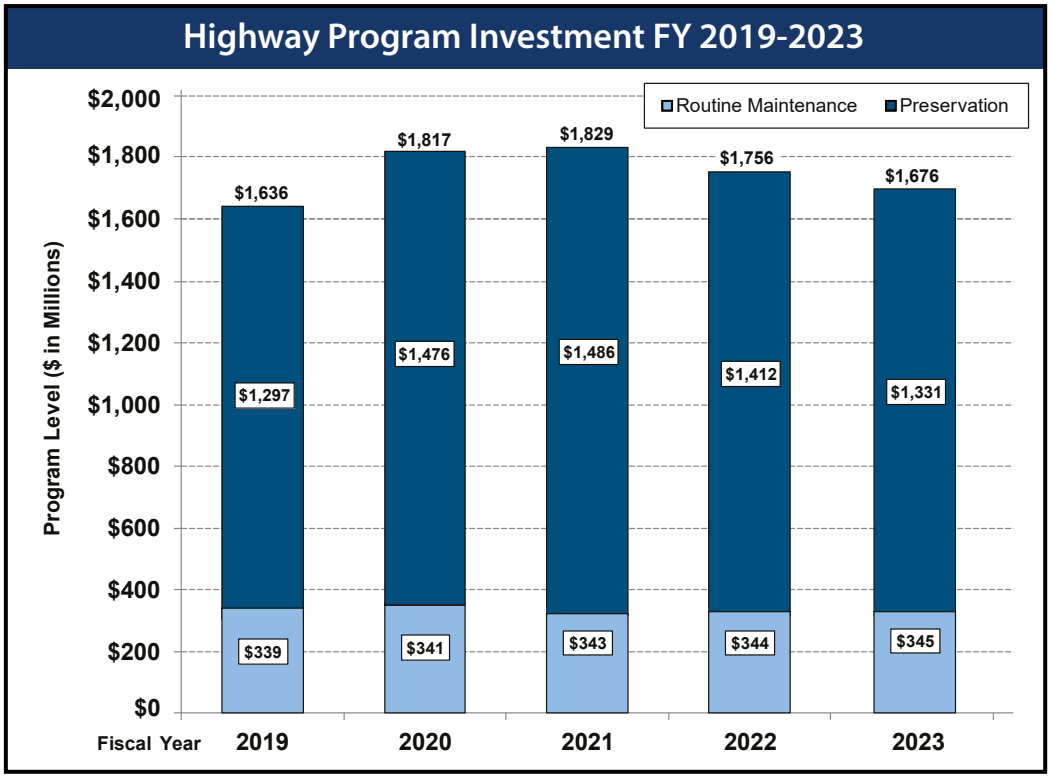
Highway Investment Program FY 2019-2023

	FY 2019-2023 Annual Average (millions)	Five-Year Total (millions)
REPAIR AND REBUILD ROADS AND BRIDGES		
REPAIR AND REBUILD ROADS		
Rehabilitation and Reconstruction	$550	$2,747
Capital Preventive Maintenance	$119	$596
Freeway Lighting	$0.2	$1
Freeway Resurfacing Program	$20	$100
Non-Freeway Resurfacing Program	$47	$235
Trunkline Modernization*	$238	$1,192
TOTAL - *Repair and Rebuild Roads*	**$974**	**$4,871**
REPAIR AND REBUILD BRIDGES		
Bridge Replacement	$65	$325
Bridge Preservation	$73	$363
Big Bridges	$26	$131
Special Needs	$22	$110
Culverts-Capital	$2	$10
Blue Water Bridge-Appropriated Capital Outlay Projects	$3	$15
TOTAL - *Bridges*	**$191**	**$954**
ROUTINE MAINTENANCE	**$342**	**$1,712**
TOTAL - *REPAIR AND REBUILD ROADS AND BRIDGES*	**$1,507**	**$7,537**
SAFETY AND SYSTEM OPERATIONS	**$168**	**$842**
OTHER		
Transportation Alternatives	$10	$48
Roadside Facilities	$12	$60
Workforce Development	$9	$45
Non-Federally Funded Programs	$37	$183
TOTAL - *FIVE-YEAR TRUNKLINE PROGRAM*	**$1,743**	**$8,715**

**Includes $575 million over five years for I-75 Oakland County Segment 3 DBFM project*

The FY 2019-2023 Five-Year Transportation Program estimates that investments for the Highway Program total approximately $8.7 billion. This total reflects investments for pre-construction (scoping, design, environmental clearance and right-of-way acquisition) and construction activities. This Highway Program investment will provide Michigan travelers with approximately 473 miles of improved roads per year over the next five years, and repairs to 119 bridges per year. MDOT also will manage its road system by extending the life of approximately 1,050 miles of pavement each year through the capital preventive maintenance (CPM) program and 400 miles of non-freeway resurfacing. The Trunkline Modernization category includes design and construction for portions of the I-75 corridor in Oakland County, and design and construction for portions of the I-94 corridor in Detroit. This document includes a project listing by region for additional projects in major work categories. These projects also can be viewed on a state map and regional maps on the MDOT website at http://mdotnetpublic.state.mi.us/fyp/.

The following chart illustrates the annual Highway Program investments by program categories over the five-year time frame. The graphic shows the year-by-year planned investments.



Multi-Modal Programs

MDOT's FY 2019-2023 Multi-Modal Program includes two main areas: public transportation and aviation. Public transportation programs are administered by two offices. The Office of Passenger Transportation (OPT) administers the Bus and Marine programs while the Office of Rail (OoR) administers the Rail and Port programs. The Office of Aeronautics administers the Aviation Program. These offices provide capital and operating assistance, technical support, and safety oversight.

The Multi-Modal Program focuses largely on continued safe and secure operation of the existing transportation system through routine maintenance, capital replacement/repair, and preservation of existing service levels. MDOT's approach to the Multi-Modal Program differs significantly from the Highway Program. Much of the infrastructure is owned, managed, and operated by entities other than MDOT, and the state and federal funding that MDOT is responsible for represents only a portion of the overall investments in these modes. However, MDOT's recent acquisition and upgrade of the rail corridor between Dearborn and Kalamazoo has changed the landscape. Investing nearly $400 million in federal grant dollars, MDOT purchased this corridor from Norfolk Southern Railway and undertook substantial improvements designed to enable accelerated passenger train speeds. As a condition of the federal grant, MDOT is now responsible for funding the annual maintenance of the corridor, as well as those capital improvements necessary to keep the line in a state of good repair.

The multi-modal portion of the five-year program contains overview information where the modes or programs have similar conditions, and mode-specific information when appropriate due to unique considerations or funding issues.

Public Transportation Revenue Assumptions (Bus, Rail, Marine, Port)

Public Transportation Revenue Issues

The Public Transportation Program receives most of its state funding through the Comprehensive Transportation Fund (CTF). Approximately 73 percent of CTF revenues are from the MTF, which is funded by the state motor fuel tax and vehicle registration fees. The MTF transfer to the CTF has increased due to the changes in fuel taxes and registration fees from the recent transportation revenue package. However, the CTF will not benefit from any of the General Fund revenues that will be appropriated for roads beginning in FY 2019. In part, additional MTF funds will support a new MDOT local crossing surface program. The CTF also receives revenues from auto-related sales tax revenue, which varies from year to year. The distribution of the MTF to the CTF and the sales tax contributions to the CTF are called for in state law but neither is constitutionally protected. In past years, the Public Transportation Program has also been appropriated General Fund dollars since CTF revenue was insufficient to match federal funds and support a continuation level of services. In FY 2018, $8 million was appropriated from the General Fund for the $8 Million Michigan Mobility Challenge to utilize technology and innovative service models to solve mobility gaps for seniors, persons with disabilities and veterans.

For CTF revenues, this five-year program is based on the FY 2019 CTF appropriation and revenue estimates for FY 2020 through FY 2023. Based on current FY 2019 revenue estimates, CTF funding available for appropriation in FY 2019 is approximately $17 million more, or 5.15 percent, than the FY 2018 appropriation. This increase is due to a small inflationary increase plus appropriation of the estimated unreserved CTF FY 2018 fund balance. Even with the additional revenue generated by the recent transportation revenue package, revenues may not be sufficient to meet the program needs over this five-year period.

Passenger Transportation (Bus and Marine) Program Development

The Bus and Marine programs are administered by MDOT's Office of Passenger Transportation and cover local transit (bus), marine, and intercity bus - the largest of these being local transit. In many ways, development of a five-year program for these programs is not suitable, at least not in the same way as is suitable for MDOT's road and bridge program, primarily because the clear majority of local transit projects are selected at the local level, not by MDOT, and are determined annually. In addition, the CTF is subject to an annual appropriations process, the results of which determine the funding available for each of the programs.

Because the CTF is subject to an annual appropriations process, it is rare that MDOT makes a multi-year funding commitment from the CTF, other than continuation of the annual programs mandated in Act 51. Therefore, what is presented in this document is MDOT's annual program for FY 2019, the estimated funding that may be available for the remaining years of the program, and a description of the factors anticipated to influence both the funding availability and the annual decisions that will be made over the life of this program.

Local Transit Revenue Assumptions

The programs in this category provide funding for operating and capital support, training, and special projects to local bus operators that service the general public. Assistance also is provided to support transportation services focused on the needs of senior citizens and persons with disabilities, as well as the transportation-to-work needs of low income individuals. A total of 119 transit providers (81 local agencies and 38 specialized services agencies) in all 83 Michigan counties are provided support under these programs.

The FAST Act continues all the federal transit formula programs as outlined in MAP-21, with increases that are roughly inflationary. It also maintains the same basic structure of these programs in terms of which programs/funds are apportioned to the state to deliver to MDOT's sub-recipients and that are apportioned directly to urbanized areas. New program requirements included in MAP-21 pertaining to transit asset management and transit safety planning and related performance measures remain in place. MDOT and urban transit agencies are developing Transit Asset Management Plans. The safety requirements have yet to come into effect because Federal Transit Agency (FTA) rulemaking is still in process. Once they become effective they may influence local and state investment decisions.

The FAST Act includes a new competitive program (Buses and Bus Facilities) that allows the FTA to make competitive grants to states and transit agencies for bus and bus facility capital projects. The predecessor to this program - under prior authorizations - was an important source of capital funding, via both congressional earmarks and FTA competitive grants, for many urban and rural transit agencies in Michigan. When the discretionary portion of the bus and bus facilities program was eliminated in MAP-21, it resulted in a reduction of federal funding to agencies in Michigan and projected declines in the condition of the state's bus infrastructure, even as nationwide transit funding amounts remained level. MDOT will submit annual applications to the FTA in hopes of getting funding to improve the condition of the rural and specialized transit fleets. Urban agencies throughout the state will likely also compete for these funds.

It is important to note that more than 80 percent of FTA formula funds for local bus systems go directly to transit agencies and are not reflected in MDOT's program. Also, the federal discretionary funds that will be sought by urban transit agencies under the Buses and Bus Facilities program, as well as the grants that The Rapid and the Regional Transit Authority (RTA) will seek to implement their regional transit improvements, will not flow through MDOT. However, under Act 51 all of these federal funds are matched by MDOT using the CTF appropriated for that purpose. Therefore, when CTF dollars are not available to match federal funds, the impact is largely on local programs, not MDOT programs, which means impacts on the transit infrastructure and on transit providers' ability to access federal funds is not detailed in this five-year program document. Given the discretionary nature of some of these funds, it is not yet known if the CTF dollars available will be sufficient to match all available federal transit aid.

Also part of local transit is the MichiVan Program. MDOT contracts with private service providers to help organize and sustain vanpools as a commuting alternative. Federal funds for MichiVan come from FHWA's Congestion Mitigation and Air Quality (CMAQ) Program and are programmed under the Highway Program. A small amount of CTF also is used each year for MichiVan.

Marine Revenue Assumptions

The FHWA Ferryboat Formula Program continues in the FAST Act. While the FHWA formula program provides a guaranteed annual allotment to eligible ferry systems in Michigan, the annual funding level for each system is small and inadequate for major capital improvements, such as replacing ferry vessels, expanding terminals or docks, or upgrades. Each ferry system that receives a federal allocation on this program will determine how to use the funds, and MDOT will issue grants accordingly. The federal funds that will come to Michigan under the

FHWA program are not shown in the Bus and Marine programs but are included in the highway portion of this five-year program.

Intercity Bus Revenue Assumptions

The Intercity Bus Program provides both operating and capital assistance for the intercity network in the state, with a goal to allow residents access to the national transportation network. The program is supported with a combination of federal and state funds, with the exception of the Terminal Development Program, which pays for small projects using only state funds. Under the FAST Act, the federal funds available for intercity bus should remain at about the same level for the duration of this five-year program. MDOT anticipates state funds to be adequate to support the continuation of the current level of service. The Intercity Bus program will utilize the federal In-Kind Match Program when the next contract is bid in 2018. The federal In-Kind Match Program allows states to use the value of connecting unsubsidized intercity bus service as in-kind match for a route subsidized by the FTA 5311 (f) program. Using this program will allow MDOT to stretch both state and federal funds without putting stress on the state funding.

Rail (Passenger and Freight) and Port Program Development

The Office of Rail administers MDOT's Rail and Port Programs. Like OPT's Program, the Rail and Port Program is primarily supported with an annual CTF appropriation. This five-year program was developed based on the FY 2019 annual program and the estimated funding for the remaining years of the five-year program. The Office of Rail scales its efforts annually to fit available funding. Most of the Office of Rail's ongoing expenditures will be for intercity passenger rail service, with costs that are calculated annually. Additional investments will be made through other annual programs that are either application-based or identified through an annual prioritization process.

Rail Revenue Assumptions

MDOT's rail programs are funded by dedicated federal-aid, MTF, and CTF dollars. Dedicated federal-aid and MTF funds support motorist safety at railroad crossings on local roads. Under the FAST Act, a gradual increase in dedicated federal aid will continue through FY 2020. The FAST Act also includes a $4.5 million one-time infusion of federal funds for railroad crossing safety that is planned to be invested in FY 2019. CTF funds are the only ongoing source of revenue for MDOT's passenger and freight rail efforts. There is a one-time $6.1 million increase in CTF funding in FY 2019 for these activities. CTF funding is otherwise projected to return to FY 2018 levels and remain constant through FY 2023. MDOT will also continue to compete for federal funding to assist with rail capital enhancements, as appropriate. Federal funding generally requires a minimum of 20 percent matching funds, which may require additional state revenues to take advantage of these opportunities.

NOTE: STF dollars and corresponding dedicated federal funds support a trunkline crossing program that also is invested as a part of the Rail Program, but those funds are accounted for as a part of the Highway Program.

Port Revenue Assumptions

The pass-through assistance provided to the Detroit-Wayne County Port Authority is nearly $420,000 for FY 2019 and is expected to continue at that level through FY 2023.

Aviation Revenue Assumptions

The Federal Aviation Administration (FAA) Modernization and Reform Act, which was to expire in September 2015, was extended by Congress until the end of September 2018. It continued to fund the Airport Capital Improvement Program (ACIP) at $3.4 billion yearly. It is expected that Congress will pass a new act that will continue the ACIP, as well as other aviation-related programs administered by FAA. Funding levels are uncertain, but for this five-year plan it is assumed that ACIP funding will remain essentially the same at $3.4 billion annually. One change in the extension was the addition of $1 billion for the Airport Improvement Program to be used over FY 2018 through FY 2020. The purpose of the extra funding is for small rural airports and will require no local or state matching funds. The funding is strictly FAA discretionary funds, although the state will provide suggestions and information as requested. It is anticipated that this program could provide Michigan airports an additional $20 million over the three years.

The current federal administration has proposed and may introduce additional infrastructure funding legislation for the next two years. While the amount that may come to airports is unknown at this time, an additional $5 million per year will be added to the anticipated federal funding levels.

While state aviation revenue has recently and may continue to increase, inflation places pressure on local communities for maintaining the airport infrastructure. Michigan's aviation fuel excise tax is the primary funding source for the State Aeronautics Fund (SAF). Additional funding from the federal government will strain the Aeronautics budget for matching funds.

The Air Service Program that supports the Governor's Dashboard is funded in FY 2019 at $250,000 per year. The program is included in this five-year plan for the final four years in anticipation of increased revenues.

In FY 2019, the Airport Safety and Protection Plan bond debt will begin to decrease and make a small amount of additional funds available for the Airport Capital Program.

In summary, aviation program revenue assumptions are:

- **Federal Revenues**
  - Uncertain through FY 2023 but estimated to remain at present levels.
  - Continued formula apportionments, congressional earmarks, and discretionary grants.
  - In partnership with locals, compete for federal discretionary funds.
  - Increase in federal funds for three years for rural airports
- **State Revenues**
  - Committed to match all available federal funding.
  - Excise fuel tax revenue may be recovering to near previous level.
  - Decrease in bond debt service.
  - Sales tax revenue grows to replace previous General Fund appropriations.

Public Transportation Investment Strategies

MDOT's Public Transportation Program includes local transit, intercity bus, marine passenger, the MichiVan vanpool program, port, freight rail, and passenger rail. The program provides for a combination of capital and operating assistance, technical support, safety oversight, and compliance monitoring for each of the modes. Last year's Five-Year Transportation Program represented the beginning of a recovery process for a program that had been steadily reduced over several years. The recently enacted revenue package provided additional funding for FY 2017 and future years to help support this program.

The total Public Transportation Program for FY 2019 is estimated to be $419.4 million, of which $321.5 million is CTF and $97.9 million is a combination of federal, other state, local, and private funds. The $97.9 million includes $13.5 million for the local grade crossing program. The CTF revenue numbers for FY 2019 and FY 2020 are from the Michigan Department of Treasury Office of Revenue and Tax Analysis's (ORTA) Jan. 19, 2018, estimates. After FY 2019, CTF revenues are only expected to grow slightly based on inflation. Based on the proposed FY 2019 program, ORTA's estimates for FY 2020, and MDOT estimates for FY 2021 through FY 2023, the five-year program estimate is $2.1 billion.

The investment of CTF revenues in the public transportation system is determined by the detailed requirements currently set forth in Act 51, as well as the annual appropriations process. Act 51 requires the majority of CTF revenues to be used for local transit. Based on the current structure of Act 51 and the requested revenue, the investments called for in this five-year program are focused heavily on the preservation of the existing public transportation system.

Local Transit Investment Strategy

State funds are combined with federal and local dollars, including farebox revenue and local millages, to support operation and maintenance of the local transit network. The state's annual investment strategy for the Local Transit Program is largely determined by detailed requirements set forth in Act 51 of 1951 for annual distribution/use of CTF revenues and the eligible uses of federal formula apportionments and competitive grant awards.

The budgeted funds for FY 2019 are anticipated to maintain current funding levels in state Local Bus Operating (LBO) assistance. The CTF available to match federal aid will be sufficient to leverage all anticipated federal operating and capital formula allocations but may not be sufficient to match all competitive awards. A high level of success in receiving new federal discretionary funds could put a strain on the CTF.

The MichiVan Program will be maintained with state, federal, and local funds. Demand for new vanpools continues to increase as fuel prices fluctuate.

MDOT's local transit investments will focus on:

- Preservation of existing services in all 83 counties via operating assistance to local transit, intercity bus, and public marine service providers.
- Preservation and maintenance of the existing infrastructure (largely locally owned) via state investment and match to federal funds for routine vehicle replacement.
- Support of local capital strategies established by individual transit agencies via matching federal capital grants for infrastructure replacement and repairs, and, in very limited situations, some minor capacity expansion.

Based on this model, there is limited CTF anticipated in the program for urban growth for projects, such as the North-South Commuter Rail (Howell-Ann Arbor) or expanded transit in the RTA service area.

Intercity Bus Investment Strategy

The Intercity Bus Program provides CTF and federal Section 5311(f) program funds for the procurement of motor coaches and select intercity bus routes within Michigan. In addition, the program is responsible for maintaining four transportation centers throughout the state. MDOT will continue to use state and federal funds to contract with intercity bus carriers to provide route service that would not otherwise exist (i.e., service that would not be provided by the carrier absent a state subsidy) and are essential to national connectivity. Every three years, MDOT bids out the five routes in northern Michigan that private carriers have abandoned due to lack of profitability. Vehicles used on these routes and routes in the southern portion of the state deemed essential to national connectivity also are funded with a combination of state and federal funds. Based on the FAST Act and anticipated CTF funding levels, the current level of service will be maintained for the life of this five-year program.

MDOT implemented its first In-Kind Match Program route that started Aug. 1, 2017. This demonstration route provides two daily round trips between Detroit and Port Huron, providing meaningful connections for both bus and train passengers. The federal In-Kind Match Program allows states to use the value of connecting unsubsidized intercity bus service as in-kind match for a route subsidized by the FTA 5311(f) program. MDOT has been in a partnership with the Wisconsin Department of Transportation (WisDOT) to co-fund two routes that benefit both states and provide meaningful connections to the national network. However, beginning in FY 2018, WisDOT will begin using the federal In-Kind Match Program to fully fund one of these routes using Wisconsin's federal 5311(f) funding and credits from a privately funded route in Wisconsin. This will free up the CTF funds to be used for other in-state projects. They hope to eventually fund the second route with in-kind match, but it may not be during this five-year program.

MDOT also will continue to use state and/or federal funds to enhance the intercity passenger infrastructure. The Terminal Development Program is used to maintain intermodal/intercity terminals and infrastructure so the public can safely and conveniently access intercity services. The Detroit intercity bus facility is nearing the end of its useful life, so more frequent/thorough inspections are planned to stay on top of requirements to maintain the aging infrastructure until plans for a new facility can be finalized over the course of this five-year program. Failure of any major mechanical or structural components could require allocating additional funds and speeding up the facility replacement schedule. The desire is to incorporate intercity bus services into a multi-modal service center. No other potential major construction projects are foreseen during this five-year program.

Marine Passenger Investment Strategy

The four state-subsidized marine passenger systems will continue to receive operating assistance under the Local Bus Operating Assistance Program called for in Act 51 to preserve the service they provide. Any state marine capital funds available over the life of this program will be used for routine infrastructure maintenance and improvements to ensure the integrity of the system. However, with the small amount of state and federal capital funding available for the Marine Passenger Program, deterioration of the locally owned infrastructure over the life of this five-year program is likely, which will make it difficult to preserve the system and likely impossible to replace the aging ferryboats.

Rail Investment Strategy

MDOT's rail investments will include state and federal funds to preserve and enhance Michigan's passenger and freight rail systems, ensure railroad crossing safety and promote economic development.

