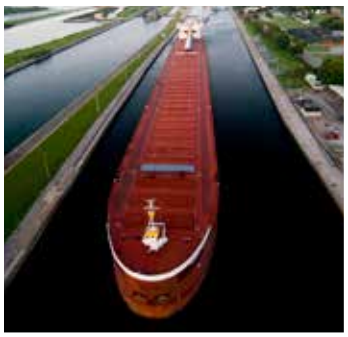
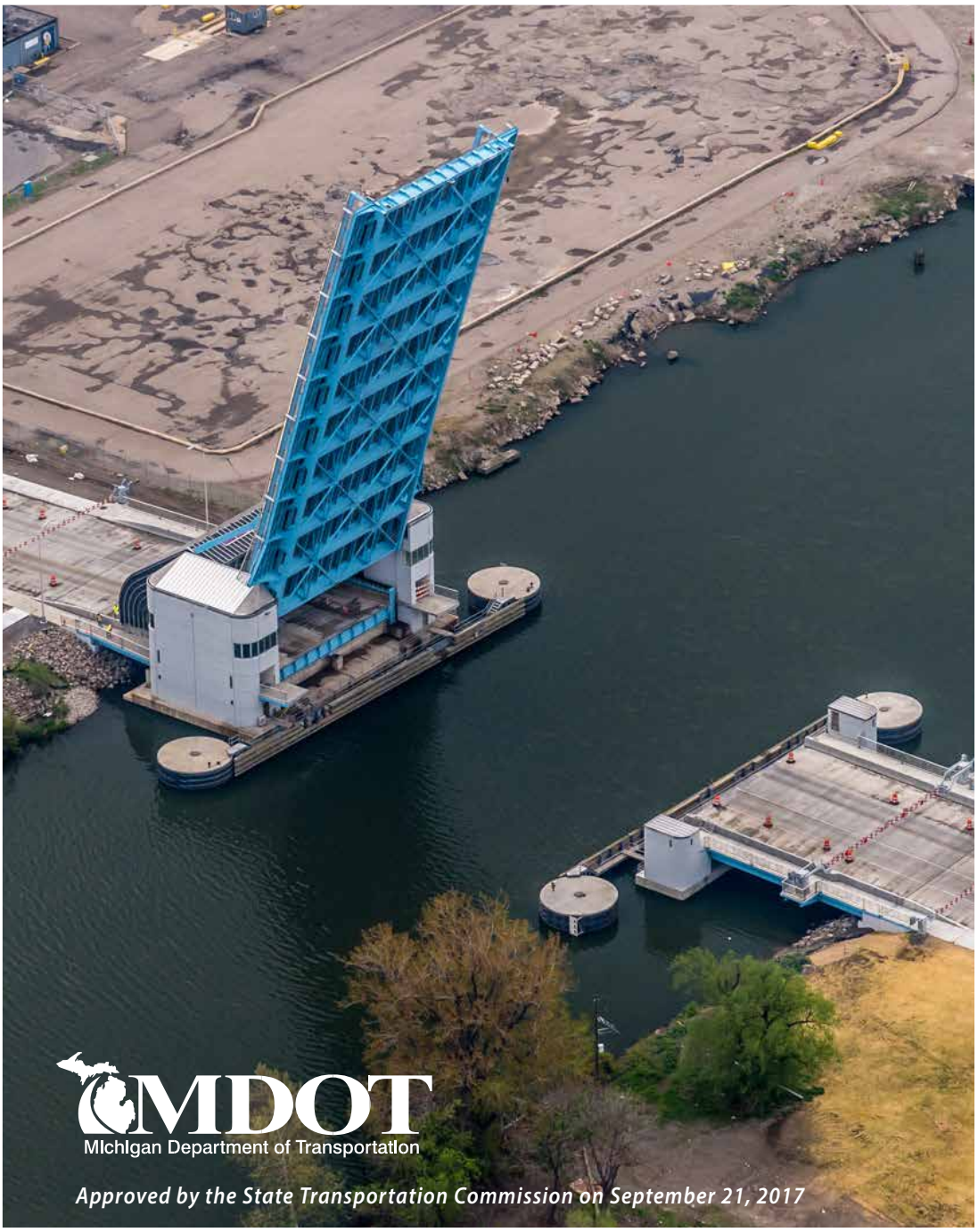
MICHIGAN DEPARTMENT OF TRANSPORTATION

2018-2022 FIVE-YEAR TRANSPORTATION PROGRAM





MDOT
Michigan Department of Transportation

Approved by the State Transportation Commission on September 21, 2017

Fort Street Bridge (M-85) over Rouge River

Dear Reader:

I present to you the 2018-2022 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 2018-2022 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

Mobility Innovation, Technology and Infrastructure

The state of Michigan has always been a pioneer in transportation and automotive innovation. This first section of the Five-Year Transportation Program highlights connected vehicle technologies, pavement innovations, major trunkline infrastructure projects, and Gov. Rick Snyder's 21st Century Infrastructure Commission report.

Planet M is a mobility program initiated by Gov. Snyder to support research and development of connected and automated vehicles and infrastructure in Michigan. The program involves collaboration among the automobile industry, universities, and all levels of government. This "smart infrastructure" electronically relates the autonomous vehicles to surrounding roads, traffic signals, pedestrians, bicyclists, trains, buses, etc. Verifying safety is obviously the primary goal for research and also a better understanding of the connected environment of the future. For more on these efforts, please visit *www.planetm.com*.

Above photos: Testing platooning connected vehicles

Connected and Automated Vehicles (CAV)

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 connected and automated vehicle (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.

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 to 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 on 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 and other partners in Michigan have already begun testing this technology at various sites around the state. Through partnerships with universities, auto manufacturers, and grants from the federal government, MDOT has gained invaluable insight and positioned Michigan to continue in its leadership role in this field.

Examples of these test projects include:

Mound Road Signal Phase and Timing and Auburn Hills Test Bed Deployment

Connected vehicle infrastructure was installed by MDOT in partnership with automotive manufacturers and local road agencies as part of two different projects. In Macomb County, MDOT worked with General Motors and the Macomb County Department of Roads to install connected vehicle infrastructure at two intersections along the Mound Road corridor and at the General Motors Technical Center in Warren. Similar infrastructure was installed in Auburn Hills at the Fiat Chrysler Automobiles (FCA) campus in conjunction with FCA and the Road Commission for Oakland County. Both of these projects help to further testing and development of connected vehicle applications.

The Mound Road traffic signals, located at the intersections of 12 Mile and 13 Mile roads, were able to send real-time data to the vehicles, which could alert the driver of a potential red light violation. It's this type of connected technology that holds promise for drastically reducing crashes that result in death or serious injury, especially at busy intersections. "It is critical that we partner with government agencies like MDOT to explore and validate V2I communication," said GM Executive Director of Research and Development Gary Smyth. "Only through collaboration will we be able bring an advanced technology like this to market in the future."

I-75 Modernization Test Bed Deployment

MDOT is in the midst of 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.

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 connected and autonomous vehicles of the future. 3M will be providing MDOT with advanced all-weather lane markings, retroreflective signs with smart sign technology and DSRC (dedicated short-range communication) devices for V2I communications.

I-69 Truck Platooning Test Support

The U.S. Army Tank Automotive 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 were 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. Platooning is technology that enables trucks to connect closely together, improving safety and allowing fuel savings.

Mcity

Mcity is a 32-acre connected and automated vehicle testing center located at the University of Michigan in Ann Arbor. The facility is a joint initiative with the University of Michigan Transportation Research Institute, MDOT, and the automotive industry where connected and automated vehicle technology and infrastructure can be tested safely in a variety of suburban and urban environments.

American Center for Mobility

In November 2016, Gov. Snyder and members of a Congressional delegation were among many state and local officials breaking ground for the new test site for autonomous vehicles. The American Center for Mobility (ACM) is a testing and product development facility for connected and automated vehicle 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. ACM also offers an opportunity for larger-scale research, development, and testing due to both the size of the facility and more diverse infrastructure. This test site has been named one of 10 national proving grounds by the USDOT. Construction schedules have the facility opening in December 2017.

How is the ACM facility different than the Mcity project? ACM is substantially larger and is able to test vehicles at high speeds and in more real-life environments. 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.

Mcity located at the University of Michigan.

American Center for Mobility located in Willow Run.

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 enabled on-road testing of technology, commercial vehicle platooning, and established the ACM.

Implementing Road Innovation

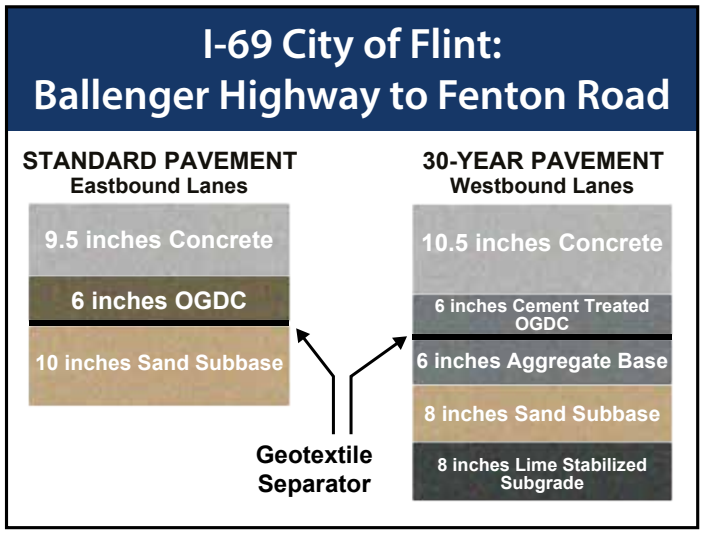
In 2016, MDOT formed a Roads Innovation Task Force to review longer-term timeframes for reconstruction based on direction from PA 175 of 2015. MDOT continually seeks new materials, technologies, and construction methods that have potential to improve pavement performance. An obvious question from the public might be, why don't you just build all roads to last 50 years? But when more money is invested on higher cost-per-lane mile, fewer lane miles of pavement can be improved overall. Investing more to reconstruct fewer miles would mean more lane miles of roadway would fall into poor condition. MDOT currently employs a mix of fixes. Typically roads reconstructed are built to the current 20-year design standard to maximize pavement condition across the entire network.

MDOT will begin four demonstration projects in Fiscal Year (FY) 2017 and FY 2018 in the Bay and Grand regions implementing 30 and 50-year road design standards. These projects will begin the long process of gathering Michigan-specific pavement life-cycle data for the new longer-lasting pavement treatments in order to generate deterioration data on these treatments.

I-69, Flint: 30-Year Concrete Pavement

I-69, Flint: 30-Year Concrete Pavement

This project is a concrete pavement reconstruction of 2.1 miles of I-69, including ramps, bridge work, drainage work, signal replacement, and freeway lighting installation from Ballenger Highway to Fenton Road in the city of Flint, Genesee County. The project will utilize two pavement sections, a standard pavement cross-section (eastbound) and a 30-year pavement section (westbound). The graphic below features the 30-year pavement section, including the following additional features compared to the standard cross-section.



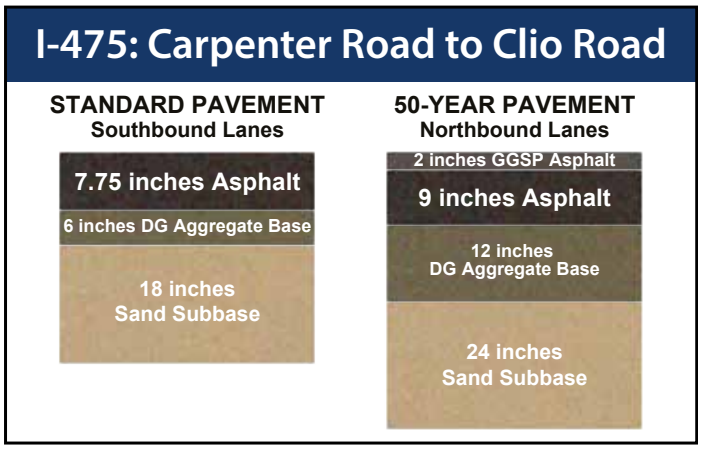
Traffic will be maintained via crossovers at each end of the project, allowing for two open lanes in each direction. Some work will require lane closures and short-term detours. Work for temporary widening and construction of crossovers are scheduled to be completed in fall 2017, with the majority of road reconstruction to take place during the 2018 construction season.

Pavement Cross-section Graphics Acronyms

DG = Dense Grade
GGSP = Gap Graded Superpave
OGDC = Open Graded Drainage Course

I-475, Carpenter Road to Clio Road, Genesee County: 50-Year Asphalt

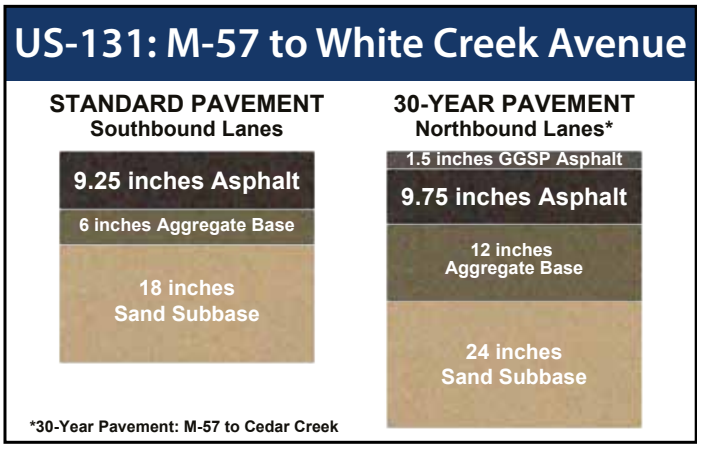
This project is an asphalt pavement reconstruction of 3.7 miles of I-475, including ramps, bridge work, drainage work, signal replacement, sign replacement, and freeway lighting installation. Some notable items of work include a lane reduction from Carpenter Road to Saginaw Road, removing two pedestrian bridges, removing the loop ramps at the Saginaw Road interchange, and creating a diamond interchange. The project will use two pavement sections, a standard pavement cross-section (southbound) and a 50-year pavement section (northbound). The graphic below depicts the 50-year pavement section, including the following additional features compared to the standard cross-section. Traffic is proposed to be maintained via a partial detour. Work is expected to begin in late 2018, with road reconstruction to take place during the 2019 construction season.



I-475, Genesee County: 50-Year Asphalt

US-131, Kent County: 30-Year Asphalt

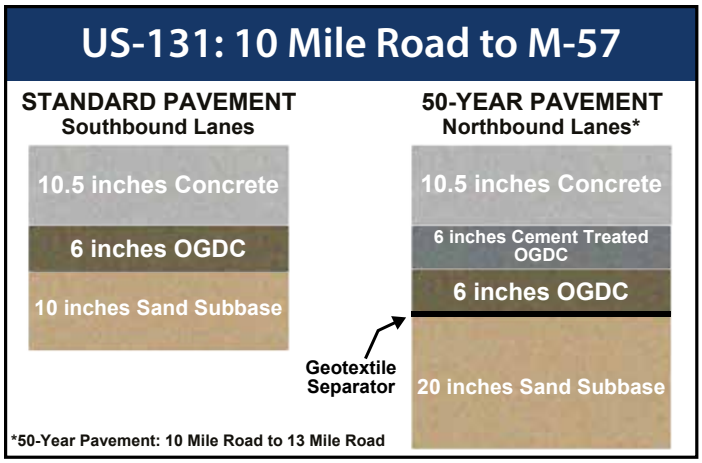
This project consists of 3.6 miles of freeway reconstruction, including ramp and bridge work, from north of M-57 (14 Mile Road) to White Creek Avenue in Kent County. There will be a section of this project constructed using MDOT's standard design and a section using the 30-year asphalt pavement design. This project began in 2017, and is on schedule to be completed later this year within the project budget. The graphic below depicts the 30-year pavement section including the following additional features compared to the standard cross section. Traffic will be maintained using a split-merge scheme to maintain two lanes in each direction. Some work will require lane closures and short-term detours.