During this five-year program, the bulk of MDOT's investment in rail will be to preserve and enhance Michigan's intercity passenger rail services, as mandated by federal statute or existing contractual arrangements. Under the Passenger Rail Investment and Improvement Act of 2008 (PRIIA), MDOT is responsible for providing operating support for the three Michigan Amtrak routes that serve

22 station communities. These operating expenditures have decreased in the past two fiscal years, therefore MDOT expects to be able to address deferred capital and maintenance work on its 665 miles of state-owned corridors over the Five-Year Program.

Investments on the state-owned corridor between Kalamazoo and Dearborn will focus on achieving and maintaining passenger train speeds of up to 110 mph. In FY 2019, MDOT plans to invest $61.6 million in operating support and on the state-owned Kalamazoo-Dearborn corridor. In addition, this five-year program will include participation in a multi-state grant that will replace train equipment on all three Michigan routes. MDOT has benefitted from significant federal grants in recent years and will continue to compete for additional funding, as appropriate, to continue its efforts to enhance this corridor and the overall passenger experience.

Remaining CTF dollars will be strategically invested in freight economic development loans and state-owned freight line preservation, while dedicated MTF and federal dollars will be invested in safety enhancements at railroad crossings. Specific projects will be identified annually based on available funding, but in FY 2019 generally will include:

- Preservation of freight service on state-owned corridors through capital repairs, including track and bridge work. In addition to the investments on the state-owned corridor between Kalamazoo and Dearborn, MDOT plans to invest approximately $7 million in track and bridge work on its other state-owned corridors in FY 2019.
- Low-interest loans through the Freight Economic Development Program to assist new or expanding businesses with access to the rail system. MDOT anticipates providing approximately $3 million through this program in FY 2019, but actual investment could vary widely based on applications received.
- Safety projects to reduce motorist risk at crossings will include warning device enhancements and crossing elimination projects on roads under local jurisdiction. Approximately $6 million is expected to be invested in crossing safety on local roads in FY 2019.
- A special effort to eliminate railroad crossings by relocating track on local roads and state trunklines will be undertaken in FY 2019 as a result of a one-time infusion of $4.5 million provided under the FAST Act.
- Approximately $3 million will be invested in FY 2019 through a competitive program for railroad crossing surface improvements on roads on the local system.
- Projects on the state trunkline system designed both to improve crossing surfaces and upgrade warning devices (accounted for under the Highway Program).

MDOT also plans to make $2 million in loans available for rail infrastructure preservation through the Michigan Rail Loan Assistance Program in a FY 2019 call for projects. Funding is available through a revolving fund started with prior CTF appropriations.

Beyond funding, MDOT will continue to work with stakeholders to plan and support other passenger rail projects, including planning for new stations in Ann Arbor and Port Huron. In addition, MDOT will provide technical assistance to existing and proposed commuter and light rail efforts. MDOT will also be assessing Amtrak stations for compliance with requirements of the Americans with Disabilities Act (ADA).

Port Authority Investment

For each of the next five years, MDOT anticipates providing approximately $420,000 in legislatively appropriated funding to the Detroit-Wayne County Port Authority to assist with operating costs and marketing activities.

Aviation Investment Strategy

Airport Capital Improvement Program (ACIP)

The ACIP potentially provides funding for approximately 226 public use airports for capital improvement projects and pavement maintenance. Of the 226 eligible airports, 90 receive federal entitlement funding as part of the National Plan of Integrated Airport Systems. Most of Michigan's public use airports that receive federal entitlement funds are owned and operated by local governments; therefore, projects using these funds are selected by the airports themselves, not the MDOT Office of Aeronautics. However, projects are ranked according to a priority system, and the airports are encouraged to select projects that not only benefit the airport, but the system as well.

In addition, the MDOT Office of Aeronautics can and does provide supplemental funding for projects and makes the decision on which projects receive these funds through the State Block Grant Program. FAA also provides supplemental funding for projects at airports they select. All project funding decisions regarding use of supplemental dollars are made based on the Michigan Aviation System Plan (MASP) or published FAA priorities, as appropriate. An updated version of the MASP was adopted by the Michigan Aeronautics Commission at their July 2017 meeting.

A key provision in the new MASP is the added emphasis to the economic benefits to the local community and Michigan. It will be possible for MDOT Office of Aeronautics staff to provide individual communities a Community Benefits Assessment. This assessment will help local officials communicate the importance of their airport to the community. It will also aid the Office of Aeronautics to determine which projects are more important to the economic benefit of Michigan. As of a recent statewide economic impact study completed in 2017, the economic benefit of Michigan's airports (direct and indirect categories) totals approximately $22 billion. The study further estimated that the jobs created by aviation activities numbers 183,597. These figures are conservative, as they are from 114 of the largest airports in Michigan, leaving out contributions from the 112 smallest airports.

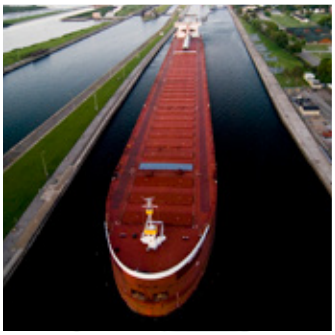
Priorities are a significant part of the funding decisions that support the organizational mission and represent the overall vision driving the airport infrastructure investment strategy. These priorities coincide with the direction set forth by the 21st Century Infrastructure Commission. While constrained, these include:

- Addressing MASP goals (asset management) by reducing system and facility deficiencies.
- Preserving critical infrastructure, particularly pavements, navigational aids and airspace.
- Maximizing federal funds and leveraging state, local and private funding.
- Supporting job growth and economic development through projects related to freight/logistics, aircraft maintenance, and other emerging opportunities.
- Supporting air service passengers statewide.

To the extent possible over the next five years, efforts will continue to focus on integration with other modes of transportation, addressing environmental issues, public awareness/outreach, and education.

In 2016, the ACIP showed a gap between the needs identified by airports and anticipated funding of approximately $60 million per year, or $300 million over five years. Today, that gap is nearly $80 million annually, or $400 million over the five-year period. This growing shortfall is due to the increased cost of delaying and phasing projects versus being able to accomplish them in a single effort. This difference can be narrowed somewhat by discretionary funding, which is distributed by FAA on a regional basis among various states. Michigan has competed well for these funds and, given the identified needs, will continue to aggressively pursue these opportunities. Additional state and other funding options will continue to be explored to impact the shortfall.

Highlighting Upcoming FY 2019

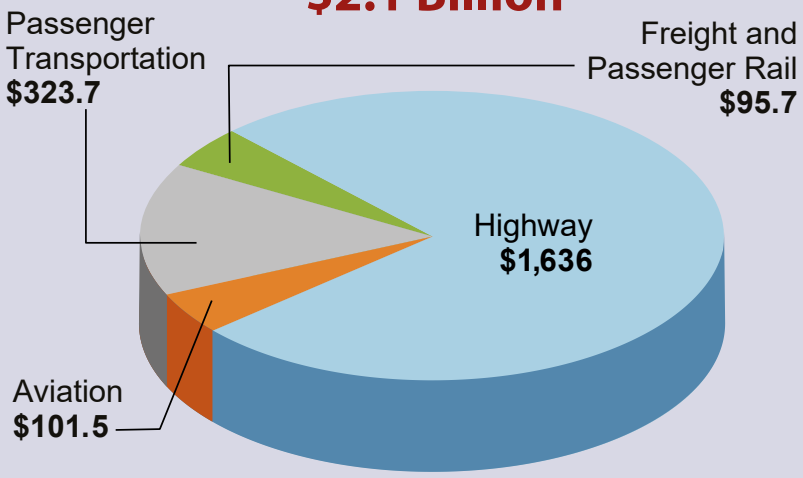


The Michigan Department of Transportation's (MDOT) $2.1 billion FY 2019 Transportation Program is a vital part of Michigan's economy, estimated to support 21,448 jobs. This program continues to emphasize preservation of the transportation system, safe mobility for motorists, and efficient system operations.

In FY 2019, MDOT will invest approximately $1.6 billion in system preservation, maintenance, safety, and operation of Michigan's state trunkline roads and bridges. The preservation and safety of Michigan's existing transportation system continue to be MDOT's highest priorities.

MDOT's FY 2019 Multi-Modal Program provides for capital and operating assistance, technical support, and safety oversight of the air, passenger rail, rail freight, marine and port, intercity bus, charter bus, limousine, and local transit sectors of Michigan's transportation system. In FY 2019, MDOT will invest $521 million in state, federal, local, and private funds to maintain Michigan's multi-modal operations and infrastructure.

FY 2019 MDOT Transportation Program $2.1 Billion



Totals in chart shown in millions.

MDOT FY 2019 Transportation Program

Highway Program Revenue Assumptions:

The announced FY 2019 Highway Program investment is consistent with anticipated federal and state revenues. It is projected that approximately $860 million in federal funding will be available in FY 2019 for the highway capital program. The state revenue estimate is based on the Michigan Department of Treasury forecast for the State Trunkline Fund (STF), which includes revenue for state trunkline routine maintenance. The estimated state transportation revenue available for the FY 2019 trunkline capital program and routine maintenance totals $800 million, after allowing for the state portion of debt service.

Public Transportation Program Revenue Assumptions:

The FY 2019 Public Transportation Program (bus, marine, passenger rail, freight rail, and port programs) is based on the state FY 2019 budget and includes federal, state, local, and private revenue. The FY 2019 program budget includes $321.5 million of CTF. This is comprised of ORTA's revenue estimates and estimated unreserved CTF fund balance at the end of FY 2018. The FY 2019 CTF program appropriation is approximately 5.1 percent more than the FY 2018 CTF appropriation. The rail program's revenue assumptions also include a continuation of dedicated federal and MTF funding allocations for rail crossing programs at FY 2018 levels and $10 million of federal spending authority in anticipation of grant opportunities under the FAST Act. The Passenger Transportation program's revenue assumptions include over $59 million of federal spending authority.

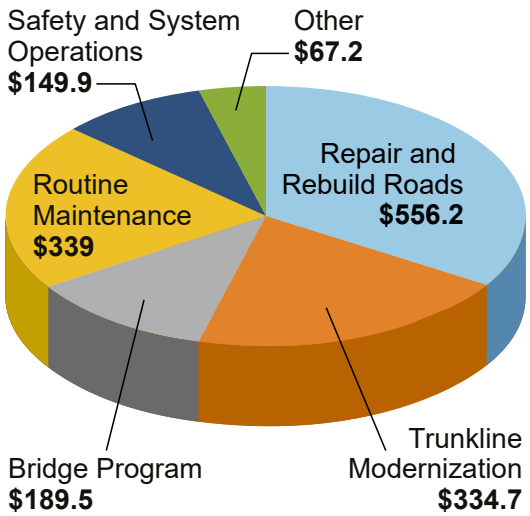
Aviation Program Revenue Assumptions:

Based upon the most current estimates available, the Office of Aeronautics' ongoing federal aid is projected to possibly increase or remain unchanged for FY 2019 from FY 2018 levels. The Federal Airport Improvement Program (AIP) was extended through FY 2018, with a new program expected to be passed in 2018. Estimates have been developed using the previous AIP levels of federal funding. A new source of state aviation revenue was authorized in December 2015, which has provided an additional stable source of funds. This new funding from sales tax revenues on aviation fuel was originally estimated at approximately $12 million yearly, but has since been revised down to $2.5 million yearly. Along with the Parking Tax and Aviation Fuel Excise Tax, these funds are sufficient to match current federal funding.

Interested in an FY 2019 MDOT project? Please go to the project list starting on page 62 or go to the MDOT website at *http://mdotnetpublic.state.mi.us/fyp/*.

$2.1 Billion Total Investment

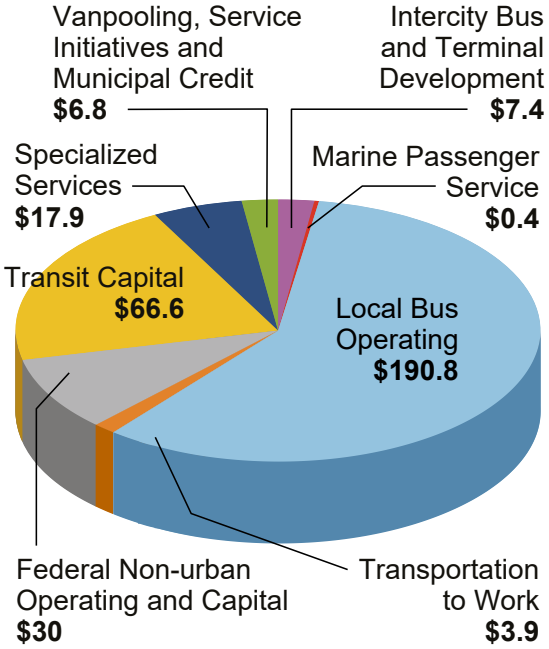
FY 2019 MDOT Highway Program $1.6 Billion



Highway Program Investment Strategy

- The FY 2019 Repair and Rebuild Roads $556.2 million total includes:
  - 379 lane miles of reconstruction and rehabilitation.
  - 1,239 lane miles of capital preventive maintenance.
  - 363 lane miles of freeway and non-freeway resurfacing.
- Bridge preservation activities, including bridge rehabilitation and reconstruction and capital preventive maintenance, will total $189.5 million.
- The Trunkline Modernization Program totals $334.7 million, including the I-75 modernization project in Oakland County (from 8 Mile Road to Coolidge Road) and the I-94 modernization project in Wayne County including bridges at East Grand Boulevard, Grand River Avenue, Frontenac Street, Burns Avenue, and two Conrail Railroad bridges over I-94, along with Milwaukee Avenue over I-75.
- Routine maintenance activities will total an estimated $339 million.
- Safety and Systems Operations includes signs, pavement markings, traffic signals, operational improvements, and other programs that support the safety and efficient operation of the system, at a total investment of $149.9 million.
- Other includes investment in nonmotorized facilities/streetscapes, recreational trails, roadside facilities, workforce development, and other non-federally funded programs, for a total of $67.2 million.

FY 2019 Passenger Transportation $323.7 Million

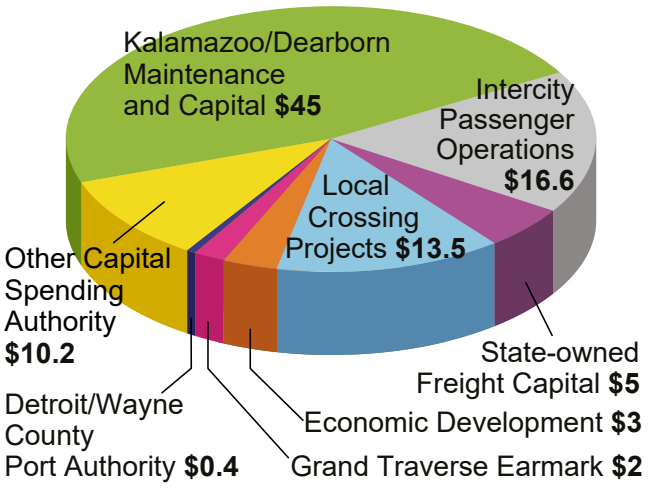


Passenger Transportation Investment Strategy:

- Act 51 defines how the CTF will be expended.
- Preservation of existing local transit and marine services.
  - 78 local bus agencies.
  - Four passenger ferry systems.
  - 38 specialized service providers.
  - More than 90 million public transit trips in FY 2016.
- Preservation of state-subsidized intercity bus service.
  - Five MDOT-contracted routes.
  - One demonstration-contracted route using only federal and private funds.
  - One interstate route jointly funded with WisDOT.
  - Four intercity bus/rail passenger transportation facilities.
- Preservation and maintenance of existing infrastructure.
- Limited funding for regional transit improvements

Totals in charts shown in millions.

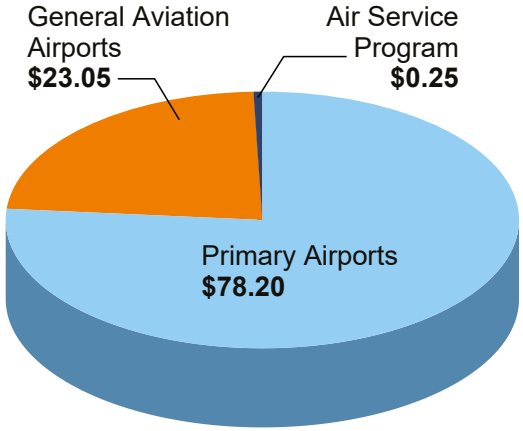
FY 2019
Rail and Port Program
$95.7 Million



Rail Investment Strategy:

- Passenger Rail
  - Amtrak operating support for three Michigan corridors.
  - Maintenance efforts on the Kalamazoo-Dearborn corridor.
  - Capital improvements on the Kalamazoo-Dearborn corridor that enhance and increase ridership.
- Grade Crossing Safety
  - Local roads - warning device enhancements at approximately 30 locations.
  - Local roads - crossing surface improvements at approximately 60-80 locations.
  - State trunklines - crossing surface improvements and/or device upgrades at approximately 20 locations (funding reflected within Highway Capital Program).
  - Local roads and state trunklines - special push on crossing eliminations through track relocation (related to FY 2017 influx of federal grade crossing dollars).
- Freight Rail
  - Support new/expanding businesses through Freight Economic Development Program.
  - Conduct calls for projects under Michigan Rail Loan Assistance Program (MiRLAP) as funding allows.
  - Limited capital investments in the 530-mile state-owned freight-only system.
- Port Development
  - Provide operating assistance to the Detroit-Wayne County Port Authority for administrative and marketing expenditures.

FY 2019
Aviation Program
$101.5 Million



Aviation Investment Strategy:

Priorities are a significant part of the funding decision that supports the organizational mission and represents the overall vision, driving the airport infrastructure investment strategy. For the Office of Aeronautics, these priorities include:

- Apply an asset management approach to reduce system and facility deficiencies (Michigan Aviation System Plan 2017).
- Preserve critical infrastructure, particularly pavements, navigational aids and protect airspace. The Office of Aeronautics goal is to maintain 90 percent of all Tier I Airports' primary runways in good or fair condition as determined by Pavement Condition Index (PCI) inspections.
- Maximize federal funds by leveraging state, local and private funding.
- Support job growth and economic development through projects related to freight/logistics, aircraft maintenance, and other emerging opportunities.
- Support statewide efforts to attract and retain air service through the implementation of the Air Service Program.

The Office of Aeronautics is committed to becoming more efficient and reducing overhead in program administration. Recent innovations include new methods of invoicing, scheduling, and planning. Additional innovations are being explored for further cost reductions and service improvements.

Totals in charts shown in millions.

MDOT's Multi-Modal Investment Strategy

(Subject to appropriation of state, federal and local funds)

	Annual Average	Five-Year Total
AVIATION		
Airport Improvement Program (AIP)*	$101.5 million	$507.5 million
PUBLIC TRANSPORTATION PROGRAM		
Local Transit, Intercity Bus, Passenger Rail, Rail Freight, and Ports**		$2.1 billion
TOTAL		**$2.6 billion**

** Includes comprehensive program of needed investments for primary airports and general aviation airports, as identified in the MDOT AIP.*
*** Includes federal, local, private, and other state expenditure authority, which is often overstated to account for potential revenue.*

Performance Measurement and System Condition

MDOT Performance Measurement

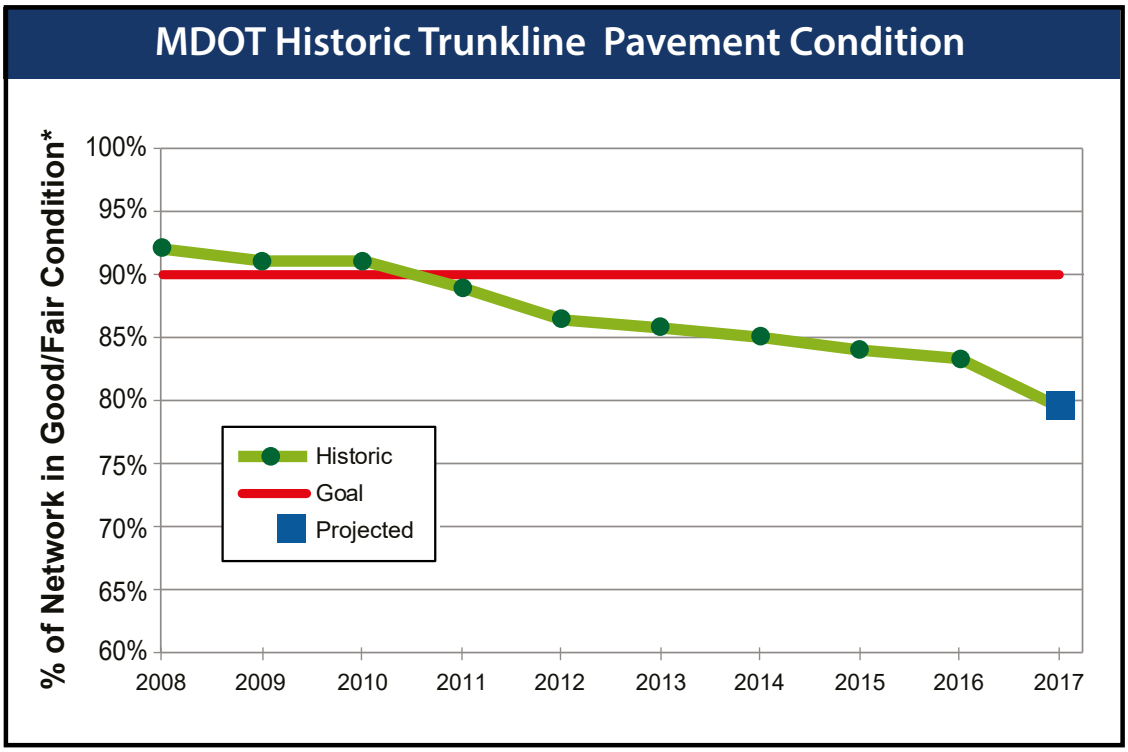
Maintaining and growing Michigan's economy depends on the preservation, modernization, and efficient operation of its transportation system. To achieve the goals that have been set forth, it is necessary to benchmark and monitor the performance of the system.

MDOT formalized its approach to improving, measuring, and reporting the condition of its transportation networks with the STC's 1997 adoption of pavement condition goals. Since then, MDOT has developed performance measures to reflect a broader range of the transportation system. The following sections reflect a representative sample of the performance measures that MDOT uses to track highway, aviation, and passenger transportation modes of travel.

Highway Pavement Condition Goal

MDOT maintains jurisdiction over trunkline pavements, which include all I, M, and US routes. These roads are important trade routes, business corridors, and keys to Michigan's economic development policy, carrying 53 percent of passenger traffic and 66 percent of commercial traffic in the state.