US-131, Kent Count: 30-Year Asphalt (FY 2017) and 50-Year Concrete (FY 2018)

US-131, Kent County: 50-Year Concrete

The project consists of 4.4 miles of freeway reconstruction including ramps and bridge work, from north of 10 Mile Road to north of M-57 (14 Mile Road) in Kent County. There will be a control section constructed using MDOT's standard design and a section using the 50-year concrete pavement design. The graphic below depicts the 50-year pavement section, including the following additional features compared to the standard cross-section. This project will be constructed in FY 2018 and 2019.



Following are some highlights of 30-year and 50-year road pavements:

- Stricter limitations on recycled material:
  - Currently, recycled asphalt pavement is allowed in the surface hot-mix asphalt (HMA) mixture, but is not being allowed in the surface course for the 30-year and 50-year pavement.
  - For concrete, the open graded base, which allows recycled concrete, will be required to be stabilized.
- A tougher corrosion-resistant high-grade epoxy coating of the dowel bars will be required for concrete.
- Use of stabilized base and subgrade for concrete.
- Increased ride quality requirements.
- Many other details involving materials, drainage enhancements, etc.

Highlighting Future and 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 RFP phase to select a private-sector partner is expected to take approximately 18 months. 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 a general engineering consultant who is performing important project-related functions. 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.

Implementation of this project will be complex, lengthy, and must comply with the Crossing Agreement. Once the private-sector partner is selected, construction is expected to take four years.

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.

The Lafayette Bridge when constructed in 1938.

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 rehabilitation versus replacing the structure. Replacement was recommended due to the scour critical status of the existing structure, the age of the existing substructure, and constructability issues requiring specialized and highly complex repairs.

The Lafayette Bridge today.

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 an 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.

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 (BL) 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-94, Berrien County

The I-94 freeway project in Berrien County scheduled to begin in FY 2021 will address poor pavements and bridge conditions on I-94 from Britain Road to I-196. The pavement within this area is composite, asphalt that has been placed over the original concrete, which dates to the 1960s. Ride quality of this road is poor due to the failed joints in the underlying concrete. The reconstruction project within this five-year program will include reconfiguring and partial construction of the I-94 BL interchange. The reconfigured interchange and bridges will be realigned; however, it will not complete the connection from I-94 to US-31. The freeway terminus will remain Napier Avenue.

Bus Rapid Transit (BRT) 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 fourth 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, and the grant agreement is anticipated to be received upon the passage of a full-year FY 2017 federal appropriation bill.

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 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 will begin 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.

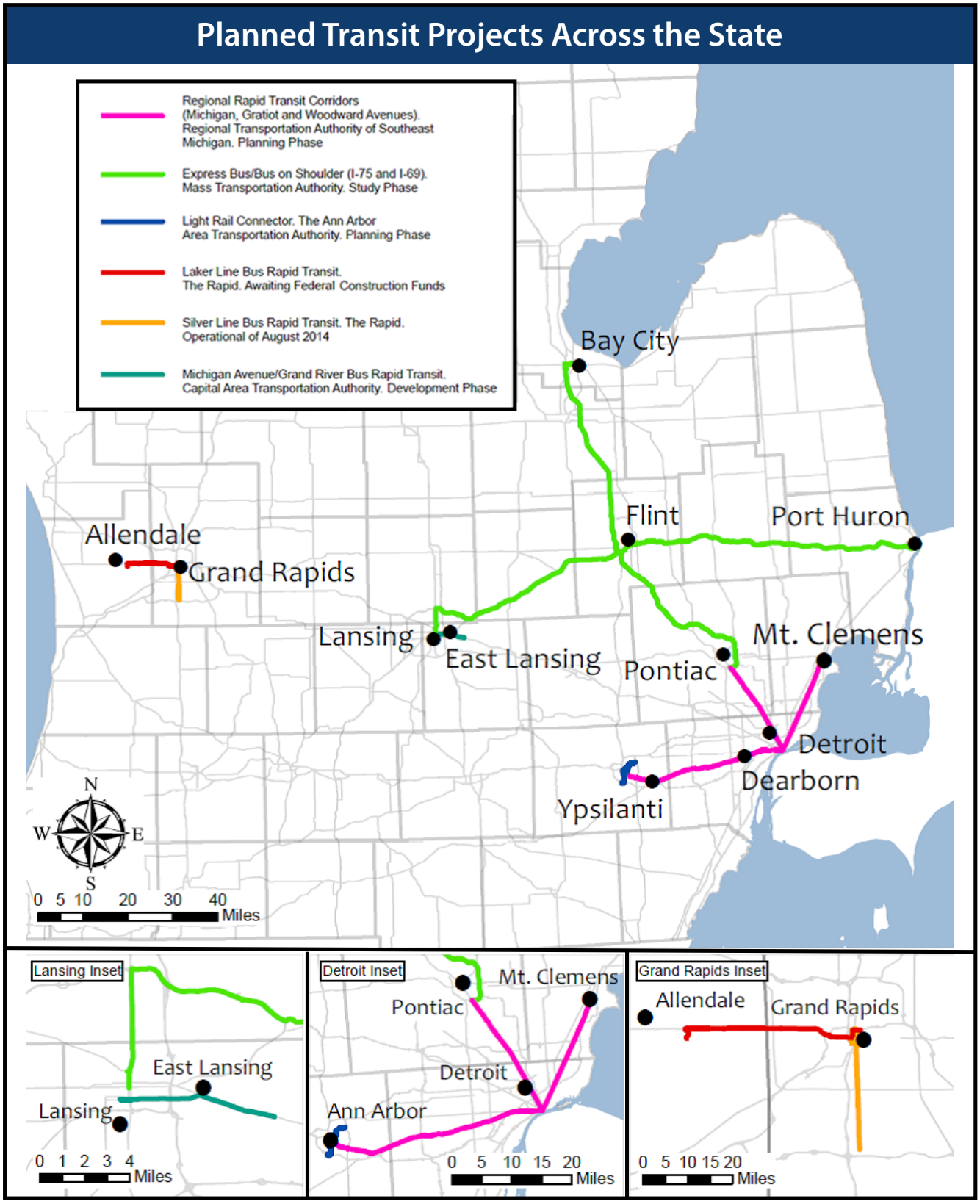
Studies have also been conducted for the Michigan Avenue and Gratiot Avenue corridors. The two studies evaluated alternatives for reliable, higher-quality transit between Detroit and Mt. Clemens, including the portion of Gratiot Avenue to M-59 and between Detroit and Ann Arbor, including the Detroit Metropolitan Wayne County (Metro) Airport. Actual service implementation will be dependent on their ability to secure federal, state and local funding.

In Ann Arbor, an alternatives analysis is underway 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.

The Flint-area transit agency, the Mass Transportation Authority, has commissioned a study of the I-75 corridor between Bay City and Detroit, which will include 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.

See map on page 15 that shows planned transit projects across the state.

Planned Transit Projects Across the State



St. Clair County International Airport

The St. Clair County International Airport in Port Huron provides both commercial corporate and general aviation services. In 2018, runway 4/22 will be rehabilitated along with lighting installation. The estimated construction costs are $4 million.

St. Clair County Airport.