MDOT uses remaining service life (RSL) data to monitor the performance of pavement on the trunkline system and to make program development and project selection decisions. RSL measures a pavement's overall condition and is defined as the estimated remaining time in years until a pavement's most cost-effective treatment requires either reconstruction or major repair. When pavements reach an RSL of two years or less, they are "poor," meaning they require these more expensive fixes. MDOT employs an asset management approach that implements short, medium, and long-term improvements to maintain



Source: MDOT, BTP, SSMS, as of 5/21/2018

overall pavement health, and strives to employ an appropriate mix of fixes to keep its pavement infrastructure in the best condition possible. However, without adequate funding, more sections of pavement are expected to slip into poor condition, requiring higher costs to repair them in the long run.

The graph on page 48 represents historic state trunkline system condition based on RSL. In 2007, MDOT surpassed its goal of 90 percent of pavement in good or fair condition and maintained this condition through 2010. However, as of 2017, pavement condition was measured at 79 percent, down 4 percent from the previous year. As the graph demonstrates, the deterioration rate since 2011 has been about 1 percent per year. However, this is forecasted to accelerate considerably in the coming years. Additional revenue from increases to the state gas tax and vehicle registration fees, alongside general fund transfers, will help to slow pavement deterioration, but projections indicate these funds are not enough to meet pavement goals in future years, or to even sustain current conditions. Due to Act 51, this new revenue must be distributed to more than 600 transportation agencies in Michigan. While this will help to slow the decline of infrastructure throughout the state, critical trunkline routes will not receive enough funding to improve overall pavement conditions.

Federal Performance Measures

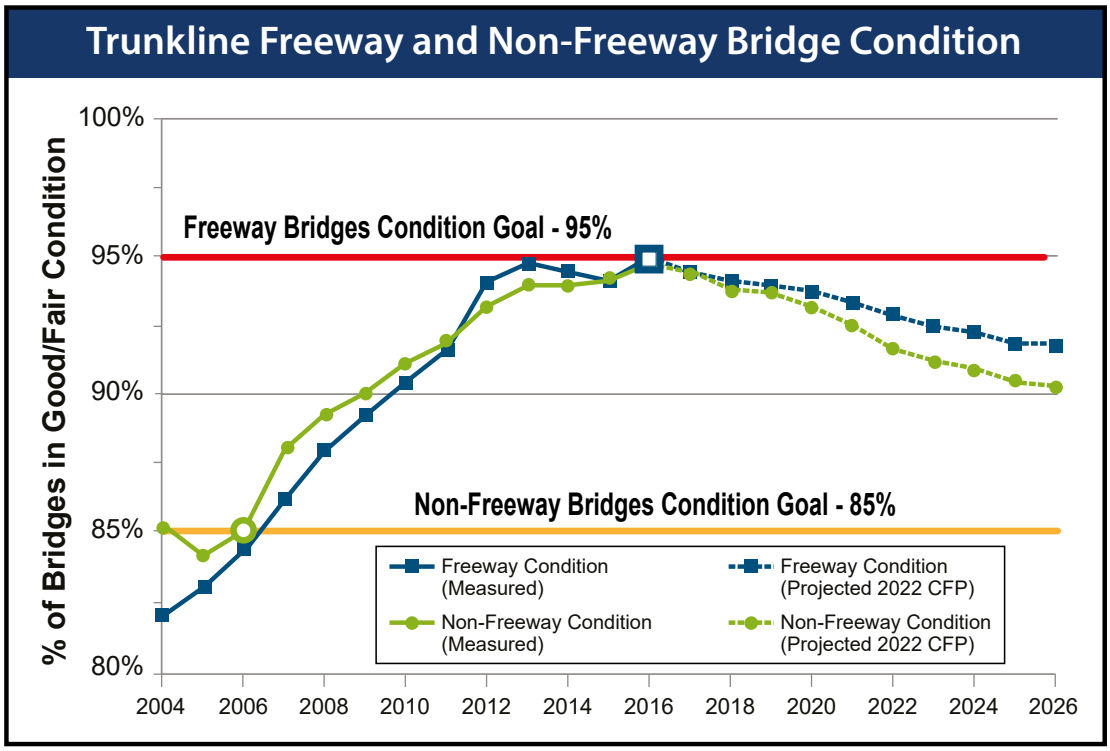
The first set of MDOT targets are due to be reported to FHWA by Oct. 1, 2018, and MDOT has developed a process and methodology to establish these targets. Leading this process are Transportation Performance Measure (TPM) Implementation Teams for pavement, pavement data, and bridges. This rule is one of eight released by FHWA to implement the requirements of MAP-21 and the FAST Act. Each rule has TPM Implementation Teams that are responsible for developing strategies and timelines for executing the rule, ensuring compliance, and establishing targets. These teams report to a core Implementation Team that ensures all rules are coordinated, and that strategies and targets are reported to and approved by MDOT executives.

Bridge Condition Goal

MDOT's Bridge Management System (BMS) is an important part of the overall asset management process. BMS is a strategic approach to linking data, strategies, programs, and projects into a systematic process to ensure achievement of the desired results.

An important tool within the BMS used by MDOT to develop preservation policies is the Bridge Condition Forecasting System (BCFS). Working from current bridge conditions, bridge deterioration rates, project costs, expected inflation, and fix strategies, BCFS estimates the future condition of the state trunkline bridge system.

MDOT bridge conditions were close to 95 percent good or fair at the end of 2013, declined slightly in 2014 and 2015, but increased again in 2016 and met the freeway bridge condition goal of 95 percent at the end of 2016. However, projections indicate that, without additional funding, the freeway bridge condition will decline and bridge condition will again fall below the freeway bridge goal. As shown in the chart below, MDOT has met and sustained the non-freeway bridge goal of 85 percent good or fair condition since 2006.



Safety Goals

MDOT's safety goal is to reduce fatalities and serious injuries on the state trunkline system in support of the Michigan Strategic Highway Safety Plan (SHSP) and the department's efforts of achieving the vision of Toward Zero Deaths (TZD).

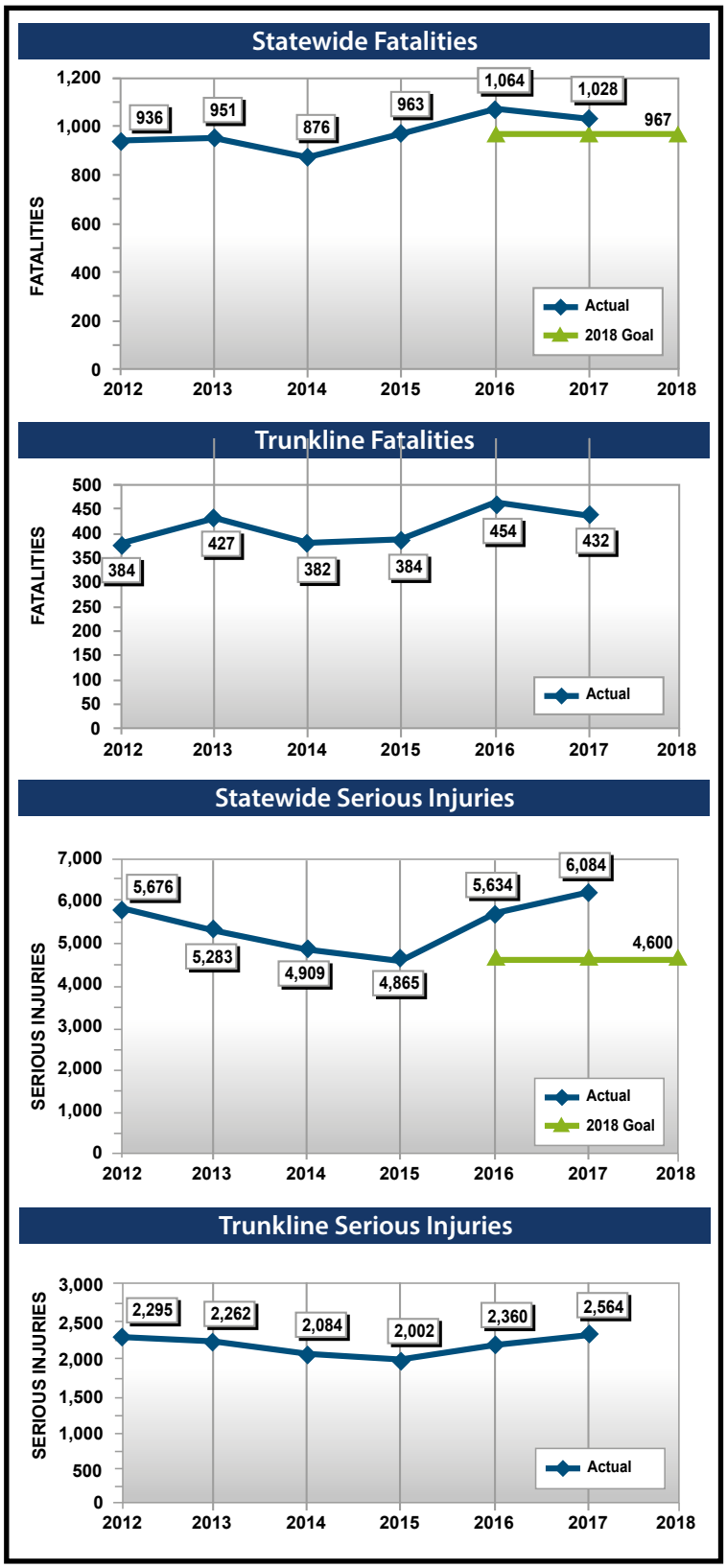
To meet that goal, the strategy of the Safety Program is to select cost-effective safety improvements, as identified in the SHSP, to address trunkline locations with correctable fatality (K) and serious injury (A) crashes. Improvements identified will support the key focus areas of the SHSP.

The purpose of the SHSP is to identify key safety needs in the state and guide investment decisions that achieve significant reductions in highway fatalities and serious injuries. The SHSP identifies four broad emphasis areas: high-risk behaviors, at-risk road users, engineering infrastructure, and system administration. Of these areas, engineering infrastructure is predominately addressed by the Safety Program through intersection safety and lane departure projects. In addition, pedestrian and bicycle safety improvements are the department's emphasis for at-risk road users.

Michigan's SHSP was adopted in December 2004 by the Governor's Traffic Safety Advisory Commission and endorsed by the governor in 2006. In December 2016, the SHSP goal was revised to prevent traffic fatalities from reaching 967 and to prevent serious traffic injuries from reaching 4,600 in 2018. In 2017, there were 1,028 fatalities and 6,084 serious injuries reported statewide.

MDOT's vision is TZD with the ultimate goal to reduce fatalities to zero and minimize serious injuries. In 2017, there were 454 fatalities and 2,360 serious injuries reported on the state trunkline system.

To the right are statewide and trunkline graphs that compare the actual values of fatalities and serious injuries compared to the 2018 SHSP goals.



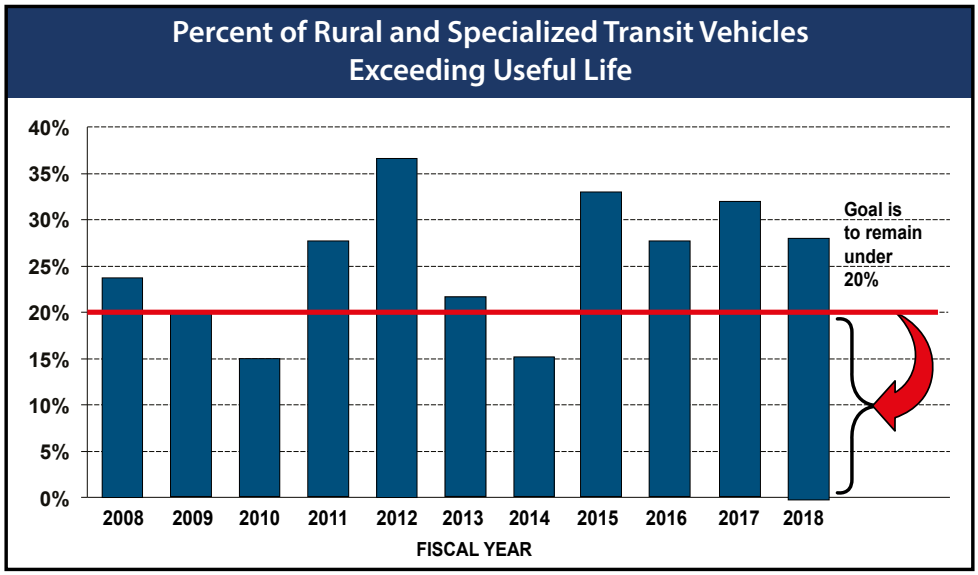
Multi-Modal Performance Measures

Local Transit Performance Measures

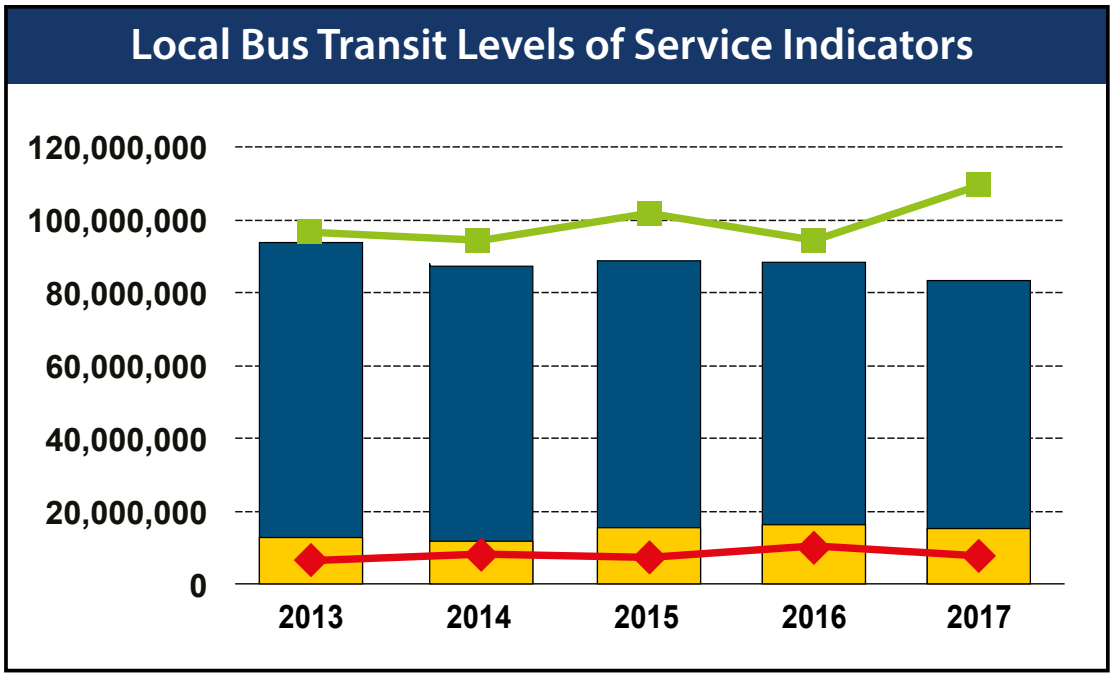
The OPT considers many factors when planning the investment strategy for local transit. Two primary performance measures considered are the condition of the rural transit fleet and the local transit level of service.

- The condition of the rural transit fleet is based on the percent of vehicles past their useful life. The goal is to have less than 20 percent of the rural fleet beyond useful life. That goal was achieved in 2014 due to a combination of federal State of Good Repair grants and the fact that fewer vehicles were eligible for replacement that year. Unfortunately, in 2016 the percentage went back up to 36 percent of the eligible fleet unfunded. One of the factors contributing to the increase in these numbers is that many of the buses previously put into service with federal funding from the American Recovery and Reinvestment Act (ARRA) are now reaching their useful life and are eligible for replacement. MDOT will submit annual applications to FTA under the new Buses and Bus Facilities competitive program in the FAST Act in hopes of improving and stabilizing fleet condition.

- The local transit level of service is measured using total annual hours and miles of service and total annual passenger trips (considering elderly/disabled passenger trips as a subset of the total). The goal is to preserve service levels and continue providing service in all 83 counties. Service levels peaked in 2008 when gas prices soared, then started to return to lower levels as gas prices stabilized. Service is still available in all 83 counties of the state and service levels are starting to return to previous points. Transit agencies continue to innovate to increase their service levels. MDOT is hopeful that this innovation in combination with the slight increase in state operating assistance will show positive results over the life of this five-year program.



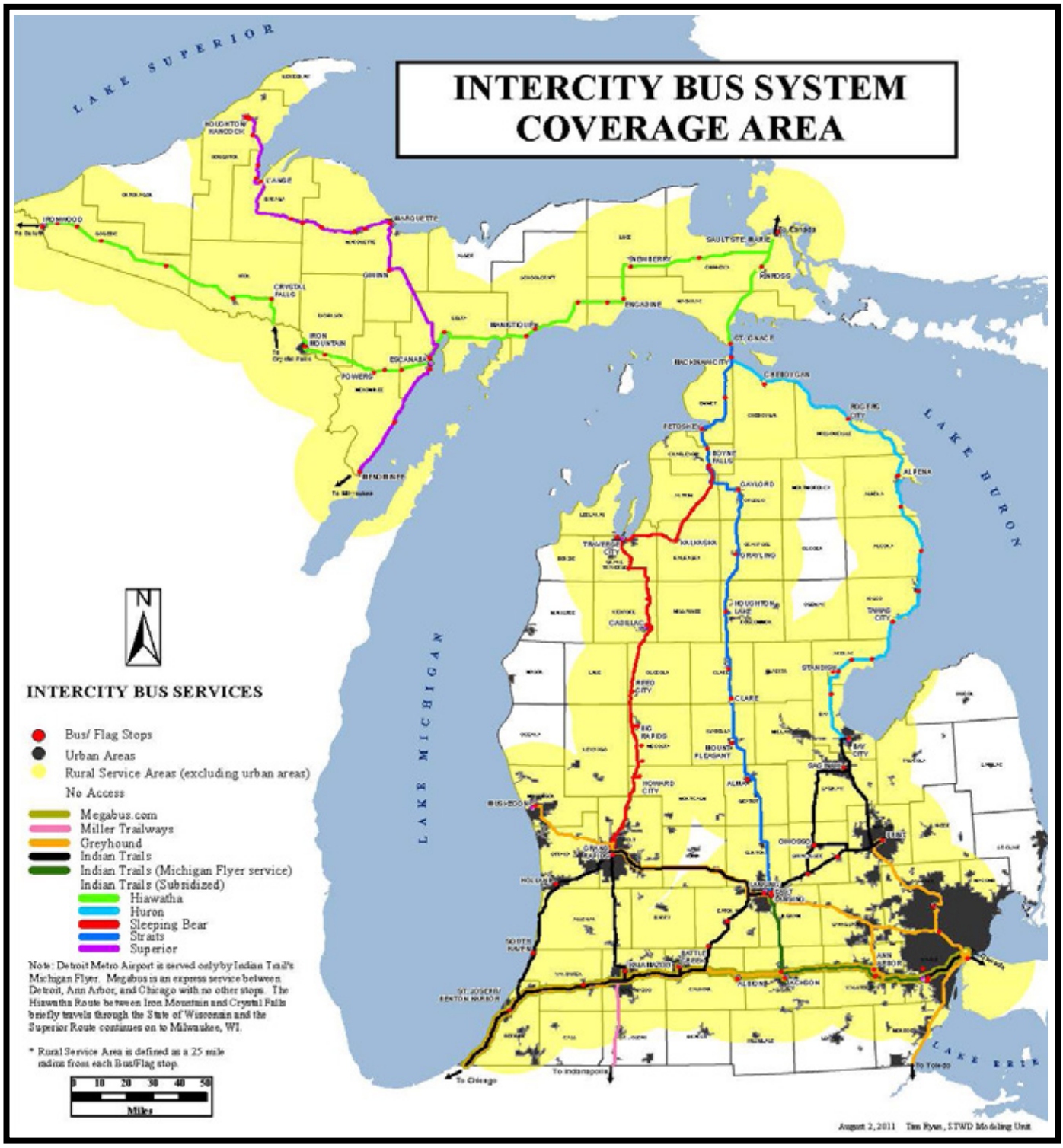
- There are federal performance measures required for the condition of transit assets - revenue vehicles, service vehicles and facilities. The OPT established 2018 targets for the condition of these three asset classes and is developing a Transit Asset Management Plan for the rural system.



	2013	2014	2015	2016	2017
Passenger Trips Total (excluding marine)	96,198,970	89,444,565	89,692,521	89,380,345	83,716,947
Elderly and Disabled Passenger Trips (as subset of total - excluding marine)	12,587,813	12,269,803	12,727,836	12,999,471	12,850,063
Hours of Service (excluding marine)	6,035,194	6,717,358	6,470,836	8,371,898	6,940,453
Miles of Service (excluding marine and special service)	98,077,359	96,770,436	101,523,828	94,670,531	109,152,183

Intercity Bus Performance Measure

The factor used to determine the investment strategy for intercity bus service is to provide reasonable access to intercity bus service in rural areas where connectivity to the national transportation network is often difficult to attain. MDOT's goal is to preserve the existing level of service, which has 81 percent of the rural population within 25 miles of an intercity bus stop. The national average is 78 percent.



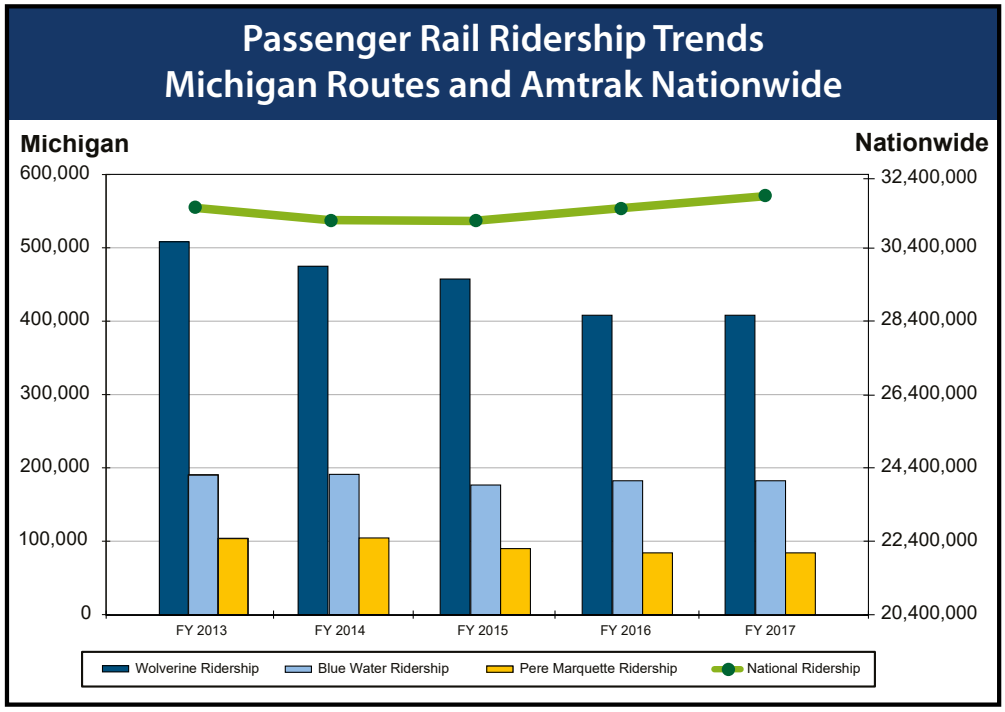
MDOT does not own or control local transit service levels, nor does it own or control the entire intercity bus network in Michigan. In addition, the state and federal funding that MDOT uses to support local transit and intercity bussing is only a portion of the total cost of operating and maintaining the service. While MDOT has established performance measures for these modes to help guide its investment decisions, MDOT cannot on its own ensure that the performance measures are met.

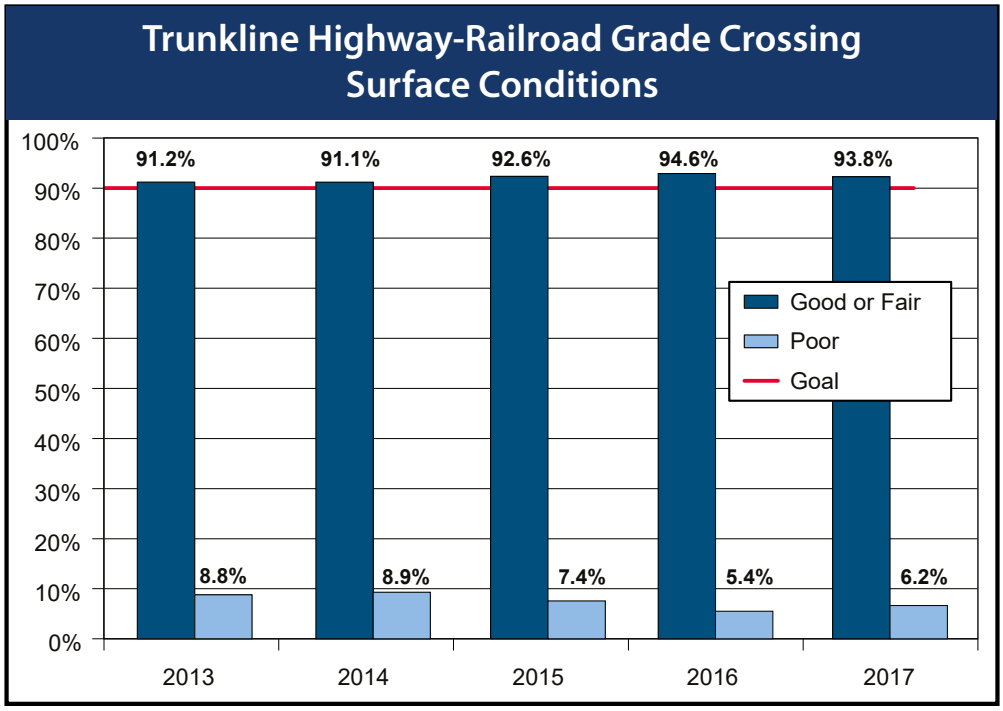
Rail Performance Measures

Two rail-related goals are included in MDOT's performance measurement efforts.

MDOT tracks the total number of passengers using state-supported passenger rail services, with a goal of maintaining ridership consistent with (within 10 percent) or better than national trends. MDOT is meeting its goal.

MDOT also tracks the railroad crossing surface condition on the state trunkline system, with a goal of at least 90 percent in good or fair condition. The percentage of the railroad crossing surfaces on the state trunkline system in at least fair condition continues to increase. At the end of FY 2017, 93.8 percent of the crossing surfaces were in good or fair condition.



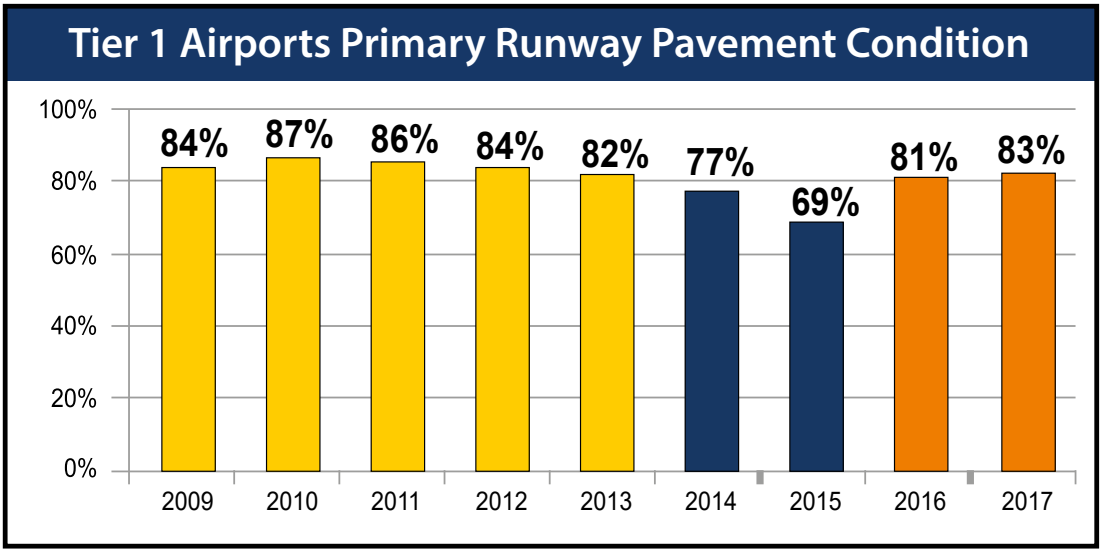


Aviation Performance Measures

The Office of Aeronautics has recently updated its Michigan Aviation System Plan (MASP) for 2017. This comprehensive document is typically updated only once every eight years. As part of the update, new statewide system goals (as well as individual airport facility goals) were developed. The economic impact of aviation in Michigan was also determined both by individual airports and on a statewide basis. The updated MASP has established new benchmarks for many of the Office of Aeronautics' system and facility goals, which will allow for the accurate tracking of future progress toward achieving various aviation-related developmental goals.

The Office of Aeronautics' current primary performance measurement goal is to maintain 90 percent of all Tier 1 Airport Primary Runways in good or fair condition, as determined by Pavement Condition Index (PCI) inspections. Previously, the goal was to maintain 100 percent of all Tier 1 Airport Primary Runways in "good or better" condition. This recent change, effective with the 2016 reporting year, allows the Office of Aeronautics to better align its pavement condition performance measurement goal with that of MDOT highways. The latest inspections show that the achievement rate toward the current goal (based on 2017 data) is 83 percent.

- **Measure: Airport Pavement Condition Index (PCI)**
- **Target: Maintain 90 percent of Tier 1 Airport Primary Runways in good or fair condition**



Pavements in "Good or Better" condition, as determined by former PCI rating methodology.

Transition Period - Pavement evaluation methodology was revised in 2014, resulting in an overall decrease in PCI number.

Pavements in "Good or Fair" condition, as determined by current PCI rating methodology.

Economic Impacts of Transportation Investments

Highway Economic Impacts

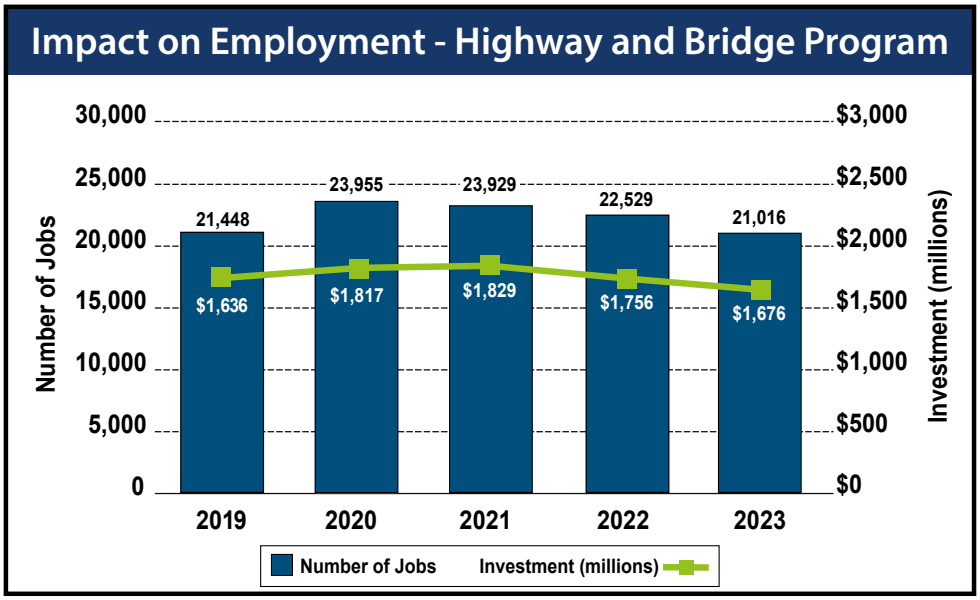
Highway infrastructure investment is a vital part of the department's strategy for economic development. An efficient highway system in good condition plays an integral role in supporting the economy of the state. To assess the economic impact of the FY 2019-2023 Highway and Bridge Program, MDOT uses the Michigan Benefits Estimation System for Transportation Tool (MI BEST Tool), the Regional Economic Models, Inc. (REMI), and the University of Michigan's calibration of REMI's standard control to evaluate the investment outcomes.

This analysis includes the spending impacts of capital and operations investment in the highway and bridges program and the economic benefits derived from the travel efficiencies. The travel efficiencies were assessed by using the statewide Travel Demand Model to evaluate changes of traffic data in vehicle miles traveled (VMT) and vehicle hours traveled (VHT) based on build and no-build scenarios of the proposed five-year projects.

The following table and chart display statewide economic impacts of MDOT's FY 2019-2023 Highway and Bridge Program.

Economic Impacts of FY 2019-2023 Highway and Bridge Program

	2019	2020	2021	2022	2023	Total
Investment (million $)	$1,636	$1,817	$1,829	$1,756	$1,676	$8,714
Employment Impact (jobs)	21,448	23,955	23,929	22,529	21,016	112,877
Gross State Product (million '18$)	$1,777	$2,042	$2,091	$2,013	$1,916	$9,839
Real Personal Income (million '18$)	$1,404	$1,624	$1,706	$1,686	$1,663	$8,083



Public Transportation Economic Impacts

Local Transit

Transportation investments are a vital part of the state's overall economic development strategy. More than 83 million trips are made annually on local public transit in Michigan. While the direct benefits of transit to its users are clear, it can be shown that the overall benefits of these trips extend beyond transit riders. Through improved mobility, safety, air quality, and economic development, public transit also benefits users of the roadway network and the community at large. Many of these trips satisfy the mobility needs of numerous households for whom owning and driving a vehicle is not an effective or affordable transportation option. As a result, there are societal benefits that result from providing essential mobility.

To assess the economic impacts of the FY 2019-2023 Transit Program (public transportation program), including additional programming as a result of the new funding package, MDOT staff used the MI BEST Tool and the Regional Economic Models, Inc. to evaluate the investment outcomes.

The resulting economic impacts reflect the statewide $1.6 billion investment for the Transit Program in this Five-Year Transportation Plan. This public transportation program will support an average of 5,334 jobs annually and add $2.5 billion in real personal income and $2 billion in gross state product for this five-year period. In this analysis, the spending-only impacts of capital and operations investment in public transportation were considered.

The following table displays economic impacts of MDOT's FY 2019-2023 Transit Program for the state of Michigan.

Economic Impacts of FY 2019-2023 Transit Program

	2019	2020	2021	2022	2023	Total
Investment (millions)	$306	$310	$314	$318	$321	$1,569
Employment Impact (jobs)	5,329	5,369	5,388	5,335	5,248	26,670
Real Personal Income (million '16 $)	$470	$492	$503	$506	$508	$2473
Gross State Product (million '16 $)	$408	$418	$426	$428	$427	$2,106

Economic Impacts of FY 2019-2023 Transit Program

Although this analysis attempts to assess the benefits of transit in a comprehensive manner, it does not account for the considerable additional benefits that can arise from rapid transit investments in urban areas. Therefore, the results of the model can be considered conservative. National models have shown that a dollar invested in light rail or rapid transit can return up to $6 in economic benefits, including local economic development around transit stops.

Rail Program Benefits

Michigan's rail system has approximately 3,600 miles of track operated by 28 railroads. It carries about 19 percent of the state's freight tonnage. These commodities totaled more than $160 billion in 2013. Rail is particularly important for the movement of heavy and bulky commodities, as well as hazardous materials. Growing healthy rail corridors is good for Michigan's economy, whether a corridor is specifically freight, passenger, or both. For the federally designated Chicago-Detroit/Pontiac accelerated rail corridor, MDOT will continue to improve the 135 miles of state-owned track between Kalamazoo and Dearborn. MDOT will have an opportunity to encourage and expand economic development along this corridor for both passenger and freight rail interests. In addition, when funding permits, MDOT will work with the Michigan Economic Development Corp., as well as the Michigan Department of Agriculture and Rural Development, to provide support to rail-reliant businesses throughout the state, most directly by helping provide access to the system through the Freight Economic Development Program.

Aviation Economic Impacts

To maintain a competitive advantage in a global economic environment, access to convenient and efficient air travel is essential. While commercial airline services are often the most recognizable facet of aviation, the fact is that general aviation accounts for 97 percent of the nation's airports. These airports support a variety of aviation activities that employ thousands of people and create millions of dollars in economic impact and benefit.

Businesses through the state depend on airports for the movement of goods and personnel. Benefits associated with airports include direct and indirect jobs, wages, and expenditures. They also include the economic ripple effects in the community, enhancing economic activities far from the airport itself. In a state like Michigan, airports serve a vital role in supporting rural communities, particularly in the Upper Peninsula.

- Aviation, both commercial and general, is big business in Michigan.
- Aviation accounts for more than 183,000 jobs in the state of Michigan.*
- Aviation contributes more than $22 billion annually to Michigan's economy.*
- Michigan airports serve more than 39 million passengers each year.**
- Michigan airports move more than 600 million pounds of air cargo each year.**

** Michigan Aviation System Plan 2017*
*** Intermodal Management System*

Economic benefits also include expenditures made by those transient passengers who use the airport but spend money throughout the region. Airports also provide savings in time and money as a result of the travel efficiencies they create. In addition, economic benefits include the intangible effect an airport has on business decisions to locate or remain in a specific area. Finally, and somewhat less tangible, are quality of life benefits provided by an airport. Examples include police and firefighting support, search and rescue, recreation, emergency medical flights, on-demand charter services, and flight instruction for future pilots.

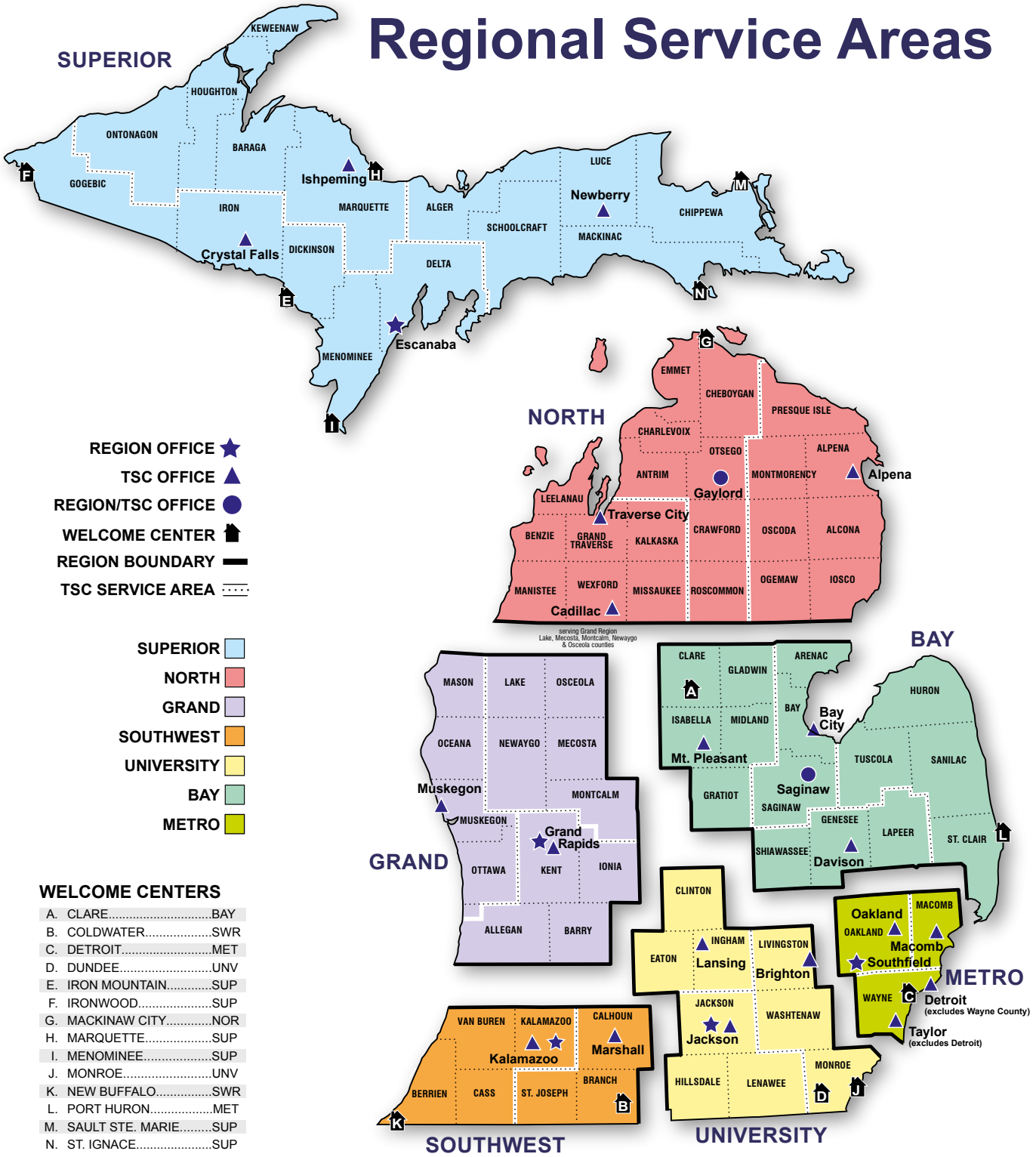
Significant Aviation Program Accomplishments

Over the last 20 years, the Office of Aeronautics has experienced up and down funding levels. Federal funding has risen, but state funding has fallen. Through the funding swings, the modernization of the Michigan Airport System has made great progress with many significant projects. A partial list includes:

- New terminal buildings at Detroit Metro Airport, Cherry Capital Airport (Traverse City), Pellston Regional Airport of Emmet County, West Michigan Regional Airport (Holland), MBS International Airport (Saginaw), Bishop International Airport (Flint), and Livingston County Airport (Howell).
- Large runway extension at Southwest Michigan Regional Airport (Benton Harbor), West Michigan Regional Airport (Holland), Hillsdale Municipal Airport, and Fremont Municipal Airport.
- New runway at Jackson County – Reynolds Field.
- Boeing 747-capable hangar at Oscoda – Wurtsmith Airport.
- Snow removal storage and maintenance building at W.K. Kellogg Airport (Battle Creek).