Alpena Terminal Building

The Alpena County Regional Airport (APN) is a public-use commercial service airport located 6 miles west of the city of Alpena, Alpena County. The current terminal configuration at APN provides insufficient area for boarding and deplaning passengers, bag claim and airport operations. Additionally, it does not comply with current building codes and air quality codes, nor does it meet Americans with Disabilities Act guidelines. The overall terminal facility has been extended beyond its useful life. APN serves the Air National Guard, which has a Combat Readiness Training Facility and is used by guard units throughout the U.S. APN will be constructing a new terminal building in 2018 and 2019, estimated at $11.9 million of federal, state, and local funding.

Proposed Alpena terminal building.

Current Alpena terminal building.

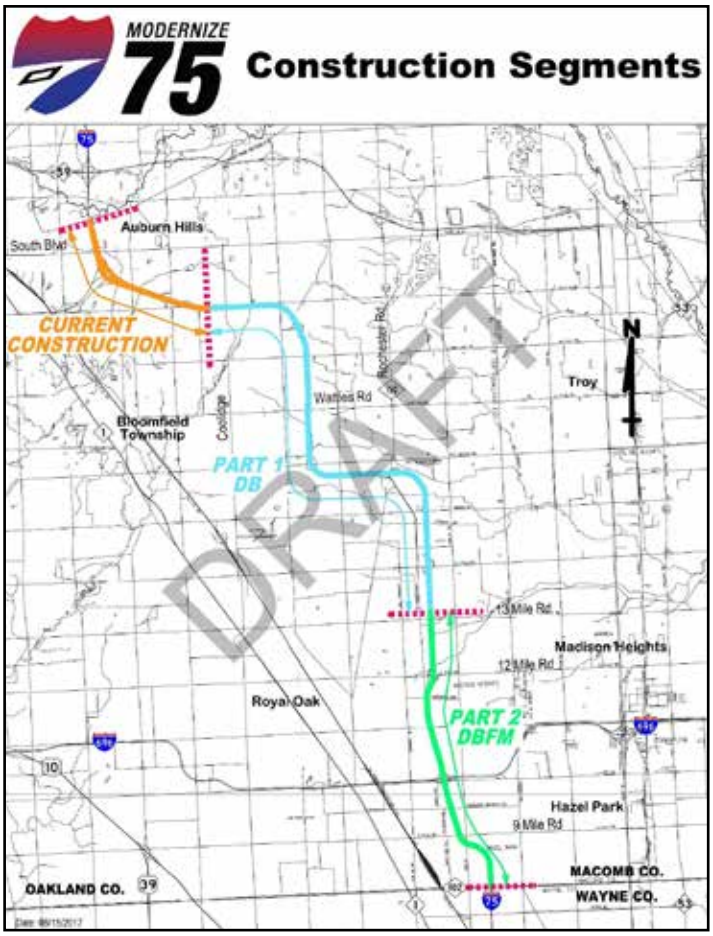
I-75 Modernization in Oakland County

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, which began construction in 2016 with a design-build (DB) segment from north of Coolidge Road to north of South Boulevard, also included modernizing the Square Lake Road interchange with standard right on and off ramps without impacting right of way. This modification improves operations and safety at the interchange and, along the entire I-75 corridor specifically, reduces sideswipe and rear-end crashes. It also improves the merge/weave movements within this segment, along with reconstruction of existing pavement. This segment is open to traffic, with minimal restoration and final clean-up during fall 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-part approach, with both running concurrently (see adjacent map). Part 1, extending from Coolidge Road to 13 Mile Road, is planned to be delivered as a DB project, and then Part 2, 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 2022 or 2023. Reducing the construction time will significantly reduce disruption 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. Refer to page 81 for continued discussion of the DB and DBFM details.

Construction of the remaining parts 1 and 2 will commence in 2019. The I-75 Oakland County projects within the back of this document reflect these revised schedule changes, but they are still evolving and need to be approved through the metropolitan planning organization (MPO) process.



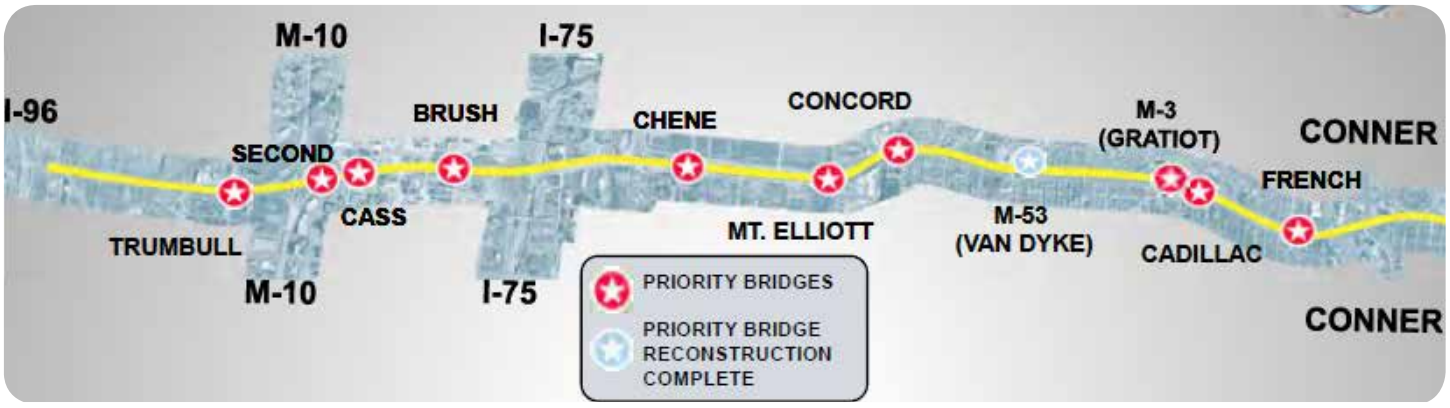
I-94 Modernization in Detroit

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 needs to be reconstructed to improve safety, traffic flow, pavement and bridge condition, freight mobility, and local access to the freeway.

In addition to the reconstruction of 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.

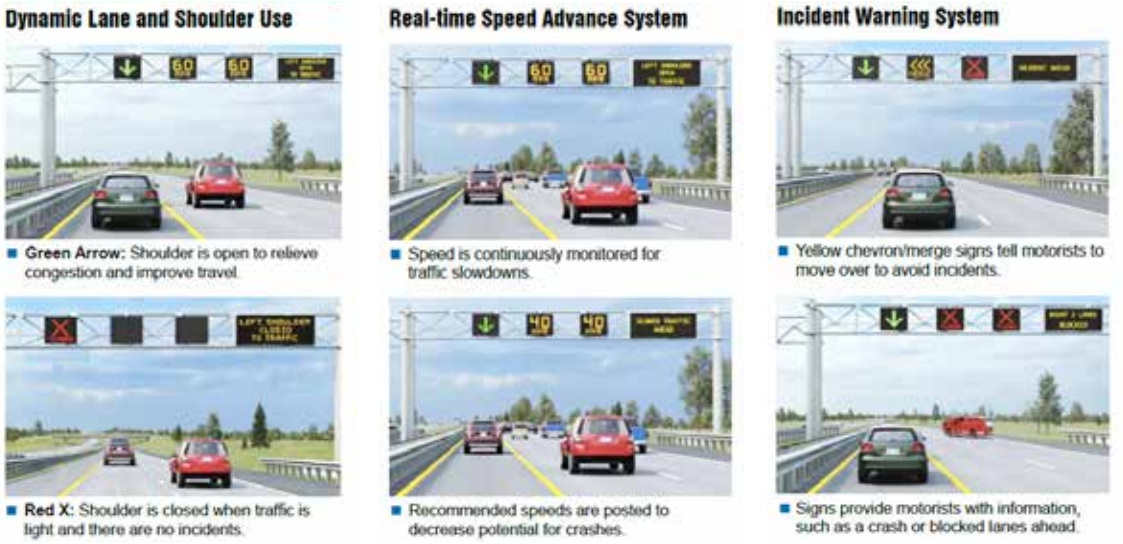
In 2015, the Woodward Avenue overpass was completed and built to accommodate M-1 RAIL. In 2016, the new Trumbull Avenue bridge was completed. The design of the remaining priority bridges (Gratiot Avenue, Second Avenue, Cass Avenue, Chene Street, Brush Street, Mt. Elliott Street, Concord Avenue, Cadillac Avenue, and French Road) is underway and will be constructed from 2017 to 2019. 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 have been identified and will be designed in 2018-2019 with construction beginning in 2020. Those bridges are E. Grand Boulevard, Burns Street, 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.