MDOT
Michigan Department of Transportation

Regional Service Areas



WELCOME CENTERS

A.	CLARE	BAY
B.	COLDWATER	SWR
C.	DETROIT	MET
D.	DUNDEE	UNV
E.	IRON MOUNTAIN	SUP
F.	IRONWOOD	SUP
G.	MACKINAW CITY	NOR
H.	MARQUETTE	SUP
I.	MENOMINEE	SUP
J.	MONROE	UNV
K.	NEW BUFFALO	SWR
L.	PORT HURON	MET
M.	SAULT STE. MARIE	SUP
N.	ST. IGNACE	SUP

BAY REGION

BRIDGE - BIG BRIDGE PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
BAY	M-13	M-13 AND M-84 OVER E CHANNEL SAGINAW RIVER	BRIDGE REPLACEMENT			CON			
				0.000					

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ARENAC	US-23	I-75 SB OVER SOUTH BRANCH PINE RIVER	SCOUR PROTECTION				CON		
ARENAC	US-23	I-75 NB OVER SOUTH BRANCH PINE RIVER	SCOUR PROTECTION				CON		
ARENAC	US-23	WORTH ROAD OVER I-75	OVERLAY - EPOXY				CON		
ARENAC	US-23	US-23 OVER I-75	OVERLAY - EPOXY				CON		
ARENAC	US-23	I-75 SB OVER M-61	OVERLAY - EPOXY				CON		
ARENAC	US-23	I-75 NB OVER M-61	OVERLAY - EPOXY				CON		
ARENAC	US-23	LINCOLN ROAD OVER I-75 SB	OVERLAY - EPOXY				CON		
ARENAC	US-23	LINCOLN ROAD OVER I-75 NB	OVERLAY - EPOXY				CON		
ARENAC	US-23	US-23 RAMP F I-75 OVER I-75	OVERLAY - EPOXY				CON		
BAY	I-75	I-75 SB OVER KAWKAWLIN RIVER	OVERLAY - DEEP		CON				
BAY	I-75	I-75 NB OVER KAWKAWLIN RIVER	OVERLAY - DEEP		CON				
BAY	I-75	I-75 OVER HEMBLING DRAIN	JOINT REPAIR		CON				
BAY	I-75	I-75 SB OVER M-13 CONNECTOR	OVERLAY - DEEP		CON				
BAY	I-75	I-75 SB OVER WHEELER ROAD	OVERLAY - DEEP		CON				
BAY	I-75	I-75 SB OVER BEAVER ROAD	OVERLAY - DEEP		CON				
BAY	I-75	I-75 NB OVER WHEELER ROAD	OVERLAY - DEEP		CON				
BAY	I-75	I-75 NB OVER BEAVER ROAD	OVERLAY - DEEP		CON				
BAY	I-75	I-75 NB OVER M-13 CONNECTOR SOUTHBOUND	OVERLAY - DEEP		CON				
GENESEE	I-475	OVER FLINT RIVER, WEST BOULEVARD AND RIVER SIDE	OVERLAY - EPOXY			CON			
GENESEE	I-475	OVER CSX RAILROAD AND NB SERVICE ROAD	OVERLAY - EPOXY			CON			
GENESEE	I-475	I-475 OVER M-54 BR (SAGINAW STREET)	OVERLAY - EPOXY			CON			
GENESEE	I-475	I-475 AND RAMP B OVER SB SERVICE ROAD	OVERLAY - EPOXY			CON			
GENESEE	I-475	I-475 OVER STEVER - BROADWAY AVENUES	OVERLAY - EPOXY			CON			
GENESEE	I-475	I-475 OVER LEITH STREET	OVERLAY - EPOXY			CON			
GENESEE	I-75	NB I-75 RAMP TO WB I-69 OVER GTW RAILROAD AND I-75 OVER BRISTOL ROAD	OVERLAY - EPOXY				CON		
GRATIOT	US-127	US-127 NB OVER MAPLE RIVER	OVERLAY - EPOXY				CON		
ISABELLA	US-127	US-127 NB OVER M-20	OVERLAY - EPOXY			CON			
ISABELLA	US-127	US-127 SB OVER M-20	OVERLAY - EPOXY			CON			
ISABELLA	US-127	US-127 BR NB OVER US-127 SB	DECK REPLACEMENT		CON				
ISABELLA	US-127	US-127 BR NB OVER US-127 SB	DECK REPLACEMENT			CON			
SHIAWASSEE	I-69	I-69 EB OVER LOOKING GLASS RIVER	SCOUR PROTECTION				CON		
SHIAWASSEE	I-69	I-69 WB OVER LOOKING GLASS RIVER	SCOUR PROTECTION				CON		
SHIAWASSEE	I-69	I-69 EB OVER WEBB DRAIN	SCOUR PROTECTION				CON		
SHIAWASSEE	I-69	I-69 WB OVER WEBB DRAIN	SCOUR PROTECTION				CON		
ST. CLAIR	M-29	M-29 OVER SWAN CREEK	JOINT REPLACEMENT						CON
				0.000					

EPE= Study/Environmental PE=Preliminary Engineering/Design PE-B=Preliminary Engineering/Design for Bridges
UTL=Utility work ROW=Right of way/Real Estate CON=Construction

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ARENAC	US-23	MELITA ROAD OVER US-23	SUPERSTRUCTURE REPLACEMENT					CON	
BAY	I-75	WILDER ROAD OVER I-75	DECK REPLACEMENT		CON				
BAY	I-75	CHIP ROAD OVER I-75	DECK REPLACEMENT		CON				
BAY	I-75	MACKINAW ROAD OVER I-75	DECK REPLACEMENT		CON				
BAY	I-75	I-75 SB OVER NORTH BRANCH KAWKAWLIN RIVER	DECK REPLACEMENT				CON		
BAY	I-75	I-75 NB OVER NORTH BRANCH KAWKAWLIN RIVER	DECK REPLACEMENT				CON		
BAY	I-75	PARISH ROAD OVER I-75	DECK REPLACEMENT				CON		
GENESEE	M-15 (State Road)	M-15 OVER PADDISON COUNTY DRAIN	CULVERT REPLACEMENT						CON
GENESEE	M-21	M-21 OVER CSX RAILROAD	CULVERT REPLACEMENT				CON		
GRATIOT	M-57	M-57 OVER BRADLEY DRAIN	CULVERT REPLACEMENT		CON				
GRATIOT	US-127	US-127 SB OVER MAPLE RIVER	SUPERSTRUCTURE REPLACEMENT				CON		
SAGINAW	M-46	I-75 OVER CSX RAILROAD	BRIDGE REPLACEMENT			CON			
SAGINAW	M-46	M-46 OVER I-75	BRIDGE REPLACEMENT			CON			
SAGINAW	M-52	M-52 OVER MARSH CREEK	SUPERSTRUCTURE REPLACEMENT				CON		
SANILAC	M-46 (Sanilac Road)	M-46 OVER BLACK RIVER	BRIDGE REPLACEMENT						CON
				0.000					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ARENAC	US-23	I-75 TO M-13	ROAD REHABILITATION	3.055				CON	
BAY	I-75	BEAVER ROAD TO COTTAGE GROVE	ROAD REHABILITATION	3.600			CON		
BAY	I-75	M-13 CONNECTOR TO BEAVER ROAD	ROAD REHABILITATION	5.328	CON				
BAY	M-13 (Huron Road)	NORTH STREET TO BAY/ARENAC COUNTY LINE	ROAD REHABILITATION	3.335	CON				
BAY	US-10	7 MILE ROAD TO BAY CITY	RECONSTRUCTION	5.485					CON
CLARE	US-10 (W Ludington Drive)	CLAREOLA ROAD TO 1,500 FT WEST OF LUDINGTON DRIVE	ROAD REHABILITATION	8.083	CON				
GENESEE	I-69	FENTON ROAD TO M-54	RECONSTRUCTION	5.256				CON	
GENESEE	M-15 (State Road)	NORTH OF RICHFIELD ROAD TO SOUTH OF DODGE ROAD	ROAD REHABILITATION	4.885					CON
GENESEE	M-54 (Dort Highway)	COLDWATER ROAD TO MT MORRIS ROAD	ROAD REHABILITATION	2.027		CON			
GRATIOT	US-127	GREAT LAKES CENTRAL RR CROSSING TO BAGLEY ROAD	ROAD REHABILITATION	5.994				CON	
HURON	M-142 (Sand Beach Road)	JOHNSTON ROAD TO RUTH ROAD	ROAD REHABILITATION	3.092				CON	
HURON	M-142 (Sand Beach Road)	M-53 TO M-19	ROAD REHABILITATION	2.843					CON
ISABELLA	M-20 (E Pickard Street)	US-127 BUSINESS ROUTE (MISSION STREET) TO US-127	RECONSTRUCTION	1.621					CON
ISABELLA	M-20 (W Remus Road)	WEST COUNTY LINE TO GILMORE ROAD	ROAD REHABILITATION	7.942	CON				
ISABELLA	US-127	US-127 BUSINESS ROUTE TO RIVER ROAD	ROAD REHABILITATION	7.867		CON			
LAPEER	M-53 (Van Dyke Road)	DEANVILLE ROAD TO MARLETT SOUTH CITY LINE	ROAD REHABILITATION	9.226			CON		
LAPEER	M-53 (VanDyke Road)	BOWERS ROAD TO DEANVILLE ROAD	ROAD REHABILITATION	8.184					CON
MIDLAND	M-30 (N Meridian Road)	US-10 TO WIXOM LAKE	ROAD REHABILITATION	9.659		CON			
SAGINAW	I-75	HESS TO SOUTH I-675 INTERCHANGE	RECONSTRUCTION	2.576		CON			
SAGINAW	M-13 (Bay City Road)	ZILWAUKEE BRIDGE TO BAY CITY SOUTH CITY LIMITS	ROAD REHABILITATION	6.268				CON	
SAGINAW	M-46 (Holland Road)	TOWERLINE ROAD TO RICHVILLE	ROAD REHABILITATION	10.421				CON	
SAGINAW	M-52 (Oakley Road)	SAGINAW COUNTY LINE NORTH TO M-57	ROAD REHABILITATION	3.996	CON				
SAGINAW	M-57 (W Brady Road)	SAGINAW/GRATIOT COUNTY LINE TO M-52	ROAD REHABILITATION	10.194	CON				
SAGINAW	M-57 (Brady Road)	M-52 TO 4TH STREET	ROAD REHABILITATION	2.036	CON				
SANILAC	M-25 (Lakeshore Road)	PORT SANILAC TO DECKERVILLE ROAD	ROAD REHABILITATION	6.866	CON				
SANILAC	M-25 (Lakeshore Road)	M-90 TO FRENCH LINE ROAD	ROAD REHABILITATION	7.286	CON				
SHIAWASSEE	I-69	CLINTON/SHIAWASSEE COUNTY LINE TO BATH ROAD BATH	ROAD REHABILITATION	5.025		CON			
SHIAWASSEE	I-69	BATH ROAD TO EAST OF M-52	ROAD REHABILITATION	4.447	CON				
ST. CLAIR	I-69	COX DOTY DRAIN TO M-19	RECONSTRUCTION	5.240			CON		
ST. CLAIR	I-69	M-19 TO TAYLOR ROAD	ROAD REHABILITATION	10.419					CON
ST. CLAIR	M-136 (Avoca Road)	AVOCA TO KINGSLEY ROAD	ROAD REHABILITATION	3.074	CON				
ST. CLAIR	M-29 (River Road)	REMER ROAD TO RIVERSIDE AVENUE	ROAD REHABILITATION	3.069	CON				
TUSCOLA	M-15 (State Road)	M-57 TO VASSAR	ROAD REHABILITATION	12.156		CON			
TUSCOLA	M-81 (E Cass City Road)	CASS CITY ROAD TO CASS CITY	ROAD REHABILITATION	4.421	CON				
				194.976					

CAPACITY IMPROVEMENT - *COUNTYWIDE*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ST. CLAIR	MCMORRAN BOULEVARD	COUNTYWIDE	PLANNING		EPE	EPE			
				0.000					

GRAND REGION

BRIDGE - BIG BRIDGE PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
OTTAWA	US-31 (Bascule Bridge)	US-31 OVER GRAND RIVER, M-104 CONNECTOR	SUPERSTRUCTURE REPAIR, STEEL				CON		
				0.000					

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ALLEGAN	I-196	I-196 WB OVER US-31 NB	OVERLAY - DEEP				CON		
ALLEGAN	I-196	I-196 E AND US-31 N OVER KALAMAZOO RIVER	OVERLAY - DEEP					CON	
ALLEGAN	I-196	I-196 W AND US-31 S OVER KALAMAZOO RIVER	OVERLAY - DEEP					CON	
ALLEGAN	I-196	I-196 WB OVER CSX RAILROAD	OVERLAY - DEEP				CON		
ALLEGAN	US-31 NB	US-31 BR (58TH) OVER US-31 NB	OVERLAY - DEEP						CON
ALLEGAN	US-31	109TH AVENUE OVER I-196 AND US-31	OVERLAY - DEEP						CON
ALLEGAN	Old US-31	OLD US-31 OVER I-196 AND US-31	OVERLAY - DEEP						CON
ALLEGAN	Old US-31	OLD US-31 OVER I-196 AND US-31	OVERLAY - DEEP						CON
IONIA	I-96	I-96 UNDER JORDAN LAKE ROAD	OVERLAY - SHALLOW					CON	
KENT	I-196	I-196 EB OVER M-45 WB RAMP TO I-196 WB	OVERLAY - SHALLOW		CON				
KENT	I-196 EB	I-196 EB OVER M-45	OVERLAY - SHALLOW		CON				
KENT	I-196	I-196 RAMP M-21 BR OVER CSX RAILROAD	OVERLAY - DEEP						CON
KENT	I-196	I-196 RAMP B M-21 BR I-196 OVER I-196 EB	OVERLAY - EPOXY						CON
KENT	I-196	I-196 RAMP A M-21 OVER M-21 BR (CHICAGO DRIVE)	OVERLAY - EPOXY						CON
KENT	I-96	I-96 UNDER BURTON STREET	OVERLAY - DEEP					CON	
KENT	I-96 EB RAMP	EB I-96 RAMP TO SB US-131 OVER W RIVER DRIVE	OVERLAY - DEEP					CON	
KENT	US-131	SB US-131 OVER GRAND RIVER & FULTON STREE	BARRIER REPLACEMENT					CON	
KENT	I-96	I-96 UNDER FRUIT RIDGE ROAD	OVERLAY - DEEP						CON
MUSKEGON	I-96	I-96 OVER HILE ROAD	OVERLAY - DEEP			CON			
MUSKEGON	I-96 EB	I-96 EB OVER NORRIS CREEK	OVERLAY - DEEP			CON			
MUSKEGON	I-96 WB	I-96 WB OVER NORRIS CREEK	OVERLAY - DEEP			CON			
MUSKEGON	US-31 NB	US-31 NB OVER RILEY THOMPSON ROAD	OVERLAY - DEEP						CON
MUSKEGON	US-31 SB	US-31 SB OVER WHITE RIVER	OVERLAY - DEEP			CON			
MUSKEGON	US-31 NB	US-31 NB OVER WHITE RIVER	OVERLAY - DEEP			CON			
MUSKEGON	US-31	US-31 OVER GTW RAILROAD & M-104	OVERLAY - DEEP				CON		
MUSKEGON	US-31	NB US-31 OVER S CHANNEL GRAND RIVER	OVERLAY - EPOXY				CON		
MUSKEGON	US-31	SB US-31 OVER S CHANNEL GRAND RIVER	OVERLAY - DEEP				CON		
MUSKEGON	US-31	US-31 OVER 3RD STREET	OVERLAY - EPOXY				CON		
MUSKEGON	M-104	M-104 OVER SPRING LAKE CHANNEL	OVERLAY - DEEP					CON	
OCEANA	Old US-31	Old US-31 OVER PENTWATER RIVER	PAINTING COMPLETE			CON			
OTTAWA	I-196 BL	I-196 BL EB OVER BR OF BLACK RIVER	OVERLAY - DEEP			CON			
OTTAWA	I-196 BL	I-196 BL WB OVER BR OF BLACK RIVER	OVERLAY - DEEP			CON			
OTTAWA	I-196 EB	I-196 EB OVER 32ND AVENUE	OVERLAY - EPOXY			CON			
OTTAWA	I-196 WB	I-196 WB OVER 32ND AVENUE	OVERLAY - EPOXY		CON				
OTTAWA	I-196 WB	I-196 WB OVER 22ND AVENUE	OVERLAY - EPOXY		CON				
				0.000					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ALLEGAN	I-196 AND US-31 SB	I-196 WB AND US-31 SB OVER KUIPERS DRAIN	CULVERT REPLACEMENT				CON		
BARRY	M-66	M-66 OVER QUAKER BROOK	BRIDGE REPLACEMENT		CON				

GRAND REGION

BRIDGE REPLACEMENT - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
IONIA	I-96	CUTLER ROAD OVER I-96	BRIDGE REPLACEMENT		CON				
KENT	I-196	I-196 M-21 WB OVER PLYMOUTH ROAD	BRIDGE REPLACEMENT		CON				
KENT	I-196	I-196 EB, M-21 OVER GRAND RIVER	DECK REPLACEMENT				CON		
MECOSTA	US-131 BR	US-131 BR OVER DALZIEL CREEK	CULVERT REPLACEMENT					CON	
OCEANA	US-31 BR (Polk Road)	US-31 BR (POLK ROAD) OVER RUSSELL CREEK	CULVERT REPLACEMENT			CON			
				0.000					

FREEWAY RESURFACING PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
MUSKEGON	US-31	M-46 NORTH TO C&O RAILROAD	ROAD REHABILITATION	5.550		CON			
				5.550					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ALLEGAN	I-196 WB	130TH AVENUE NORTH TO US-31	RECONSTRUCTION	7.375			CON		
ALLEGAN	I-196 WB	CSX RAILROAD EAST TO ALLEGAN/OTTAWA COUNTY LINE	ROAD REHABILITATION	2.086	CON				
ALLEGAN	I-196 WB	US-31 EAST TO CSX RAILROAD	ROAD REHABILITATION	4.170			CON		
ALLEGAN	M-179 (129th Avenue)	US-131 EAST TO GRAND ELKS RAILROAD	ROAD REHABILITATION	0.460			CON		
ALLEGAN	M-40	106TH AVENUE NORTH TO M-89	ROAD REHABILITATION	4.484	CON				
ALLEGAN	M-40	VAN BUREN/ALLEGAN COUNTY LINE NORTH TO 106TH AVENUE	ROAD REHABILITATION	3.205		CON			
ALLEGAN	M-89 (Main Street)	58TH STREET EAST TO 56TH STREET (FENNVILLE)	ROAD REHABILITATION	1.165		CON			
ALLEGAN	M-89 (Marshall Street)	M-222 EAST TO 29TH STREET	ROAD REHABILITATION	1.826				CON	
ALLEGAN	US-31	I-196 NORTH TO CENTRAL AVENUE	ROAD REHABILITATION	3.283				CON	
ALLEGAN	US-31	CENTRAL AVENUE NORTH TO ALLEGAN/ OTTAWA COUNTY LINE	ROAD REHABILITATION	1.238				CON	
BARRY	M-66	BRUMM ROAD NORTH TO THORNAPPLE LAKE ROAD	ROAD REHABILITATION	1.027					CON
BARRY	M-79 (Scott Road)	BARRYVILLE ROAD EAST TO NASHVILLE WEST VILLAGE LIMIT	ROAD REHABILITATION	3.330			CON		
IONIA	I-96	BLISS ROAD EAST TO SUNFIELD HIGHWAY	TRAFFIC SAFETY	9.260			CON		
IONIA	I-96 WB	BLISS ROAD EAST TO SUNFIELD HIGHWAY	RECONSTRUCTION	9.061				CON	
IONIA	M-21 (Lincoln Avenue)	WALL STREET EAST TO M-66 (EAST JUNCTION)	ROAD REHABILITATION	1.047	CON				
IONIA	M-66 (State Road)	M-50 NORTH TO PORTLAND ROAD	ROAD REHABILITATION	8.000			CON		
KENT	I-196	FULLER AVENUE EAST TO I-96	RECONSTRUCTION	2.051	CON				
KENT	I-196	I-196 M-21 EB OVER PLYMOUTH ROAD	BRIDGE REPLACEMENT		CON				
KENT	I-196	THE GRAND RIVER EAST TO LANE AVENUE	ROAD REHABILITATION	2.501		CON			
KENT	I-96	THORNAPPLE RIVER DRIVE EAST TO WHITNEYVILLE ROAD	TRAFFIC SAFETY	2.734	CON				
KENT	I-96	THORNAPPLE RIVER DRIVE EAST TO WEST OF WHITNEYVILLE	ROAD REHABILITATION	7.649			CON		
KENT	I-96	CASCADE ROAD EAST TO M-11	ROAD REHABILITATION	3.025					CON
KENT	M-11	CHURCH STREET EAST TO US-131	ROAD REHABILITATION	4.203				CON	
KENT	US-131 SB	AT THE ROCKFORD REST AREA	ROADSIDE FACILITIES - PRESERVE	0.000	CON				
MASON	US-31	US-10 NORTH TO SUGAR GROVE ROAD	ROAD REHABILITATION	3.735	CON				
MASON	US-31	OCEANA/MASON COUNTY LINE NORTH TO MEISENHEIMER ROAD	ROAD REHABILITATION	4.560			CON		
MASON	US-31	HOAGUE ROAD NORTH TO MASON/MANISTEE COUNTY LINE	ROAD REHABILITATION	2.187			CON		
MECOSTA	US-131 NB	13 MILE ROAD NORTH TO 19 MILE ROAD	ROAD REHABILITATION	7.070				CON	
MONTCALM	M-91 (Greenville Road)	PECK ROAD NORTH TO COLBY ROAD	ROAD REHABILITATION	3.490		CON			
MUSKEGON	M-120 (Holton Road)	MID-MICHIGAN RAILROAD EAST TO GETTY STREET	ROAD REHABILITATION	1.203	CON				
NEWAYGO	M-37 (State Road)	M-82 (S JUNCTION) NORTH TO THE MUSKEGON RIVER	ROAD REHABILITATION	2.142			CON		
OCEANA	US-31 NB	AT THE ROTHBURY REST AREA #529	ROADSIDE FACILITIES - IMPROVE	0.938			CON		
OSCEOLA	M-115	80TH AVENUE SOUTHEAST TO THE MIDDLE BRANCH RIVER	ROAD REHABILITATION	1.084		CON			
OSCEOLA	M-115	WEXFORD/OSCEOLA COUNTY LINE SOUTHEAST TO 20 MILE ROAD	ROAD REHABILITATION	6.425	CON				
OSCEOLA	M-115	50TH AVENUE SOUTHEAST TO 16 MILE ROAD	ROAD REHABILITATION	1.270		CON			
OSCEOLA	US-131 SB	US-10 NORTH TO 14 MILE ROAD	ROAD REHABILITATION	7.714					CON
OTTAWA	I-196 WB	WEST OF 32ND AVENUE EAST TO OTTAWA/KENT COUNTY LINE	RECONSTRUCTION	4.996	CON				
OTTAWA	I-196 EB	WEST OF 32ND AVENUE EAST TO OTTAWA/KENT COUNTY LINE	RECONSTRUCTION	5.303		CON			
OTTAWA	I-196	BYRON ROAD EAST TO 32ND AVENUE	RECONSTRUCTION	6.674					CON
OTTAWA	I-196	ALLEGAN/OTTAWA COUNTY LINE EAST TO BYRON ROAD	ROAD REHABILITATION	3.960	CON				
OTTAWA	I-196	BYRON ROAD EAST TO 32ND AVENUE	TRAFFIC SAFETY	6.874				CON	
				152.805					

METRO REGION

BRIDGE - BIG BRIDGE PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
WAYNE	I-75	OVER ROUGE RIVER, DEARBORN STREET AND RAILROAD	SUBSTRUCTURE REPAIR					CON	
WAYNE	I-75 NB	I-75 NB OFF RAMP OVER RAILROAD AND MAINTENANCE ROAD	SUBSTRUCTURE PATCHING					CON	
WAYNE	I-75 SB	ON RAMP OVER ROUGE RIVER AND PLEASANT STREET	SUBSTRUCTURE PATCHING					CON	
WAYNE	I-75	I-75 OVER FORT STREET	SUBSTRUCTURE REPAIR					CON	
WAYNE	Douglas MacArthur Bridge	BELLE ISLE TRAFFIC OVER DETROIT RIVER	SUPERSTRUCTURE REPAIR					CON	
				0.000					

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
MACOMB	I-94	I-94 OVER CLINTON RIVER CONTROL CHANNEL	OVERLAY - EPOXY				CON		
MACOMB	I-94	I-94 RAMP (WB BEACH OVER CLINTON RIVER SPILLWAY)	OVERLAY - EPOXY				CON		
MACOMB	I-94	I-94 WB OVER CLINTON RIVER, NORTH AND SOUTH ROADS	SCOUR PROTECTION				CON		
MACOMB	I-94	I-94 EB OVER CLINTON RIVER, NORTH AND SOUTH ROADS	SCOUR PROTECTION				CON		
MACOMB	I-94	I-94 EB OVER SELFRIDGE AIR BASE SPUR TRACK	HEALER SEALER				CON		
MACOMB	I-94	I-94 WB OVER SELFRIDGE AIR BASE SPUR TRACK	HEALER SEALER				CON		
MACOMB	I-94	I-94 EB OVER CROCKER ROAD	OVERLAY - EPOXY				CON		
MACOMB	I-94	I-94 WB OVER CROCKER ROAD	OVERLAY - EPOXY				CON		
MACOMB	I-94	I-94 EB OVER JOY ROAD	SUPERSTRUCTURE REPAIR				CON		
MACOMB	I-94	I-94 WB OVER JOY ROAD	SUPERSTRUCTURE REPAIR				CON		
MACOMB	I-94	21 MILE ROAD OVER I-94	OVERLAY - EPOXY				CON		
MACOMB	I-94	COTTON ROAD OVER I-94	HEALER SEALER				CON		
MACOMB	I-94	I-94 EB OVER SALT RIVER	PAINTING COMPLETE				CON		
MACOMB	I-94	I-94 WB OVER SALT RIVER	PAINTING COMPLETE				CON		
MACOMB	I-94	I-94 AND NB RAMP OVER FISH CREEK	SCOUR PROTECTION				CON		
MACOMB	I-94	M-19 NEW HAVEN ROAD OVER I-94	JOINT REPLACEMENT				CON		
MACOMB	I-94	26 MILE ROAD OVER I-94	PAINTING - ZONE				CON		
MACOMB	I-94	COUNTY LINE ROAD OVER I-94	OVERLAY - DEEP				CON		
MACOMB	M-53	M-53 SB OVER CLINTON RIVER	OVERLAY - DEEP				CON		
MACOMB	M-53	M-53 NB OVER CLINTON RIVER	OVERLAY - SHALLOW				CON		
MACOMB	M-53	M-53 OVER BEAVER CREEK	SCOUR PROTECTION	0.191			CON		
OAKLAND	I-75	I-75 NB OVER CLINTON RIVER	SCOUR PROTECTION		CON				
OAKLAND	I-75	I-75 SB OVER CLINTON RIVER	SCOUR PROTECTION		CON				
OAKLAND	I-96	NOVI ROAD OVER I-96	OVERLAY - EPOXY			CON			
OAKLAND	M-10	MOUNT VERNON STREET OVER M-10	OVERLAY - SHALLOW			CON			
OAKLAND	M-10	EVERGREEN ROAD (NORTHBOUND) OVER M-10	OVERLAY - SHALLOW			CON			
OAKLAND	M-10	EVERGREEN ROAD (SOUTHBOUND) OVER M-10	OVERLAY - SHALLOW			CON			
OAKLAND	M-10	10 MILE ROAD OVER M-10	SUPERSTRUCTURE REPAIR			CON			
OAKLAND	M-24	M-24 OVER PAINT CREEK	OVERLAY - EPOXY			CON			
OAKLAND	M-5	I-96 BL (GRAND RIVER) OVER M-5	OVERLAY - DEEP		CON				
OAKLAND	M-5	DRAKE ROAD OVER M-5	DECK PATCHING		CON				
OAKLAND	I-75	NB JOSLYN TO I-75 OVER GTW RAILROAD	SUPERSTRUCTURE REPAIR	0.326	CON				
OAKLAND	I-75	FEATHERSTONE ROAD OVER I-75	JOINT REPLACEMENT		CON				

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METRO REGION

BRIDGE - PRESERVATION - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
OAKLAND	I-75	FEATHERSTONE ROAD OVER I-75	OVERLAY - EPOXY		CON				
OAKLAND	I-75	M-24 CONNECTOR EB OVER I-75	HEALER SEALER		CON				
OAKLAND	I-75	M-24 CONNECTOR WB OVER I-75	HEALER SEALER		CON				
WAYNE	I-94	WB EAST GRAND BOULEVARD OVER I-94	HEALER SEALER					CON	
WAYNE	I-94	CHENE RAMP TO I-94 OVER EB GRAND BOULEVARD	SUBSTRUCTURE PATCHING					CON	
WAYNE	I-94	I-94 EB RAMP TO M-10 OVER I-94 WB AND M-10 SB	OVERLAY - SHALLOW		CON				
WAYNE	I-275	SB TO EB I-96 OVER I-275 NB	OVERLAY - EPOXY			CON			
WAYNE	I-275	FIVE MILE ROAD OVER I-96	OVERLAY - DEEP			CON			
WAYNE	I-275	I-275 SB OVER SCHOOLCRAFT ROAD	DECK REPLACEMENT			CON			
WAYNE	I-275	I-275 NB OVER M-14	SUBSTRUCTURE REPLACEMENT			CON			
WAYNE	I-275	I-275 NB COLLECTOR OVER M-14	SUBSTRUCTURE REPLACEMENT			CON			
WAYNE	I-275	I-275 SB OVER CSX RAILROAD	OVERLAY - EPOXY			CON			
WAYNE	I-275	I-275 NB OVER CSX RAILROAD	OVERLAY - EPOXY			CON			
WAYNE	I-275	I-275 RAMP N OVER CSX RAILROAD	OVERLAY - EPOXY			CON			
WAYNE	I-75	DAVISON TO I-75 RAMP OVER GTW RAILROAD, I-75 AND M-8 (DAVISON)	DECK PATCHING - FULL DEPTH				CON		
WAYNE	I-75	HOLBROOK AVENUE OVER I-75	DECK PATCHING - FULL DEPTH				CON		
WAYNE	I-75	SAVANNAH AVENUE OVER I-75	PAINTING COMPLETE				CON		
WAYNE	I-75	MEADE STREET OVER I-75	PAINTING COMPLETE				CON		
WAYNE	I-75	I-75 OVER RAMP TO M-8 (DAVISON)	SUBSTRUCTURE PATCHING				CON		
WAYNE	I-75	I-75 AND RAMPS C, D OVER M-8 (DAVISON) AND SERVICE ROAD	SOVERLAY - EPOXY				CON		
WAYNE	I-75	M-8 (DAVISON) RAMP OVER I-75	DECK PATCHING - FULL DEPTH				CON		
WAYNE	I-75	DAVISON RAMP TO I-75 OVER DEQUINDRE AVENUE	OVERLAY - EPOXY				CON		
WAYNE	I-94	I-94 WB OVER WAYNE ROAD	SUBSTRUCTURE REPAIR		CON				
WAYNE	I-94	I-94 EB OVER MERRIMAN ROAD	OVERLAY - EPOXY	0.246	CON				
WAYNE	I-94	I-94 WB OVER MERRIMAN ROAD	OVERLAY - EPOXY		CON				
WAYNE	I-94	I-94 EB OVER INKSTER ROAD	OVERLAY - EPOXY		CON				
WAYNE	I-94	I-94 WB OVER INKSTER ROAD	OVERLAY - EPOXY		CON				
WAYNE	I-94	VINING ROAD OVER I-94	OVERLAY - EPOXY		CON				
WAYNE	I-94	24TH STREET OVER I-94	SUBSTRUCTURE REPAIR		CON				
WAYNE	I-94	CSX RAILROAD OVER I-94	SUBSTRUCTURE REPAIR		CON				
WAYNE	I-94	CONRAIL OVER I-94	SUBSTRUCTURE REPAIR		CON				
WAYNE	I-94	GTW AND CONRAIL OVER I-94	PAINTING COMPLETE		CON				
WAYNE	I-94	I-94 EB OVER WAYNE ROAD	OVERLAY - EPOXY		CON				
WAYNE	I-94	I-94 EB OVER MIDDLEBELT ROAD	OVERLAY - EPOXY		CON				
WAYNE	I-94	I-94 WB OVER MIDDLEBELT ROAD	OVERLAY - EPOXY		CON				
WAYNE	I-94	I-94 EB OVER ECORSE ROAD	OVERLAY - EPOXY		CON				
WAYNE	I-94	I-94 EB OVER BEECH-DALY ROAD	OVERLAY - EPOXY		CON				
WAYNE	I-94	I-94 WB OVER BEECH-DALY ROAD	OVERLAY - EPOXY		CON				
WAYNE	I-96	I-96 RAMP OVER LAND ROAD	JOINT REPLACEMENT					CON	
WAYNE	I-96	I-96 RAMP OVER WB SERVICE ROAD	BRIDGE BARRIER RAILING REPLACE					CON	
WAYNE	I-96	WEST CHICAGO AVENUE OVER I-96	OVERLAY - EPOXY					CON	
WAYNE	I-96	TURN ROADWAY EB TO SB OVER WB AND TO TURN SERVICE ROADS	OVERLAY - DEEP					CON	
WAYNE	I-96	TURN ROADWAY 3RD LEVEL OVER I-96 ROADWAYS	OVERLAY - DEEP					CON	
WAYNE	I-96	I-96 RAMP OVER OPEN GROUND	OVERLAY - DEEP					CON	
WAYNE	I-96	FULLERTON AVENUE OVER I-96 (JEFFRIES FREEWAY)	OVERLAY - DEEP					CON	
WAYNE	I-96	SCHAEFER ROAD OVER I-96 (JEFFRIES FREEWAY)	OVERLAY - EPOXY					CON	
WAYNE	I-96	MEYERS ROAD OVER I-96 (JEFFRIES FREEWAY)	OVERLAY - EPOXY					CON	
WAYNE	I-96	WYOMING AVENUE OVER I-96 (JEFFRIES FREEWAY)	OVERLAY - EPOXY					CON	
WAYNE	I-96	I-96 WB COLLECTOR OVER RAMP TO M-8	OVERLAY - EPOXY					CON	
WAYNE	I-96	WEST GRAND BOULEVARD AND TIREMAN OVER I-96	SUBSTRUCTURE PATCHING					CON	
WAYNE	I-96	WEST GRAND BOULEVARD AND TIREMAN OVER I-96	JOINT REPAIR					CON	
WAYNE	I-96	WB TO SB TURN ROADWAY OVER TURN ROADWAY U-TURN	OVERLAY - EPOXY					CON	
WAYNE	I-96	SERVICE ROAD OVER M-39 (SOUTHFIELD EXPRESSWAY)	OVERLAY - EPOXY					CON	
WAYNE	I-96	I-96 WB COLLECTOR OVER M-39 (SOUTHFIELD EXPRESSWAY)	OVERLAY - EPOXY					CON	

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METRO REGION

BRIDGE - PRESERVATION - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
WAYNE	I-96	I-96 WB MAIN ROADWAY OVER M-39 (SOUTHFIELD EXPRESSWAY)	OVERLAY - EPOXY					CON	
WAYNE	I-96	I-96 RAMP OVER EASTBOUND SERVICE ROAD	OVERLAY - EPOXY					CON	
WAYNE	M-14	CONNECTOR OVER M-14	OVERLAY - EPOXY			CON			
WAYNE	I-275	I-275 SB OVER TONQUISH CREEK	SCOUR PROTECTION			CON			
WAYNE	I-275	I-275 SB OVER MIDDLE ROUGE RIVER	OVERLAY - EPOXY			CON			
WAYNE	I-275	I-275 NB OVER MIDDLE ROUGE RIVER	OVERLAY - EPOXY			CON			
WAYNE	I-275	I-275 NB OVER TONQUISH CREEK	SCOUR PROTECTION			CON			
WAYNE	I-275	I-275 NB TO I-96 EB OVER SCHOOLCRAFT ROAD	OVERLAY - EPOXY			CON			
WAYNE	I-275	I-275 SB OVER M-14	BRIDGE BARRIER RAILING REPAIR			CON			
WAYNE	I-275	SB TO EB I-96 OVER M-14 WB	OVERLAY - EPOXY			CON			
WAYNE	I-275	I-275 NB OVER SCHOOLCRAFT ROAD	SUPERSTRUCTURE REPAIR			CON			
WAYNE	I-275	I-275 NB COLLECTOR OVER SCHOOLCRAFT ROAD	OVERLAY - EPOXY			CON			
WAYNE	M-153	MILLER ROAD OVER M-153	OVERLAY - EPOXY			CON			
WAYNE	M-153	M-153 EB OVER HINES DRIVE	OVERLAY - EPOXY			CON			
WAYNE	M-153	M-153 WB OVER HINES DRIVE	JOINT REPLACEMENT			CON			
WAYNE	M-153	M-153 WB OVER ROUGE RIVER	PIN AND HANGER REPLACEMENT			CON			
WAYNE	M-153	M-153 EB OVER ROUGE RIVER	OVERLAY - SHALLOW			CON			
WAYNE	M-39	M-39 OVER ROUGE RIVER	JOINT REPLACEMENT	0.357		CON			
WAYNE	M-39	M-39 NB SERVICE ROAD OVER ROUGE RIVER	SUBSTRUCTURE REPAIR			CON			
WAYNE	M-39	M-39 SB SERVICE ROAD OVER ROUGE RIVER	SUBSTRUCTURE REPAIR			CON			
WAYNE	Central Avenue	CENTRAL AVENUE OVER CANOE STREAM	ASPHALT CAP					CON	
WAYNE	Oakway Trail	OAKWAY TRAIL OVER CANOE STREAM	SCOUR PROTECTION					CON	
WAYNE	US-24	US-24 NB OVER ROUGE RIVER	SUPERSTRUCTURE REPAIR		CON				
WAYNE	US-24	US-24 SB OVER ROUGE RIVER	SUPERSTRUCTURE REPAIR		CON				
				1.120					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
OAKLAND	I-696	I-696 OVER PEBBLE CREEK	CULVERT REPLACEMENT						CON
WAYNE	I-75	M-102 8 MILE ROAD OVER I-75	DECK REPLACEMENT						CON
WAYNE	I-94	I-94 WB OVER ECORSE ROAD	BRIDGE REPLACEMENT		CON				
WAYNE	I-96	HUBBELL AVENUE OVER I-96 (JEFFRIES FREEWAY)	DECK REPLACEMENT					CON	
WAYNE	I-96	FULLERTON AVENUE OVER I-96 (JEFFRIES FREEWAY)	DECK REPLACEMENT					CON	
WAYNE	I-96	I-96 RAMP OVER M-39 RAMP AND EAST SERVICE ROAD	DECK REPLACEMENT					CON	
WAYNE	M-39	SAWYER AVENUE WALKOVER OVER M-39	BRIDGE REPLACEMENT		CON				
WAYNE	M-39	VERNE STREET PEDESTRIAN WALKOVER M-39	NEW STRUCTURE		CON				
WAYNE	M-39	VASSAR AVENUE WALKOVER OVER M-39	BRIDGE REPLACEMENT		CON				
WAYNE	Vista Avenue	VISTA AVENUE OVER CANOE STREAM	BRIDGE REPLACEMENT					CON	
WAYNE	US-12	US-12 EB OVER M-39	DECK REPLACEMENT			CON			
WAYNE	US-12	US-12 WB OVER M-39	DECK REPLACEMENT			CON			
WAYNE	US-24	US-24 SB OVER FRANK AND POET DRAIN	SCOUR PROTECTION					CON	
WAYNE	US-24	US-24 NB OVER FRANK AND POET DRAIN	CULVERT REPLACEMENT					CON	
				0.000					

NEW ROADS - GORDIE HOWE INTERNATIONAL BRIDGE

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
WAYNE	Gordie Howe International	BRIDGE AREA	NEW ROAD		CON	CON	CON	CON	CON
WAYNE	Gordie Howe International	BRIDGE AREA	NEW ROAD		ROW	ROW	ROW		
WAYNE	Gordie Howe International	BRIDGE AREA	NEW ROAD		PE	PE	PE		
WAYNE	Gordie Howe International	INTERCHANGE AREA	NEW ROAD		CON	CON	CON	CON	CON
WAYNE	Gordie Howe International	INTERCHANGE AREA	NEW ROAD		ROW	ROW	ROW		
WAYNE	Gordie Howe International	INTERCHANGE AREA	NEW ROAD		PE	PE	PE		
WAYNE	Gordie Howe International	PLAZA AREA	NEW ROAD		CON	CON	CON	CON	CON
WAYNE	Gordie Howe International	AT THE GORDIE HOWE INTERNATIONAL BRIDGE	PROJECT MANAGEMENT CONTRACT		CON	CON	CON	CON	CON
				0.000					

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METRO REGION

FREEWAY RESURFACING PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
OAKLAND	M-5	HALSTEAD ROAD TO GRAND RIVER ROAD	ROAD REHABILITATION	4.454	CON				
WAYNE	I-94	CONNOR TO 8 MILE ROAD	ROAD REHABILITATION	5.491		CON			
				9.945					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
MACOMB	M-3	11 MILE ROAD TO 14 MILE ROAD	RECONSTRUCTION	6.880			CON		
OAKLAND	I-696	I-275 TO LAHSER	ROAD REHABILITATION	8.536					CON
OAKLAND	M-24	SOUTH OF GOLDENGATE TO NORTH OF HARRIET	ROAD REHABILITATION	4.580		CON			
OAKLAND	M-59	TIPISCO LAKE ROAD TO MILFORD ROAD	RECONSTRUCTION	3.183	CON				
OAKLAND	US-24	LONG LAKE TO ORCHARD LAKE ROAD AND MAPLE ROAD	ROAD REHABILITATION	4.170					CON
WAYNE	I-275	SOUTH OF M-153 TO 5 MILE ROAD	ROAD REHABILITATION	6.404		CON			
WAYNE	I-275	NORTHLINE ROAD (SOUTH OF I-94) TO M-153	ROAD REHABILITATION	8.652			CON		
WAYNE	I-94	PELHAM TO EAST OF M-39	ROAD REHABILITATION	3.489					CON
WAYNE	I-375	SOUTH OF I-75/I-375 INTERCHANGE TO JEFFERSON AVENUE	RECONSTRUCTION	3.503				CON	
WAYNE	OLD 701	OAKWAY DRIVE, CENTRAL WAY, AND VISTA AT BELLE ISLE	ROAD REHABILITATION	2.131	CON				
WAYNE	US-12 (Michigan Avenue)	LOTZ ROAD TO PERSHING STREET	ROAD REHABILITATION	2.048					CON
WAYNE	US-24 (Telegraph Road)	CARTER TO PENNSYLVANIA	ROAD REHABILITATION	2.633					CON
WAYNE	US-24	GRAND RIVER TO NORTH OF 8 MILE ROAD	RECONSTRUCTION	1.431			CON		
				57.640					

TRUNKLINE MODERNIZATION I-75 OAKLAND COUNTY

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
OAKLAND	I-75	FROM 8 MILE ROAD TO NORTH OF 13 MILE ROAD	RECONSTRUCTION	5.416	CON	CON	CON	CON	CON
OAKLAND	I-75	FROM COOLIDGE HIGHWAY TO NORTH OF SOUTH BOULEVARD	ENVIRONMENTAL MITIGATION	2.947	CON	CON	CON		
OAKLAND	I-75	FROM NORTH OF 13 MILE ROAD TO COOLIDGE HIGHWAY	RECONSTRUCTION	8.878	CON	CON	CON	CON	CON
OAKLAND	I-75	FROM NORTH OF I-696 TO SOUTH OF 12 MILE ROAD	RECONSTRUCTION		PE	PE	PE	PE	
OAKLAND	I-75	FROM 8 MILE ROAD TO M-59	PROJECT MANAGEMENT CONTRACT		EPE	EPE	EPE	EPE	
OAKLAND	I-75	FROM 8 MILE ROAD TO M-59	REAL ESTATE ACTIVITIES		ROW				
				17.241					

TRUNKLINE MODERNIZATION I-94 DETROIT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
WAYNE	I-94 (Ford Freeway)	M-3 OVER I-94	BRIDGE REPLACEMENT		CON				
WAYNE	I-94 (Ford Freeway)	CHENE STREET OVER I-94	BRIDGE REPLACEMENT		CON				
WAYNE	I-94 (Ford Freeway)	SECOND AVENUE OVER I-94	BRIDGE REPLACEMENT		CON				
WAYNE	I-94 (Ford Freeway)	SECOND AVENUE OVER I-94	BRIDGE REPLACEMENT		PE				
WAYNE	I-94 (Ford Freeway)	SECOND BOULEVARD OVER I-94	BRIDGE REPLACEMENT		PE-B				
WAYNE	I-94 (Ford Freeway)	CADILLAC AVENUE, DETROIT	BRIDGE REPLACEMENT		CON	CON			
WAYNE	I-94 (Ford Freeway)	CADILLAC AVENUE, DETROIT	BRIDGE REPLACEMENT		PE				
WAYNE	I-94 (Ford Freeway)	FRENCH ROAD OVER I-94	BRIDGE REPLACEMENT		CON	CON			
WAYNE	I-94 (Ford Freeway)	FRENCH ROAD OVER I-94	BRIDGE REPLACEMENT		PE				
WAYNE	I-94 (Ford Freeway)	CONCORD AVENUE OVER I-94	BRIDGE REPLACEMENT		CON	CON			
WAYNE	I-94 (Ford Freeway)	MOUNT ELLIOT STREET OVER I-94	BRIDGE REPLACEMENT		CON	CON			
WAYNE	I-94 (Ford Freeway)	MOUNT ELLIOT STREET OVER I-94	BRIDGE REPLACEMENT		PE	PE			
WAYNE	I-94 (Ford Freeway)	MOUNT ELLIOT STREET OVER I-94	BRIDGE REPLACEMENT		PE-B	PE-B			
WAYNE	I-94 (Ford Freeway)	CASS AVENUE, DETROIT	BRIDGE REPLACEMENT		CON	CON			
WAYNE	I-94 (Ford Freeway)	CASS AVENUE, DETROIT	BRIDGE REPLACEMENT		PE				