US-23 Flex Route

MDOT began the US-23 Flex Route improvements project in November 2016, the first of its kind in Michigan. It is intended to help alleviate congestion by using an active traffic management strategy that consists of upgrading the shoulders to carry traffic during peak hours and during incidents. The shoulder lanes will be controlled through the installation of dynamic message signs, lane control signs (see graphic above), and full camera coverage for incident management. The project will also consist of new freeway courtesy patrols to service immobile vehicles and improve traffic flow. Crash investigation sites will be installed for motorists and first responders to safely pull off the road during an incident. The corridor project also involves improving interchange ramp operations to meet current design standards and widening, reconstructing and repairing the corridor's bridges.



The first phase of the project is from M-14 to M-36 and will be complete in early 2018. The second phase will be from M-36 to I-96 but currently lacks funding and is not scheduled within this five-year program time frame. For up-to-date information on this project, go to *www.michigan.gov/drive* or download the free Mi Drive app from iTunes and Google Play. Additional project information can be found at *www.flexroute23.com*, *www.facebook.com/michigandot*, and *www.twitter.com/mdot_a2*.

QLine/M-1 Streetcar

Working with the state and community partners, M-1 RAIL - a nonprofit - has opened a 3.3-mile, 23-station light rail/streetcar system along Woodward Avenue that is the centerpiece for economic development and future connectivity in the Detroit region. The project is an unprecedented P3, funded by $110 million in private philanthropic investments, $10 million from MDOT, and $25 million in Federal Transit Administration (FTA) funds.

MDOT's investment in M-1 RAIL included technical assistance to coordinate design and engineering with the department's reconstruction of Woodward Avenue from Chandler Street to Sibley Street. Streetcar operations on Woodward Avenue started May 12, 2017, for the first time since 1956. City and business leaders hope that the newly offered streetcar service will continue to spur economic revitalization in the corridor.

Iron Belle Trail

An initiative of Gov. Snyder, the Iron Belle Trail is the longest designated state trail in the nation and includes a route for hiking and a route for biking between Belle Isle Park in Detroit and Ironwood in the Upper Peninsula. The 1,273-mile hiking route (71 percent complete as of 2016) incorporates a large portion of the existing North Country National Scenic Trail. It traverses the west side of the Lower Peninsula and borders Lake Superior in the Upper Peninsula. The 791-mile bicycle route (64 percent complete as of 2016) uses existing multi-use trails and follows US-2, a designated US Bicycle Route in the U.P.

MDOT is supporting the Michigan Department of Natural Resources (DNR)-led effort, along with multiple local, regional, nonprofit, and corporate partners and sponsors, to complete the trail. MDOT's efforts include awarding federal grant funding, as well as providing technical assistance when possible on design, project management, and construction engineering.

An example of MDOT's partnership with the DNR and local partners is captured nicely in the 2018 Lakelands Trail Project in Jackson County that will serve as a segment of the Iron Belle Trail. MDOT will implement this 11.9-mile project on behalf of the DNR.

The 10-foot-wide crushed limestone multi-use path will begin at M-52 in the village of Stockbridge, where it will connect to an existing segment of the Lakelands Trail State Park. The path will continue from Stockbridge southwest along an abandoned rail line through the community of Munith and end at a new trailhead located approximately 400 feet south of the Portage River.

Grayling Community Pathway M-93/I-75 Nonmotorized Bridge

The 11-mile-long Grayling Community Pathway provides residents and visitors in the Grayling area with transportation options and access to recreational opportunities. The construction of this nonmotorized bridge has been in the works since 2011 and fills a critical gap in the nonmotorized network between the city of Grayling and Hartwick Pines State Park.

With guidance from MDOT, the Crawford County Road Commission is constructing a dedicated nonmotorized bridge over I-75 directly adjacent to and within the M-93 interchange. The new bridge will be open in 2018. The addition of a dedicated nonmotorized bridge will eliminate the need to use the road overpass and will result in safer and more comfortable travel through the interchange for all users.

This project is funded primarily through a local federal earmark that was designated for improvements at interchanges in the Grayling area. The community has worked tirelessly for many years to obtain additional local, state and federal funding to make the vision become a reality.

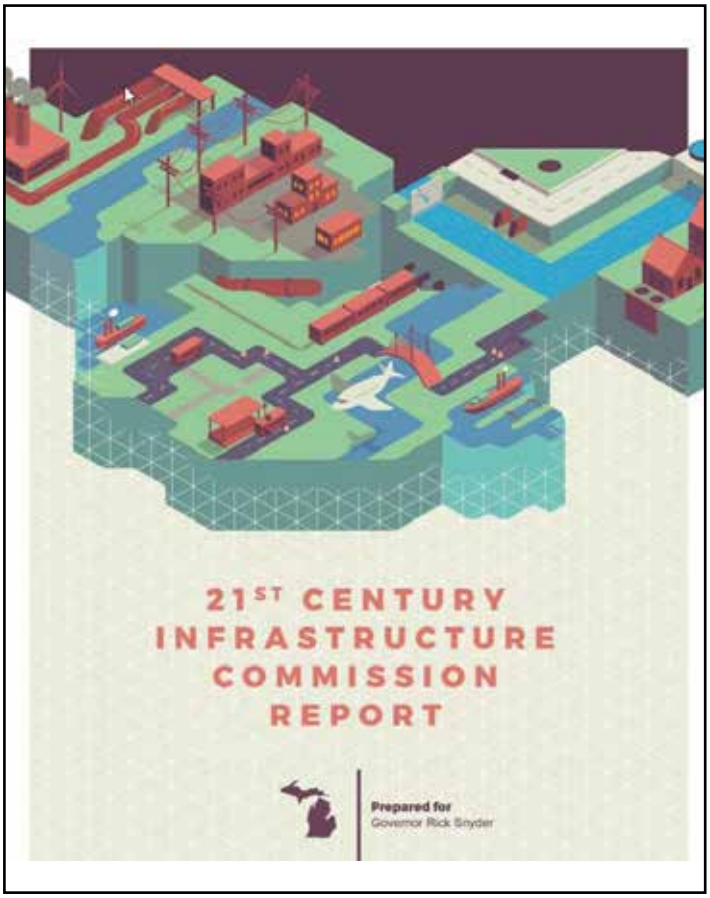
The planning and design of the project is consistent with MDOT's Complete Streets initiative, Context Sensitive Solutions, community "livability" goals, and supports the governor's goal of establishing Michigan as a "trail state."

21st Century Infrastructure Report: Innovation in Asset Management

Beyond the focus earlier in this document on technology innovations and innovative projects, the 21st Century Infrastructure Commission created in 2016 by Gov. Snyder focused on innovation in asset management in the state. The commission was comprised of 27 members representing the business, government, nonprofit, and academic communities and those who have a particular interest or expertise in infrastructure. Its goal was to provide recommendations for infrastructure systems that are safe, reliable, efficient, and cost-effective for all Michigan taxpayers. The commission held public listening sessions around the state and interacted with hundreds of community leaders throughout the summer. The commission put forward 110 recommendations in the areas of water, transportation, energy, and communication infrastructure, as well as recommending the development of a statewide infrastructure asset management system and recommendations on how to fund infrastructure that is equitable and protects our most vulnerable residents. In November 2016, the 21st Century Infrastructure Commission Report outlined a series of goals and strategies for improving the state's infrastructure, and the associated benefits of such investment.