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METRO REGION

TRUNKLINE MODERNIZATION I-94 DETROIT - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
WAYNE	I-94 (Ford Freeway)	CASS AVENUE OVER I-94	BRIDGE REPLACEMENT		PE-B	PE-B			
WAYNE	I-94 (Ford Freeway)	BRUSH STREET OVER I-94	BRIDGE REPLACEMENT		CON				
WAYNE	I-94 (Ford Freeway)	BRUSH STREET OVER I-94	BRIDGE REPLACEMENT		PE				
WAYNE	I-94 (Ford Freeway)	BRUSH STREET OVER I-94	BRIDGE REPLACEMENT		PE-B				
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO EAST OF CONNER AVENUE	PROJECT MANAGEMENT CONTRACT	7.239	EPE				
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO CONNER AVENUE, CITY OF DETROIT	BRIDGE REPLACEMENT	0.001	PE	PE			
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO EAST OF CONNER AVENUE	PROJECT MANAGEMENT CONTRACT	7.027			PE		
WAYNE	I-94	EAST OF I-96 TO EAST OF CONNER AVENUE	RECONSTRUCTION	4.56	ROW	ROW	ROW	ROW	ROW
WAYNE	I-94	EAST OF I-96 TO EAST OF CONNER AVENUE	RECONSTRUCTION	4.56	PE	PE			
WAYNE	I-94	EAST GRAND BOULEVARD OVER I-94	BRIDGE REPLACEMENT		CON	CON			
WAYNE	I-94	EAST GRAND BOULEVARD OVER I-94	BRIDGE REPLACEMENT		PE				
WAYNE	I-94	AT CONRAIL RAILROAD (X01 OF 82025)	BRIDGE REPLACEMENT				CON	CON	
WAYNE	I-94	AT CONRAIL RAILROAD (X02 OF 82024)	BRIDGE REPLACEMENT				CON	CON	
WAYNE	I-94	AT FORTENAC STREET (S08 OF 82024)	BRIDGE REPLACEMENT				CON	CON	
WAYNE	I-94	AT FORTENAC STREET (S08 OF 82024)	BRIDGE REPLACEMENT		PE	PE			
WAYNE	I-94	AT BURNS STREET (S12 OF 82024)	BRIDGE REPLACEMENT			CON	CON	CON	
WAYNE	I-94	AT BURNS STREET (S12 OF 82024)	BRIDGE REPLACEMENT		PE	PE			
WAYNE	I-94	AT GRAND RIVER AVENUE (S17 OF 82024)	BRIDGE REPLACEMENT	0.078		CON	CON	CON	
WAYNE	I-94	AT GRAND RIVER AVENUE (S17 OF 82024)	BRIDGE REPLACEMENT	0.078	PE	PE			
WAYNE	I-94	SECOND AVENUE OVER I-94	MISCELLANEOUS BRIDGE		CON	CON	CON		
WAYNE	I-94	CHENE AND GRATIOT BRIDGES OVER I-94	MISCELLANEOUS BRIDGE	0.077	CON	CON	CON		
WAYNE	I-94	CONCORD AND FRENCH OVER I-94	MISCELLANEOUS BRIDGE		CON	CON	CON		
WAYNE	I-94	SECOND AND BRUSH OVER I-94	LANDSCAPING - IMPROVE	0.153	CON	CON	CON	CON	CON
WAYNE	I-94	MOUNT ELLIOT STREET OVER I-94	MISCELLANEOUS BRIDGE		CON	CON	CON		
WAYNE	I-94	CHENE AND GRATIOT OVER I-94	MISCELLANEOUS BRIDGE		CON	CON	CON		
WAYNE	I-94	MOUNT ELLIOT OVER I-94	MISCELLANEOUS BRIDGE		CON	CON			
WAYNE	I-94	CHENE AND GRATIOT OVER I-94	MISCELLANEOUS BRIDGE		CON	CON	CON		
WAYNE	I-94	CONCORD AND FRENCH OVER I-94	MISCELLANEOUS BRIDGE		CON				
WAYNE	I-94	SECOND AND BRUSH OVER I-94	MISCELLANEOUS ROADSIDE	0.172	CON	CON	CON	CON	CON
WAYNE	I-94	AT THIRD STREET BRIDGE (S30 OF 82023)	BRIDGE REMOVAL		CON	CON			
WAYNE	I-94	THIRD STREET OVER I-94	BRIDGE REMOVAL		PE-B				
WAYNE	I-94	FROM SAINT AUBIN TO FRONTENAC	RECONSTRUCTION	1.502					CON
WAYNE	I-94	FROM SAINT AUBIN TO FRONTENAC	RECONSTRUCTION	1.502		PE	PE	PE	PE
WAYNE	I-94 (East Grand Boulavard)	GRAND RIVER, GRAND BOULEVARD, FRONTENAC, BURNS OVER I-94	BRIDGE REPLACEMENT		PE	PE	PE	PE	PE
WAYNE	I-94	FROM CONNER AVENUE TO CHENE STREET	RECONSTRUCTION	9.05			CON	CON	
WAYNE	I-94	FROM I-96 TO CONNER	DYNAMIC LANE USE	6.856	CON	CON			
WAYNE	I-94	FROM I-96 TO CONNER	DYNAMIC LANE USE	6.856	PE				
WAYNE	I-94	FROM I-96 TO CONNER	QUEUE WARNING SYSTEM	6.845	CON	CON			
WAYNE	I-94	FROM I-96 TO CONNER	QUEUE WARNING SYSTEM	6.845	PE				
				63.401					

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NORTH REGION

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
MANISTEE	M-55	M-55 OVER PINE RIVER	OVERLAY EPOXY		CON				
OGEMAW	I-75 BL	M-55 OVER RIFLE RIVER	JOINT REPLACEMENT			CON			
OGEMAW	I-75 BL	I-75 BL OVER WEST BRANCH RIFLE RIVER	SUPERSTRUCTURE REPAIR			CON			
OGEMAW	I-75 BL	I-75 SB OVER M-55	SUBSTRUCTURE REPAIR			CON			
OGEMAW	I-75 BL	I-75 NB OVER M-55	SUBSTRUCTURE REPAIR			CON			
OSCODA	M-33	M-33 (M-72) OVER AU SABLE RIVER	MISCELLANEOUS BRIDGE				CON		
PRESQUE ISLE	US-23	US-23 OVER SWAN RIVER	BRIDGE BARRIER RAILING REPLACE			CON			
ROSCOMMON	M-18 (E Houghton Lake Drive)	M-18 OVER SPRING BROOK CREEK	SUPERSTRUCTURE REPAIR						CON
WEXFORD	M-115	M-115 OVER MANISTEE RIVER	OVERLAY DEEP				CON		
				0.000					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
EMMET	US-23	US-23 SB OVER I-75	SUPERSTRUCTURE REPLACEMENT					CON	
MANISTEE	M-55	M-55 OVER MANISTEE RIVER	BRIDGE REPLACEMENT			CON			
MANISTEE	US-31	US-31 OVER MANISTEER RIVER	BRIDGE REPLACEMENT						CON
OGEMAW	M-33 (N Williams Street)	M-33 OVER HOUGHTON CREEK	CULVERT REPLACEMENT						CON
PRESQUE ISLE	US-23	US-23 OVER TWIN LAKES OUTLET	CULVERT REPLACEMENT						CON
ROSCOMMON	M-18 (N Roscommon Road)	M-18 OVER BACKUS CREEK	CULVERT REPLACEMENT		CON				
				0.000					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ALCONA	US-23	WASHINGTON STREET TO LAKESHORE DRIVE	ROAD REHABILITATION	1.867			CON		
ALCONA	US-23	ALCONA SOUTH COUNTY LIMIT TO GREENBUSH RAILROAD	ROAD REHABILITATION	6.170	CON				
ALCONA	US-23	BLACK RIVER ROAD TO SAYERS ROAD	ROAD REHABILITATION	2.023		CON			
BENZIE	US-31	M-115 SOUTH TO THE BETSIE RIVER	RECONSTRUCTION	1.416		CON			
BENZIE	US-31	EAST OF BEULAH TO WEST OF HONOR	ROAD REHABILITATION	2.114				CON	
BENZIE	US-31	CRYSTAL DRIVE WEST	ROAD REHABILITATION	1.021			CON		
CHARLEVOIX	US-131	CHERRY HILL ROAD TO NORTH OF THUMB LAKE ROAD	RECONSTRUCTION	1.259		CON			
CHARLEVOIX	US-31	BARNARD ROAD/NORWOOD ROAD NORTH TO BARNARD ROAD	RECONSTRUCTION	6.874					CON
CHEBOYGAN	I-75	LEVERING ROAD TO SOUTH OF HEBRON TOWN HALL ROAD	ROAD REHABILITATION	3.881			CON		
CHEBOYGAN	I-75	NORTH OF M-27 TO TOPINABEE MAIL ROUTE	ROAD REHABILITATION	2.245		CON			
CHEBOYGAN	M-27	I-75 NB RAMPS TO WOODSIDE PARK ROAD AND POLISH LINE	ROAD REHABILITATION	4.966			CON		
CHEBOYGAN	M-68	I-75 EAST TO EAST OF COUNTY LINE ROAD	ROAD REHABILITATION	18.770		CON			
CHEBOYGAN	I-75	SOUTH OF HEBRON TOWN HALL ROAD NORTH TO US-31	ROAD REHABILITATION	5.249				CON	
CHEBOYGAN	US-23	FROM CORDWOOD ROAD TO DUNCAN AVENUE	ROAD REHABILITATION	6.995			CON		
CRAWFORD	M-72	KALKASKA/CRAWFORD COUNTY LINE TO M-93	ROAD REHABILITATION	6.074	CON				
EMMET	I-75	FROM OLD M-108 NORTH TO MACKINAC BRIDGE	ROAD REHABILITATION	2.229				CON	
EMMET	US-31	FROM LIBERTY STREET TO ROSEDALE AVENUE	RECONSTRUCTION	1.339	CON				
EMMET	US-31	M-119 TO MANVEL ROAD; M-119 FROM US-31 TO PICKEREL	ROAD REHABILITATION	0.240		CON			
EMMET	US-31	BLUMKE ROAD NORTH TO MILTON ROAD	RECONSTRUCTION	4.117				CON	

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NORTH REGION

REPAIR AND REBUILD ROADS - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
GRAND TRAVERSE	M-113	M-37 INTERSECTION EAST TO CLARK STREET	ROAD REHABILITATION	5.661	CON				
GRAND TRAVERSE	M-37	VANCE ROAD TO BLAIR TOWNHALL ROAD	ROAD REHABILITATION	1.095			CON		
GRAND TRAVERSE	M-37	BLAIR TOWNHALL ROAD TO M-113	ROAD REHABILITATION	4.024			CON		
GRAND TRAVERSE	US-31	EAST SILVER LAKE ROAD TO CHUMS CORNER	MINOR WIDENING	0.623		CON			
GRAND TRAVERSE	US-31	MURCHIE BRIDGE EAST TO GARFIELD AVENUE	RECONSTRUCTION	0.864				CON	
GRAND TRAVERSE	US-31	DIVISION STREET TO B01 OF 28013	RECONSTRUCTION	1.211					CON
IOSCO	US-23	F-41 TO GASTON WAY AND CHANNEL ROAD TO PINE ACRES	ROAD REHABILITATION	3.618		CON			
LEELANAU	M-72	FRITZ ROAD TO BUGAI/GRAY ROAD	ROAD REHABILITATION	12.108	CON				
MANISTEE	M-22	DONTZ ROAD TO 8 MILE ROAD (ONEKAMA)	ROAD REHABILITATION	6.564		CON			
MANISTEE	M-55	CLAYBANK ROAD TO UDELL HILLS ROAD	ROAD REHABILITATION	7.640		CON			
MONTMORENCY	M-32	JEROME STREET TO HAAS ROAD	ROAD REHABILITATION	3.381		CON			
MONTMORENCY	M-33	GREASY CREEK ROAD TO M-32	ROAD REHABILITATION	7.045	CON				
OGEMAW	I-75	SKI PARK ROAD TO THE OGEMAW WEST COUNTY LINE	ROAD REHABILITATION	3.969	CON				
OGEMAW	M-55	WEST OF FAIRVIEW STREET TO WEST OF M-30	RECONSTRUCTION	1.193					CON
OSCODA	M-33	CHERRY CREEK ROAD TO WEST OF THE M-33/ M-72 JUNCTION	ROAD REHABILITATION	6.719	CON				
PRESQUE ISLE	M-68	GLASIER ROAD TO CURTIS ROAD; CEDAR TO STATE PARK	ROAD REHABILITATION	18.880	CON				
ROSCOMMON	I-75	MAPLE VALLEY ROAD TO 9 MILE HILL ROAD	ROAD REHABILITATION	6.785					CON
ROSCOMMON	M-18	M-157 NORTH TO LANSING ROAD	ROAD REHABILITATION	6.645		CON			
ROSCOMMON	US-127	FROM M-55 TO MUSKEGON RIVER BRIDGE	ROAD REHABILITATION	5.251		CON			
WEXFORD	M-37	BURKETT CREEK	RECONSTRUCTION	0.050			CON		
				187.565					

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SOUTHWEST REGION

BRIDGE - BIG BRIDGE PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
BERRIEN	I-94 BL	I-94 BL OVER ST JOSEPH RIVER	OVERLAY - EPOXY		CON				
BERRIEN	M-63	M-63 OVER ST JOSEPH RIVER	OVERLAY - EPOXY		CON				
				0.000					

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
BERRIEN	I-94	GLENLORD ROAD OVER I-94	OVERLAY - EPOXY		CON				
BERRIEN	I-94	CLEVELAND AVENUE OVER I-94	OVERLAY - DEEP		CON				
BERRIEN	US-12	US-12 OVER ST JOSEPH RIVER	PAINTING COMPLETE		CON				
BERRIEN	US-31	US-31 SB OVER US-12	OVERLAY - SHALLOW			CON			
BERRIEN	US-31	US-31 NB OVER US-12	OVERLAY - SHALLOW			CON			
BRANCH	I-69	I-69 BL (FENN ROAD) OVER I-69	OVERLAY - DEEP			CON			
BRANCH	I-69	STATE ROAD OVER I-69	OVERLAY - DEEP			CON			
BRANCH	I-69	NEWTON ROAD OVER I-69	OVERLAY - DEEP			CON			
BRANCH	US-12 (W Chicago Street)	US-12 OVER COLDWATER RIVER	BRIDGE BARRIER RAILING REPLACE						CON
CALHOUN	I-69	N DRIVE NORTH OVER I-69	OVERLAY - DEEP				CON		
CALHOUN	I-69	GARFIELD ROAD OVER I-69	OVERLAY - DEEP				CON		
CALHOUN	I-69	I-69 SB OVER ST JOSEPH RIVER	OVERLAY - DEEP					CON	
CALHOUN	I-69	I-69 NB OVER ST JOSEPH RIVER	OVERLAY - DEEP					CON	
CALHOUN	I-69	JACKSON ROAD OVER I-69	OVERLAY - DEEP					CON	
CALHOUN	I-94	24 MILE ROAD OVER I-94	OVERLAY - EPOXY		CON				
CALHOUN	I-94 (Michigan Avenue)	I-94 BL MICHIGAN AVENUE OVER I-94	BRIDGE BARRIER RAILING REPLACE						CON
KALAMAZOO	M-43	M-43 OVER KALAMAZOO RIVER	JOINT REPLACEMENT		CON				
ST. JOSEPH	M-60	M-60 AND M-66 OVER NOTTAWA CREEK	OVERLAY - EPOXY					CON	
VAN BUREN	I-196	I-196 NB OVER KAL-HAVEN TRAIL AND BLACK RIVER	SCOUR PROTECTION					CON	
VAN BUREN	I-196	I-196 SB OVER KAL-HAVEN TRAIL AND BLACK RIVER	SCOUR PROTECTION					CON	
VAN BUREN	I-94	32ND STREET (CR653) OVER I-94	OVERLAY - SHALLOW				CON		
				0.000					

BRIDGE - REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
CALHOUN	M-311 (11 Mile Road)	M-311 (11 MILE ROAD) OVER KALAMAZOO RIVER	BRIDGE REPLACEMENT		CON				
KALAMAZOO	US-131	US-131 NB OVER AMTRAK AND KL AVENUE	BRIDGE REPLACEMENT		CON				
KALAMAZOO	US-131	US-131 SB OVER AMTRAK AND KL AVENUE	BRIDGE REPLACEMENT		CON				
ST. JOSEPH	US-131 BR	US-131 BR OVER ST JOSEPH RIVER	DECK REPLACEMENT				CON		
				0.000					

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SOUTHWEST REGION

FREEWAY RESURFACING PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
CALHOUN	I-194	I-94 TO HAMBLIN AVENUE	ROAD REHABILITATION	1.673	CON				
KALAMAZOO	US-131 BR	WESTNEDGE AVENUE TO US-131	ROAD REHABILITATION	4.291		CON			
				10.351					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
BERRIEN	I-94	BRITAIN AVENUE TO I-196	RECONSTRUCTION	4.721			CON		
BERRIEN	I-94	HIGHLAND ROAD OVER I-94	BRIDGE REMOVAL				CON		
BERRIEN	I-94	I-94 BL EB MAIN STREET OVER I-94	BRIDGE REMOVAL				CON		
BERRIEN	I-94	TERRITORIAL ROAD OVER I-94	BRIDGE REPLACEMENT				CON		
BERRIEN	I-94	NB US-31 and WB I-94 BL OVER I-94	NEW STRUCTURE- RELOCATED ROUTE				CON		
BERRIEN	I-94	SB US-31 and EB I-94 BL OVER I-94	NEW STRUCTURE - RELOCATED ROUTE				CON		
BERRIEN	I-94	ST JOSEPH RIVER TO BRITAIN AVENUE	RECONSTRUCTION	4.086				CON	
BERRIEN	I-94	I-94 OVER YORE AND STOEFFER DRAIN	CULVERT REPLACEMENT					CON	
BERRIEN	I-94	I-94 EB OVER PIPESTONE ROAD	BRIDGE REPLACEMENT					CON	
BERRIEN	I-94	I-94 WB OVER PIPESTONE ROAD	BRIDGE REPLACEMENT					CON	
BERRIEN	I-94 WB	I-196 TO 0.7 MILES WEST OF M-140	ROAD REHABILITATION	5.375					CON
BERRIEN	I-94	OVER SQUAW CREEK, SOUTH OF US-12	CULVERT REPLACEMENT	2.232					CON
BERRIEN	M-139	OVER BUCKHORN CREEK, NORTH OF ROCKY WEED ROAD	CULVERT REPLACEMENT	0.191				CON	
BERRIEN	US-12	DAYTON LAKE ROAD TO MAYFLOWER ROAD	ROAD REHABILITATION	6.854			CON		
BERRIEN	US-12	M-51 INTERCHANGE	RECONSTRUCTION	1.045					CON
BERRIEN	US-31	US-12 (EXIT 3) TO WALTON ROAD (EXIT 7)	ROAD REHABILITATION	4.368					CON
BRANCH	US-12 (W Chicago Road)	ST. JOSEPH COUNTY LINE TO BRONSON	ROAD REHABILITATION	6.039	CON				
CALHOUN	I-69	N DRIVE NORTH (EXIT 42) TO EATON COUNTY LINE	RECONSTRUCTION	5.004				CON	
CALHOUN	M-199 (25 1/2 Mile Road)	27 MILE ROAD TO I-94	ROAD REHABILITATION	2.938		CON			
CALHOUN	M-199 (E Michigan Avenue)	25 1/2 MILE ROAD TO 28 MILE ROAD (EATON STREET)	ROAD REHABILITATION	2.775		CON			
CALHOUN	M-96	EDEN STREET TO I-69	ROAD REHABILITATION	2.850	CON				
CASS	M-40	MARCELLUS HIGHWAY TO VAN BUREN COUNTY LINE	ROAD REHABILITATION	2.933	CON				
CASS	M-51	NILES TO DOWAGIAC	ROAD REHABILITATION	11.180		CON			
CASS	M-62	M-62 IN DOWAGIAC	ROAD REHABILITATION	1.292	CON				
KALAMAZOO	I-94	EAST OF LOVERS LANE TO EAST OF PORTAGE ROAD	MAJOR WIDENING	1.248		CON			
KALAMAZOO	I-94	I-94 OVER PORTAGE ROAD	REPLACE BRIDGE, ADD LANES			CON			
KALAMAZOO	I-94	KILGORE ROAD OVER I-94	REPLACE BRIDGE, ADD LANES			CON			
KALAMAZOO	I-94	PORTAGE ROAD TO SPRINKLE ROAD	MAJOR WIDENING	1.182		CON			
KALAMAZOO	I-94	I-94 OVER DAVIS CREEK	CULVERT REPLACEMENT			CON			
KALAMAZOO	I-94	I-94 OVER NORFOLK SOUTHERN	REPLACE BRIDGE, ADD LANES			CON			
KALAMAZOO	I-94	I-94 EB OVER GTW RAILROAD	REPLACE BRIDGE, ADD LANES			CON			
KALAMAZOO	I-94	I-94 WB OVER GTW RAILROAD	REPLACE BRIDGE, ADD LANES			CON			
KALAMAZOO	I-94 BL (Stadium Drive)	AT HOWARD STREET INTERSECTION	MINOR WIDENING	0.500	CON				
KALAMAZOO	I-94 BL (Stadium Drive)	EAST OF SENECA TO HOWARD	ROAD REHABILITATION	1.232	CON				
VAN BUREN	I-94 EB	FROM EAST OF CR 687 TO CR 681	ROAD REHABILITATION	2.355				CON	
VAN BUREN	I-94 EB	WEST OF M-51 TO EAST OF M-40	ROAD REHABILITATION	6.280					CON
VAN BUREN	M-40	72ND STREET TO SOUTH OF LAGRAVE STREET	ROAD REHABILITATION	3.402					CON
VAN BUREN	M-43	I-196 BL TO BLUE STAR HIGHWAY	ROAD REHABILITATION	0.762	CON				
VAN BUREN	M-51	SWARTWOOD DRIVE TO DECATUR	ROAD REHABILITATION	4.061	CON				
				84.905					