The recommendations also provide for better coordination in the planning, construction and maintenance of all infrastructure types, as well as making investments that will lead to improved public and environmental health. The commission's recommendations regarding transportation included the need to update the manner in which the state distributes transportation funding. It recommended that a revised funding structure be simple and transparent, and distributed in a way that serves Michigan's 21st century economy. It noted that decades of underinvestment in transportation infrastructure, increased demand on the road system, and Michigan's harsh climate have resulted in crumbling roads and bridges. The commission also noted that the funding package signed by the governor last November was a good first step to addressing the state's transportation funding gap, but was just a first step; more is needed. Learn more about the 21st Century Infrastructure Commission at *http://www.michigan.gov/documents/snyder/21st_Century_Infrastructure_Commission_Report_555079_7.pdf*.

MDOT strives to promote and build a highly integrated transportation network that will produce efficiencies and maximize the investment of public funds. There are large infrastructure needs for all transportation modes, and funding these needs will continue to be challenging.



21st Century Pilot

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 database. 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 projects are ongoing and results are expected by the end of the calendar year.

Pavement and Bridges

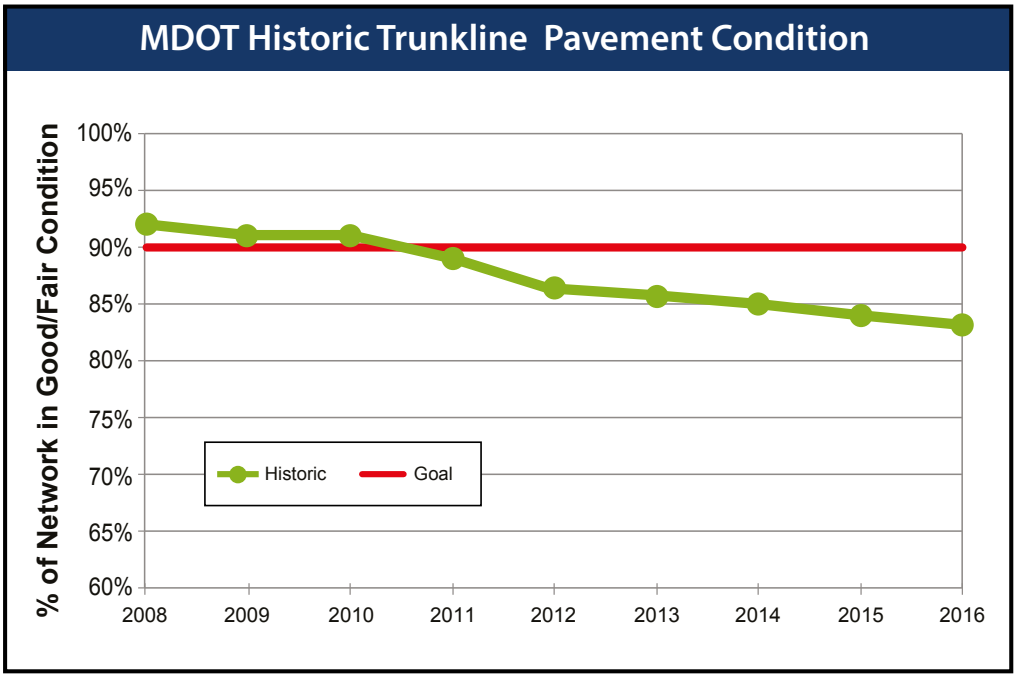
The report finds that investing in pavement would create and sustain jobs, increase the gross state product and personal income, and decrease fatalities and their associated economic losses, all of which would improve the quality of life for Michigan residents.

The report finds, "Michigan's asset management agencies predict that without increased investment, road and bridge conditions will continue to deteriorate and the conversation that has surrounded transportation funding in Michigan will remain necessary." Each year that pavement conditions continue to decline leads to an increase in the amount of funding necessary to regain the 2007 to 2010 condition levels, and to prepare Michigan for a 21st century economy. The graphic to the right presents the trunkline pavement conditions since 2008.

Nonmotorized

The report also noted the need for a nonmotorized transportation system in the state to enhance the state's tourism potential and augment opportunities for place-making within local communities. MDOT and Michigan's metropolitan planning organizations (MPOs) have collaborated on regional-level nonmotorized planning initiatives and statewide efforts, such as the Iron Belle Trail, noted earlier in this section. Michigan still has a patchwork system of nonmotorized trails that can deter nonmotorized users from making safe connections between communities. Nonmotorized trail options and paved shoulder option coordination at the state and regional levels are needed to improve options for visitors and residents.

MDOT has been proactively supporting the Complete Streets program for several years and already has more than 3,000 miles of wide paved shoulders and 40 miles of marked bicycle lanes on state highways. MDOT also partners with local agencies and other state agencies to expand the shared-use path network across the state. The Complete Streets program is aimed at making Michigan's



Source: MDOT, SSMS, as of March 2017

transportation network work for everyone, with an emphasis on increasing opportunities and safety for those who travel by bike or foot. This requires being sensitive to removing obstacles to travel as well as making simple improvements that improve safety for all users. The types of facilities that may be needed are dependent on context but may include things like better access to transit stops, bike parking, pedestrian signals and crosswalk markings, bike lanes, and connected networks for travel between places and within a community.

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 nearly 50-year-old Poe Lock is the only lock capable of accommodating the largest Great Lakes vessels that carry 70 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 the 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 completed in December 2017 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 $600 million of federal funding invested over several years.

Public Comments

The public review and comment period for the preliminary draft of the MDOT 2018-2022 Five-Year Transportation Program was July 24 – Aug. 25, 2017. On July 21, 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 2,163 visits and the document was downloaded 385 times within the comment period. MDOT received 57 public comments on the draft 2018-2022 Five-Year Transportation Program from 41 different individuals, including respective comments from the Times Herald (Port Huron) newspaper, Grand Rapids Area of Commerce and Canton 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.

Safety/Road Conditions

Bay

- Five comments mention poor pavement condition on M-81 from Portsmouth Road and M-15.
- One comment suggests that a flashing caution light needs to be installed at the intersection of M-81 (Caro Road) and Colwood Road in Ellington Township.
- M-46 from Richardville to Saginaw should be considered for resurfacing.

Southwest

- A comment expressed concern over road conditions in Cass County, including M-62 from Cassopolis to Edwardsburg.

University

- Four comments would like to see safety and congestion improvements on I-94 in Jackson, Ann Arbor, and the I-94/US-23 interchange, respectively.
- One comment expressed concern over large bumps on I-96 from Burkhart Road to Stockbridge Road in Ingham and Livingston counties.

Alternatives/Suggestions

Grand

- One comment suggests that M-66 should be resurfaced in Ionia County from Woodbury Road to I-96.
- One comment suggests that major freeway arteries in MDOT's Grand Region should be modernized to reflect new design standards.
- The Grand Rapids Area Chamber of Commerce supports including operational improvements with the road and bridge preservation projects currently planned for 2018 and 2019 construction, along I-196 east of Fuller Avenue and the I-96/I-196 interchange area. They are also encouraging MDOT to continue operational and capacity improvements along I-196 and I-96 east of downtown Grand Rapids to address growth and development occurring in the area.

Metro

- Four comments suggest the development of a regional rail or bus system in Metro Detroit.
- Two comments suggest that travel lanes should be added to I-75 in Oakland County, north of the current modernization project.
- Two comments would like to see MDOT address traffic congestion on I-96 (including the I-96/I-696 interchange) by adding travel lanes or using flex lanes.
- One comment suggests that a turn lane be added on Hickory Ridge Road at the eastbound M-59 intersection in Highland.
- One comment suggests that the I-75/M-59 interchange should be redesigned.
- One comment would like to see funding assigned to the M-153 boulevard project in Canton Township.

- One comment would like to see the I-75 modernization project in Oakland County be completed at an earlier date.

Superior

- One comment would like to see the Iron Belle Trail extended to the Keweenaw Peninsula and nonmotorized transportation prioritized on US-41 in city of Houghton.