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SUPERIOR REGION

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ALGER	M-28	M-28 OVER SAND RIVER	OVERLAY - SHALLOW		CON				
BARAGA	US-41	US-41/M-28 OVER RUTH LAKE, THREE LAKES, 4.8 MILES WEST OF MARQUETTE COUNTY LINE	DECK PATCHING			CON			
HOUGHTON	US-41	US-41 OVER STURGEON RIVER SLOUGH	PAINTING COMPLETE			CON			
IRON	US-2	US-2 OVER S BR IRON RIVER	BRIDGE BARRIER RAILING REPLACE		CON				
MARQUETTE	M-95	M-95 OVER TROUT FALLS CREEK	SUBSTRUCTURE REPAIR		CON				
MARQUETTE	M-95	M-95 OVER MICHIGAMME RIVER	SUBSTRUCTURE REPAIR		CON				
MENOMINEE	M-35	M-35 OVER DEER CREEK	SUPERSTRUCTURE REPAIR			CON			
ONTONAGON	US-45	US-45 OVER ROSELAWN CREEK	SUPERSTRUCTURE REPAIR, STEEL				CON		
SCHOOLCRAFT	M-28	M-28, M-77 OVER FOX RIVER	PAINTING COMPLETE			CON			
				0.000					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ALGER	US-41	US-41 OVER WEST BRANCH WHITEFISH RIVER	DECK REPLACEMENT				CON		
DICKINSON	US-8	US-8 OVER MENOMINEE RIVER	DECK REPLACEMENT		CON				
IRON	US-141	US-141 OVER EAST BRANCH NET RIVER	OVERLAY - SHALLOW					CON	
MACKINAC	US-2	US-2 OVER BREVORT RIVER	BRIDGE REPLACEMENT		CON				
MARQUETTE	US-41	OLD M-28 (ABANDONED) OVER CARP RIVER	BRIDGE REMOVAL						CON
MENOMINEE	US-2	US-2 OVER BIG CEDAR RIVER	BRIDGE REPLACEMENT				CON		
ONTONAGON	M-26	M-26 OVER WEST BRANCH FIRESTEEL RIVER	DECK REPLACEMENT						CON
ONTONAGON	M-26	M-26 OVER EAST BRANCH FIRESTEEL RIVER	SUPERSTRUCTURE REPLACEMENT						CON
ONTONAGON	M-28	M-28 OVER BALTIMORE RIVER	DECK REPLACEMENT			CON			
ONTONAGON	M-64	M-64 OVER FLOODWOOD RIVER	DECK REPLACEMENT				CON		
				0.000					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
ALGER	M-28	EAST OF FFR 2275 TO EAST OF MUNISING AVENUE	RECONSTRUCTION	4.339		CON			
ALGER	M-28	ONOTA STREET TO ALGER/SCHOOLCRAFT COUNTY LINE	ROAD REHABILITATION	15.568				CON	
BARAGA	US-41	COVINGTON AND SPUR TOWNSHIPS, BARAGA COUNTY	ROAD REHABILITATION	9.633		CON			
BARAGA	US-41/M-28	M-28 TO NESTORIA HERMAN ROAD	ROAD REHABILITATION	7.542				CON	
CHIPPEWA	I-75	FROM M-80 TO M-28	ROAD REHABILITATION	8.230			CON		
CHIPPEWA	I-75	I-75 FROM MACKINAC COUNTY LINE NORTHLY TO M-28	ROAD REHABILITATION	0.002	CON				
CHIPPEWA	M-123	M-123 FROM M-28 TO THE NORTH 7.4 MILES	ROAD REHABILITATION	7.400		CON			
CHIPPEWA	M-129	FROM 10 MILE ROAD TO 18TH AVENUE IN SAULT STE MARIE	ROAD REHABILITATION	8.027					CON
CHIPPEWA	M-28	FROM I-75 TO M-129	ROAD REHABILITATION	2.693				CON	
CHIPPEWA	M-28	M-28 FROM M-221 TO I-75	ROAD REHABILITATION	7.998		CON			
CHIPPEWA	M-28	FROM EAST OF RACO TO M-221	ROAD REHABILITATION	5.917					CON
DELTA	US-2	EB US-2 BETWEEN GLADSTONE AND RAPID RIVER	ROAD REHABILITATION	5.549		CON			

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SUPERIOR REGION

REPAIR AND REBUILD ROADS - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
DICKINSON	M-95 (Carpenter Avenue)	MORIN STREET TO WOODWARD AVENUE, KINGSFORD	ROAD REHABILITATION	1.185					CON
DICKINSON	US-2	VULCAN TO DICKINSON/MENOMINEE COUNTY LINE	ROAD REHABILITATION	9.480	CON				
GOGEBIC	US-2 (Lead Street)	POWDERMILL CREEK TO OLD US-2	RECONSTRUCTION	1.813			CON		
GOGEBIC	US-2	EDDY STREET TO PIERCE STREET, THE CITY OF WAKEFIELD	ROAD REHABILITATION	1.040				CON	
HOUGHTON	M-203	SALO ROAD NORTHERLY TO 10.5 STREET, CITY OF CALUMET	ROAD REHABILITATION	5.862	CON				
HOUGHTON	US-41	HANCOCK AND FRANKLIN TOWNSHIP, HOUGHTON COUNTY	ROAD REHABILITATION	1.673		CON			
HOUGHTON	US-41 (College Avenue)	US-41 FROM MACINNES DRIVE TO ISLE ROYAL STREET	RECONSTRUCTION	0.893			CON		
HOUGHTON	US-41	NORTH OF AIRPARK BOULEVARD TO NORTH OF BOSTON	ROAD REHABILITATION	1.422	CON				
HOUGHTON	US-41	BARAGA COUNTY LINE NORTHERLY TO THE SNAKE RIVER	ROAD REHABILITATION	4.452		CON			
HOUGHTON	US-41	US-41 FROM LAKE ANNIE ROAD NORTH TO AGENT STREET	ROAD REHABILITATION	7.343				CON	
IRON	M-69	M-69 CRYSTAL FALLS TO SAGOLA, AND M-95 IN SAGOLA	ROAD REHABILITATION	11.465		CON			
KEWEENAW	M-26	M-26 FROM PHEONIX TO COPPER HARBOR	ROAD REHABILITATION	23.923		CON			
MACKINAC	M-134	M-134 FROM HILLTOP DRIVE TO MACKINAC/ CHIPPEWA COUNTY	ROAD REHABILITATION	12.277	CON				
MACKINAC	US-2	EAST LIMITS OF NAUBINWAY TO BORGSTROM ROAD	ROAD REHABILITATION	5.884	CON				
MACKINAC	US-2	BETWEEN HIAWATHA TRAIL AND CUT RIVER	NEW ROADS	1.392		CON			
MARQUETTE	M-95	M-95 FROM THE IRON COUNTY LINE NORTHERLY TO CR LLL	ROAD REHABILITATION	11.276		CON			
MARQUETTE	US-41	US-41 FROM BIG CREEK ROAD NORTHERLY TO M-28	ROAD REHABILITATION	3.134					CON
MARQUETTE	US-41	WEST OF BRICKYARD ROAD NORTHERLY TO IROQUOIS DRIVE	ROAD REHABILITATION	6.355					CON
MARQUETTE	US-41	COUNTY ROAD HQ TO WEST OF BRICKYARD ROAD	RECONSTRUCTION	0.932	CON				
MARQUETTE	US-41/M-28	US-41/M-28 FROM FRONT STREET TO COUNTY ROAD HQ	ROAD REHABILITATION	2.652			CON		
MARQUETTE	US-41/M-28	FURNACE STREET TO US-41 BYPASS	RECONSTRUCTION	0.374				CON	
MENOMINEE	US-41	FROM MENOMINEE TO WALLACE	ROAD REHABILITATION	12.336				CON	
MENOMINEE	US-41	US-41 FROM WALLACE TO STEPHENSON	ROAD REHABILITATION	5.702					CON
SCHOOLCRAFT	M-77	M-28 IN SENEY TO SCHOOLCRAFT/ALGER COUNTY LINE	ROAD REHABILITATION	11.960	CON				
SCHOOLCRAFT	US-2	FROM M-149 TO MANISTIQUE CITY LIMIT	ROAD REHABILITATION	4.036	CON				
				231.759					

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UNIVERSITY REGION

BRIDGE - BIG BRIDGE PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
MONROE	I-75	I-75 OVER CONRAIL RR, RAISIN RIVER, FRONT STREET	OVERLAY - EPOXY		CON				
				0.000					

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
CLINTON	I-69	I-69 SB OVER CSX RAILROAD	OVERLAY - EPOXY				CON		
CLINTON	I-69	AIRPORT ROAD OVER I-69	OVERLAY - EPOXY				CON		
CLINTON	I-69	LOWELL ROAD OVER I-69	OVERLAY - EPOXY				CON		
CLINTON	I-69	I-69 SB OVER EB TURNING ROADWAY	OVERLAY - EPOXY				CON		
CLINTON	I-69	I-69 NB OVER EB TURNING ROADWAY	OVERLAY - EPOXY				CON		
CLINTON	I-69	I-69 SB OVER I-96 BL GRAND RIVER AVENUE	OVERLAY - EPOXY				CON		
CLINTON	I-69	I-69 NB OVER I-96 BL GRAND RIVER AVENUE	OVERLAY - EPOXY				CON		
CLINTON	I-69	I-69 SB OVER I-96	OVERLAY - EPOXY				CON		
CLINTON	I-69	FRANCIS ROAD OVER EB AND WB TURNING ROAD	OVERLAY - EPOXY				CON		
CLINTON	I-69	EB TURNING ROADWAY OVER I-96	OVERLAY - EPOXY				CON		
EATON	I-69	AINGER ROAD OVER I-69	OVERLAY - DEEP			CON			
EATON	I-69	I-96 EB OVER GRAND RIVER	OVERLAY - EPOXY				CON		
EATON	I-69	I-96 WB OVER GRAND RIVER	OVERLAY - EPOXY				CON		
EATON	I-69	I-69 SB TO I-96 EB OVER GRAND RIVER	OVERLAY - EPOXY				CON		
EATON	I-69	I-69 SB OVER INDIAN CREEK	OVERLAY - EPOXY	0.506		CON			
EATON	I-69	I-69 NB OVER INDIAN CREEK	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 NB OVER BATTLE CREEK RIVER	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 SB ON RAMP OVER INDIAN CREEK	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 NB OFF RAMP OVER INDIAN CREEK	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 SB OVER BIG CREEK	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 NB OVER BIG CREEK	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 SB OVER BATTLE CREEK RIVER	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 NB OVER GTW RAILROAD	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 SB OVER GTW RAILROAD	OVERLAY - EPOXY			CON			
EATON	I-69	BASELINE HIGHWAY OVER I-69	OVERLAY - DEEP			CON			
EATON	I-69	BUTTERFIELD HIGHWAY M-78 OVER I-69 SHERWOOD	OVERLAY - EPOXY			CON			
EATON	I-69	ROAD OVER I-69	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 BL OVER I-69	OVERLAY - EPOXY			CON			
EATON	I-69	KALAMO ROAD OVER I-69	OVERLAY - EPOXY			CON			
EATON	I-69	ISLAND HIGHWAY OVER I-69	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 SB OVER STINE ROAD	OVERLAY - EPOXY			CON			
EATON	I-69	FIVE POINT HIGHWAY OVER I-69	OVERLAY - EPOXY			CON			
EATON	I-69	I-69 NB OVER STINE ROAD	OVERLAY - EPOXY			CON			
INGHAM	I-96	HAGADORN ROAD OVER I-96	DECK PATCHING			CON			
INGHAM	I-96	MERIDIAN ROAD OVER I-96	DECK PATCHING			CON			
INGHAM	I-96	ZIMMER ROAD OVER I-96 EB	DECK PATCHING			CON			
INGHAM	I-96	ZIMMER ROAD OVER I-96 WB	DECK PATCHING			CON			
INGHAM	I-96 BL (S Cedar Street)	I-96 BL OVER GTW, SOUTH STREET AND RED CEDAR	OVERLAY - EPOXY					CON	

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BRIDGE - PRESERVATION - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
INGHAM	I-96 BL (S Cedar Street)	US-27 BR OVER CSX RAILROAD AND WB I-96 BR	OVERLAY - EPOXY					CON	
JACKSON	US-127	US-127 NB OVER CONRAIL	OVERLAY - EPOXY						CON
JACKSON	US-127	US-127 SB OVER CONRAIL	OVERLAY - EPOXY						CON
JACKSON	US-127	SPRINGPORT ROAD OVER US-127	OVERLAY - EPOXY						CON
MONROE	I-75	LUNA PIER ROAD OVER I-75	OVERLAY - EPOXY				CON		
MONROE	I-75	ALLEN COVE ROAD OVER I-75	OVERLAY - EPOXY				CON		
MONROE	I-75	OTTER CREEK ROAD OVER I-75	OVERLAY - EPOXY				CON		
MONROE	I-75	I-75 AND M-125 CONNECTOR OVER I-75	OVERLAY - DEEP	0.053	CON				
MONROE	I-75	I-75 RAMP B OVER I-75	OVERLAY - DEEP		CON				
WASHTENAW	I-94	I-94 OVER I-94 BL	OVERLAY - EPOXY						CON
WASHTENAW	I-94	I-94 EB OVER MILL CREEK	OVERLAY - EPOXY						CON
WASHTENAW	I-94	I-94 WB OVER MILL CREEK	OVERLAY - EPOXY						CON
WASHTENAW	I-94	I-94 EB OVER CONRAIL	OVERLAY - EPOXY						CON
WASHTENAW	I-94	NOTTEN ROAD OVER I-94	OVERLAY - EPOXY						CON
WASHTENAW	I-94	KALMBACH ROAD OVER I-94	OVERLAY - DEEP						CON
WASHTENAW	I-94	M-52 OVER I-94	OVERLAY - EPOXY						CON
WASHTENAW	I-94	FREER ROAD OVER I-94	OVERLAY - EPOXY						CON
WASHTENAW	I-94	OLD US-12 OVER I-94	OVERLAY - EPOXY						CON
WASHTENAW	I-94	JACKSON AVENUE WB, I-94 BR OVER I-94 RAMP	OVERLAY - EPOXY						CON
WASHTENAW	US-23	US-23 NB OVER CONRAIL AND HURON RIVER	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	US-23 SB OVER CONRAIL AND HURON RIVER	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	US-23 NB, I-94 BL OVER PACKARD ROAD	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	US-23 SB, I-94 BL OVER PACKARD ROAD	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	US-23 NB OVER US-23 BR	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	US-23 SB OVER US-23 BR	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	US-23 NB OVER HURON RIVER DRIVE	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	US-23 SB OVER HURON RIVER DRIVE	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	GEDDES ROAD OVER US-23	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	EARHART ROAD OVER US-23	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	PLYMOUTH-ANN ARBOR OVER US-23	OVERLAY - EPOXY		CON				
WASHTENAW	US-23	ELLSWORTH ROAD OVER US-23	OVERLAY - EPOXY		CON				
				0.559					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
INGHAM	I-496	I-496 WB RAMP OVER CSX RAILROAD	BRIDGE REPLACEMENT	0.173				CON	
INGHAM	I-96 BL	I-96 BL OVER HORESBROOK CREEK	CULVERT REPLACEMENT	0.000				CON	
JACKSON	M-60	M-60 EB RAMP I-94 OVER I-94	BRIDGE REPLACEMENT	1.564		CON			
JACKSON	M-60	M-60 WB RAMP I-94 OVER I-94	BRIDGE REPLACEMENT			CON			
LIVINGSTON	I-96	I-96 BL (ON RAMP) OVER I-96 WB	DECK REPLACEMENT	0.000					CON
MONROE	I-275 BIKE PATH	BIKE PATH OVER GTW RAILROAD	BRIDGE REMOVAL	0.000		CON			
MONROE	I-275 BIKE PATH	BIKE PATH OVER CONRAIL	BRIDGE REMOVAL			CON			
MONROE	I-75	LAPLAISANCE ROAD OVER I-75	BRIDGE REPLACEMENT	1.325			CON		
MONROE	I-75 (Detroit-Toledo Freeway)	I-75 NB OVER MUDDY CREEK	BRIDGE REPLACEMENT	0.000			CON		
MONROE	I-75 (Detroit-Toledo Freeway)	I-75 SB OVER MUDDY CREEK	BRIDGE REPLACEMENT				CON		
MONROE	I-75 (Detroit-Toledo Freeway)	I-75 NB OVER OTTER CREEK	BRIDGE REPLACEMENT				CON		
MONROE	I-75 (Detroit-Toledo Freeway)	I-75 SB OVER OTTER CREEK	BRIDGE REPLACEMENT				CON		
MONROE	I-75 (Detroit-Toledo Freeway)	I-75 NB OVER HALFWAY CREEK	BRIDGE REPLACEMENT	0.000	CON				
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 SB OVER HALFWAY CREEK	BRIDGE REPLACEMENT		CON				
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 NB OVER BAY CREEK	BRIDGE REPLACEMENT		CON				

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UNIVERSITY REGION

BRIDGE REPLACEMENT - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 SB OVER BAY CREEK	BRIDGE REPLACEMENT		CON				
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 NB OVER POWER COUNTY RAILROAD SPUR	BRIDGE REPLACEMENT		CON				
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 SB OVER POWER COUNTY RAILROAD SPUR	BRIDGE REPLACEMENT		CON				
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 NB OVER BAY CREEK ROAD	BRIDGE REPLACEMENT		CON				
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 SB OVER BAY CREEK ROAD	BRIDGE REPLACEMENT		CON				
MONROE	I-75 N (Detroit-Toledo Freeway)	ERIE ROAD OVER I-75	BRIDGE REPLACEMENT		CON				
				3.062					

FREEWAY RESURFACING PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
JACKSON	US-127	EB I-94 OFF RAMP TO PARNELL ROAD	ROAD REHABILITATION	1.307	CON				
				1.307					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2019	2020	2021	2022	2023
CLINTON	I-69	I-96 TO AIRPORT ROAD	RECONSTRUCTION	5.391			CON		
CLINTON	Old US-27	OLD US-27 FROM PRATT TO TAFT	ROAD REHABILITATION	3.720	CON				
CLINTON	US-127	US-127 FROM SOUTH OF M-43 TO SOUTH OF CLARK ROAD	ROAD REHABILITATION	5.149				CON	
EATON	I-496	I-496 FROM I-96 TO LANSING ROAD	RECONSTRUCTION	4.529		CON			
EATON	I-69	I-69 SOUTH OF THE CALHOUN/ EATON COUNTY LINE TO M-50	ROAD REHABILITATION	15.040		CON			
EATON	M-50	LONG HIGHWAY TO HALLAWOOD DRIVE	ROAD REHABILITATION	3.769	CON				
HILLSDALE	M-99 (Hudson Road)	NORTH STEAMBURG ROAD TO SOUTH STEAMBURG ROAD	ROAD REHABILITATION	1.555	CON				
HILLSDALE	M-99 (Homer Road)	STRAIT COURT TO ADAMS STREET	ROAD REHABILITATION	5.902		CON			
HILLSDALE	Old M-99 (Beck Road)	OLD M-99 (BECK ROAD), BOTH SECTION	ROAD REHABILITATION	2.111	CON				
INGHAM	M-43 (Grand River Avenue)	PARK LAKE ROAD TO DOBIE ROAD	ROAD REHABILITATION	2.073					CON
INGHAM	M-99	FROM NORTH OF HOLT HIGHWAY TO EDGEWOOD NORTH	RECONSTRUCTION	2.376				CON	
JACKSON	I-94	I-94 AT ELM ROAD	RECONSTRUCTION	1.499			CON		
JACKSON	I-94	ELM ROAD OVER I-94	BRIDGE REPLACEMENT				CON		
JACKSON	I-94	MICHIGAN AVENUE TO M-60	RECONSTRUCTION	7.583					CON
JACKSON	I-94	I-94 UNDER LANSING AVENUE	RECONSTRUCTION	0.464			CON		
JACKSON	I-94	LANSING AVENUE OVER I-94	BRIDGE REPLACEMENT				CON		
JACKSON	M-60	EMERSON ROAD TO RENFREW ROAD	ROAD REHABILITATION	2.528				CON	
JACKSON	US-127	NORTH OF HENRY ROAD TO JACKSON/ INGHAM COUNTY LINE	ROAD REHABILITATION	5.037			CON		
LENAWEE	M-50 (W Chicago Boulevard)	M-52 TO SUNSET STREET	ROAD REHABILITATION	2.527	CON				
LENAWEE	US-223	ROME ROAD TO INDUSTRIAL DRIVE	ROAD REHABILITATION	8.352				CON	
LIVINGSTON	I-96	I-96 FROM CHILSON TO DORR	ROAD REHABILITATION	3.708					CON
LIVINGSTON	M-36	M-36 KELLY DRIVE TO WEST CITY LIMITS OF PINCKNEY	ROAD REHABILITATION	2.378	CON				
LIVINGSTON	M-59	WEST OF LAKENA ROAD TO THE COUNTY LINE	ROAD REHABILITATION	3.309				CON	
LIVINGSTON	US-23 NB	NB US-23 BETWEEN 8 MILE AND M-36	OPERATION IMPROVEMENTS	0.413		CON			
MONROE	I-75	I-75 FROM OHIO STATE LINE TO ERIE ROAD	RECONSTRUCTION	5.060	CON				
MONROE	I-75	I-75 FROM ERIE ROAD TO OTTER CREEK ROAD	RECONSTRUCTION	3.731			CON		
MONROE	US-24	READY TO WAYNE COUNTY LINE	ROAD REHABILITATION	3.347		CON			
WASHTENAW	I-94	WASHTENAW/JACKSON COUNTY LINE TO FREER	ROAD REHABILITATION	6.542					CON
WASHTENAW	M-17/US-12 BR (Cross Street)	NORMAL TO MICHIGAN, I-94 TO MICHIGAN, HAMILTON TO ECORSE	ROAD REHABILITATION	2.307				CON	
WASHTENAW	US-12	US-12 FELDKAMP TO SALINE WEST CITY LIMITS	ROAD REHABILITATION	3.868		CON			
WASHTENAW	US-23 BR (Main Street)	I-94 BL TO M-14	ROAD REHABILITATION	1.239				CON	
WASHTENAW	US-23	NORTH OF PLYMOUTH ROAD TO I-94	ROAD REHABILITATION	6.784	CON				
				122.291					

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Acronyms and Definitions

Acronyms

ACIP	Airport Capital Improvement Program
BRT	Bus Rapid Transit
CATA	Capital Area Transportation Authority
CMAQ	Congestion Mitigation Air Quality
CPM	Capital Preventive Maintenance
CTF	Comprehensive Transportation Fund
DDOT	Detroit Department of Transportation
DDP	Downtown Detroit Partnership
DG	Dense Grade
DNR	Michigan Department of Natural Resources
GGSP	Gap Grade Superpave
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HTF	Highway Trust Fund
LBO	Local Bus Operating
MAP-21	Moving Ahead for Progress in the 21st Century
MASP	Michigan Aviation System Plan
MPO	Metropolitan Planning Organization
MTF	Michigan Transportation Fund
OGDC	Open Graded Drainage Course
PCI	Pavement Condition Index
QLINE	M-1 RAIL in Detroit
R & R	Road Rehabilitation and Reconstruction
RSL	Remaining Service Life
RTA	Regional Transportation Authority of Southeast Michigan
SAF	State Aeronautics Fund
SHSP	Strategic Highway Safety Plan
STF	State Trunkline Fund
STIP	State Transportation Improvement Program
TIP	Transportation Improvement Program
TSC	Transportation Service Center
TZD	Toward Zero Deaths

Definitions

DBFM (design-build-finance-maintain) is an innovative contracting model that uses the DB methodology, but transfers risk to the contractor for the long-term performance of the work. The DBFM team is responsible for not only designing and building the project, but to maintain it for a period between 25 to 30 years; accordingly, they have a vested interest in ensuring it performs well in order to manage their long-term risk and be paid back over time as it hits agreed upon standards. Because of this risk transfer, it is also possible for the financial arm of the DBFM team to spread MDOT repayments over the term of the maintenance period. This frees up more money in the short term for MDOT to invest in other parts of transportation system.

Notes

MICHIGAN DEPARTMENT
OF TRANSPORTATION

2019-2023
FIVE-YEAR
TRANSPORTATION
PROGRAM

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MDOT
Michigan Department of Transportation

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