University

- Two comments suggest that M-59 should be widened to four travel lanes from Hartland to Howell.
- Two comments suggest US-23 can be improved by funding the second phase of the US-23 Flex Route and completing the noise wall between 8 Mile Road and 9 Mile Road respectively.
- One commenter felt additional lane was needed on I-94 from the US-23 interchange to US-12. They also asked to address potholes and poor pavement in this area.

Oppose a Project

Metro

- One comment is opposed to any potential alteration to I-375 in Detroit.

Other

Statewide

- Two comments state that MDOT should build roads to higher standards.
- Two comments state interstates should not be expanded.
- Two comments were received regarding local roads.
- The Times Herald editorial staff wrote an opinion piece on MDOT's Five-Year Transportation Program and expressed frustration with the delayed expansion of the Blue Water Bridge customs plaza in Port Huron. State Transportation Director Kirk Steudle wrote a response to the Times Herald article explaining the situation, reaffirming MDOT's commitment to Port Huron and shared frustration in the delayed plaza project.
- One comment believes that modernization of the Soo Locks should be funded.
- One comment sought information concerning funding MDOT annually receives.
- One comment disagrees with the Act 51 funding distribution formula and believes poor road condition should be a factor.
- One comment believes that tax dollars should not be used for intercity buses.
- One comment states that MDOT needs to require warranties from contractors on road projects and that those warranties need to be enforced.
- One comment believes that there should be a lower weight limit on trucks.
- One comment opposes the increased cost for license plate renewals.
- One comment opposes roundabouts in Michigan.
- One comment believes that Michigan should invest in nonmotorized transportation networks.
- One comment believes that ownership of state highways should be transferred to the cities they reside in.
- One comment approves of the Flex Route project on US-23 and believes that Flex Routes should be implemented on other interstates throughout Michigan.
- One comment suggests that roads should not be designed with the Level-of-Service methodology and instead focus on improving nonmotorized and public transportation.
- One comment recommends that Michigan should consider implementing a carbon tax, install hydrogen generator facilities at airports, install electric car charging facilities at MDOT rest areas, and set aside corridors for hyper-loops and high-speed rail.
- One comment would like to see US-31 completed from Napier Road to I-94.
- One comment is disappointed that the I-73 project has been dropped for consideration.
- Consider widening Thompson Road overpass at US-23 and Genesse County.

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.

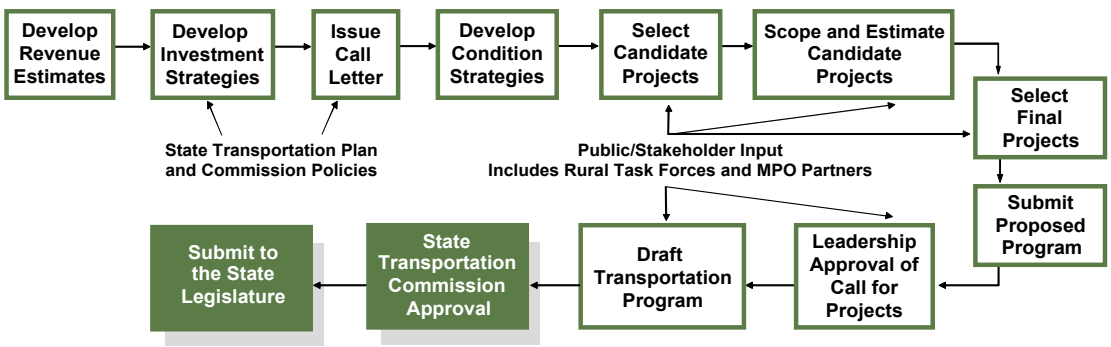
The highway portion is a rolling program; each year, the first year is implemented, a new fifth year is added, and program/project adjustments are made to the other years. This document only pertains to that portion of the programs that MDOT delivers. It does not account for programs delivered locally 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. (MDEC), rural planning agencies, metropolitan planning organizations (MPOs), road commissions, local officials, tribal governments, businesses, local nonprofit groups, and the general 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 or Twitter, or contact your MDOT region office in order to be best informed about upcoming projects in your area.

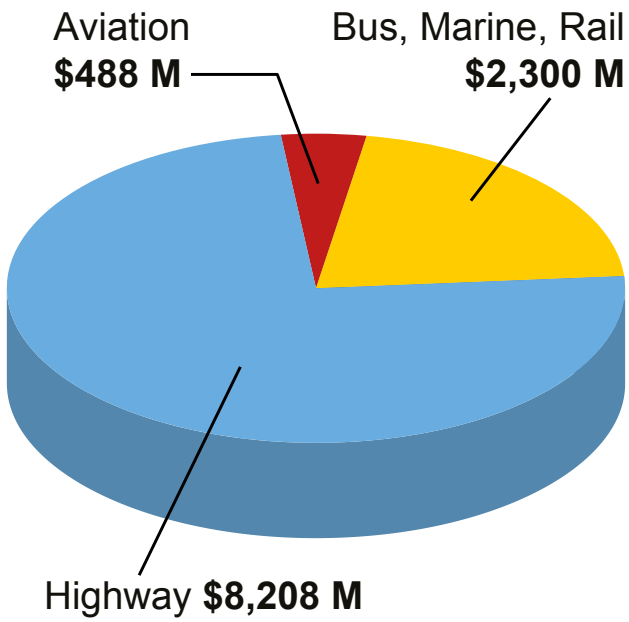
Revenue Assumptions and Investment Strategies

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 billion in MDOT's transportation system. This includes investments in Highway, Aviation, Bus, Rail, and Marine programs. A total of $8.2 billion (including routine maintenance) will be invested in the 2018-2022 Highway Program. Over these five years, $488 million will be invested in the Aviation Program and $2.3 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 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 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 Billion



Highway Program Revenue Assumptions

Federal funding

Fiscal Year (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 framework for implementing this new approach is nearing completion. 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 2018-2022 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 in 2019, income tax revenues will be appropriated for roads, increasing from $150 million to $600 million over three years, until 2021. 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 for the five years of the program.

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 and villages 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.

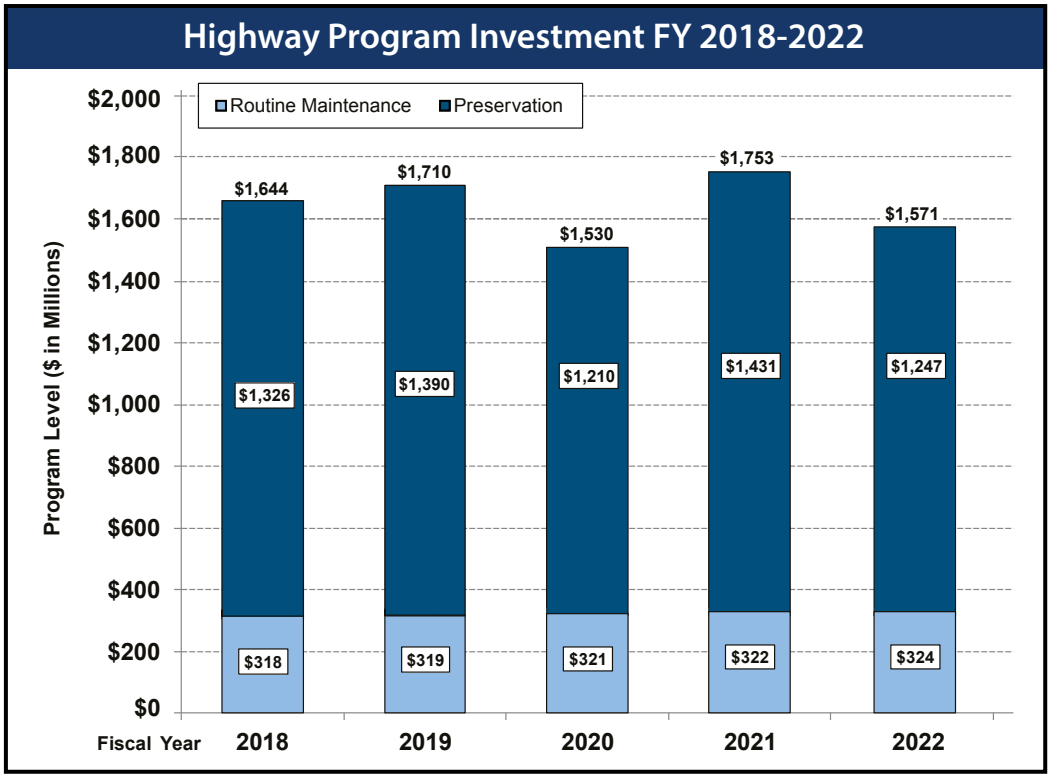
Bridge funding is distributed to MDOT regions using the bridge preservation allocation formula. It uses the deck area of bridges in each National Bridge Inventory condition to allocate funds to each MDOT region. Funding is split into investment targets for replacement, repair, and preventive maintenance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

The table below provides the Highway Program investments strategy for FY 2018-2022.

Highway Investment Program FY 2018-2022

	FY 2018-2022 Annual Average (millions)	Five-Year Total (millions)
REPAIR AND REBUILD ROADS AND BRIDGES		
REPAIR AND REBUILD ROADS		
Rehabilitation and Reconstruction	$499	$2,495
Capital Preventive Maintenance	$135	$673
Freeway Lighting	$5	$25
Freeway Resurfacing Program	$20	$100
Non-Freeway Resurfacing Program	$47	$235
Trunkline Modernization	$197	$987
TOTAL - *Repair and Rebuild Roads*	**$903**	**$4,515**
REPAIR AND REBUILD BRIDGES		
Bridge Replacement	$76	$380
Bridge Preservation	$67	$338
Big Bridges	$23	$114
Special Needs	$22	$108
Blue Water Bridge-Appropriated Capital Outlay Projects	$5	$26
TOTAL - *Bridges*	**$193**	**$965**
ROUTINE MAINTENANCE	**$321**	**$1,604**
TOTAL - *REPAIR AND REBUILD ROADS AND BRIDGES*	**$1,417**	**$7,084**
SAFETY AND SYSTEM OPERATIONS	$165	$824
TRANSPORTATION ALTERNATIVES	$9	$47
ROADSIDE FACILITIES	$7	$37
WORKFORCE DEVELOPMENT	$7	$35
NON-FEDERALLY FUNDED PROGRAMS	$36	$182
TOTAL - FIVE-YEAR TRUNKLINE PROGRAM	**$1,672**	**$8,208**

The FY 2018-2022 Five-Year Transportation Program estimates that investments for the Highway Program total approximately $8.2 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 426 miles of improved roads per year over the next five years, and repairs to 111 bridges per year. MDOT also will manage its road system by extending the life of approximately 1,300 miles of pavement each year through the capital preventive maintenance (CPM) program, and 375 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/*.



This chart illustrates the annual Highway Program investments by program categories over the five-year time frame.

Multi-Modal Programs

MDOT's FY 2018-2022 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. The majority 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 70 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 income tax 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 recent 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.

For CTF revenues, this five-year program is based on the FY 2018 CTF appropriation, and revenue estimates for FY 2019 through FY 2022. The FY 2018 appropriation is approximately $15 million, or 4.7 percent, more than the FY 2017 appropriation. This increase is largely due to the recent transportation revenue package being in effect for only nine months of FY 2017, but twelve months of FY 2018. Even with the additional revenue generated by newly enacted legislation, 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 feasible, at least not in the same way as is feasible for MDOT's road and bridge program, primarily because the vast 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 2018, 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. The asset management and 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, the Capital Area Transportation Authority (CATA), 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 from 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 Assumptions

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 2018 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 money support motorist safety at railroad crossings on local roads. Under the FAST Act, a gradual increase in dedicated federal aid began in FY 2017 and is scheduled to continue over the life of the legislation. 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 2018. With the creation of the local crossing surface program, MTF revenue for railroad crossings increased in FY 2017 by $3 million annually and is expected to continue over this five-year program. As the largest source of revenue for the rail programs, the CTF supports all other passenger and freight rail activities. CTF funding for these activities increased by almost $5.6 million in FY 2018 to nearly $60 million and is projected to continue at that level for FY 2019-2022. MDOT will continue to compete for federal funding to assist with rail capital enhancements, as appropriate. As such, a significant amount of spending authority is reflected in the budget. 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 experienced a significant reduction in the FY 2018 appropriations and is expected to continue at that level over the next five years. FY 2018 appropriated revenue for ports is $200,000.

Aviation Revenue Assumptions

The Federal Aviation Administration (FAA) Modernization and Reform Act, which was to expire in September 2015, was extended by Congress to the end of September 2017. It continued to fund the Airport Capital Improvement Program (ACIP) at $3.35 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 $3.35 billion yearly.

If the above assumption holds true, the Office of Aeronautics is planning on a funding total of $97.5 million annually in federal, state, and local funding for airport capital projects administered by the Office of Aeronautics. This is an increase of $2.5 million over the past several five-year plans.

While state aviation revenue has recently and may continue to increase, inflation continues to place an increasing burden 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). Aviation fuel tax revenues have significantly declined over the last decade with small increases happening in the last two fiscal years. While these increases have led to some optimism when adjusted for inflation, the projected aviation fuel tax revenues are less than half of those available in FY 1998.

Gov. Snyder signed legislation in December 2015 that dedicated 2 percent of the sales tax on aviation fuel to fund aviation programs. Sixty-five percent is sent to the Qualified Airport Fund (airports with more than 10 million yearly enplaned passengers) and 35 percent to SAF. The State Budget Office estimated that the total sales tax revenue will be $13.5 million yearly in the initial years, with $4.725 million being sent to SAF. This estimate now appears to have been overly optimistic, as revenue from this source has been less than 50 percent of estimate.

While the additional funds made available have helped, they do not meet current aviation infrastructure needs. It is hoped that, as the program matures, the funds will increase to the original estimates. Until then, airport capital improvements have been placed on hold or rescheduled for later years. Other sources of revenue include aircraft registration, airport licensing, tall structure permit fees, and aircraft dealer licensing.

Since 2009, certain statewide programs funded directly from the SAF were suspended or reduced. Those programs include statewide pavement maintenance, statewide paint marking, all weather access, and the Air Service Program. As of FY 2017, all of these programs have been restored. The Air Service Program that supports the Governor's Dashboard is funded in FY 2017 and FY 2018 at $250,000 per year. Additional Aeronautics revenue is needed to restore this program to its historical level of $1 million annually.

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

In summary, aviation program revenue assumptions are:

- **Federal Revenues**
  - Uncertain through FY 2022, but estimated to remain at present levels.
  - Continued formula apportionments, congressional earmarks, and discretionary grants.
  - In partnership with locals, compete for federal discretionary funds.
- **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 Strategy

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 2018 is estimated to be $460.8 million, of which $305.6 million is CTF and $145.2 million is a combination of federal, other state, local, and private funds. The CTF revenue numbers for FY 2019 are from the Michigan Department of Treasury Office of Revenue and Tax Analysis's (ORTA) Jan. 12, 2017, estimates. After FY 2018, CTF revenues are only expected to grow slightly based on inflation. Based on the FY 2018 program, ORTA's estimates for FY 2019, and MDOT estimates for FY 2020 through FY 2022, the five-year program estimate is placed at $2.3 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 2018 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 transportations 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 will implement its first In-Kind Match Program route starting Aug. 1, 2017. This demonstration route will provide 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. There are no major construction projects planned in the next five years, so a minimal amount of funding has been requested to maintain the current facilities and pathfinder signs. 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.

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. Significant investments will also be made to maintain the track and bridges on the state-owned corridor between Kalamazoo and Dearborn, and undertake additional capital improvements necessary to allow passenger train speeds of up to 110 mph on that 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 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 generally will include:

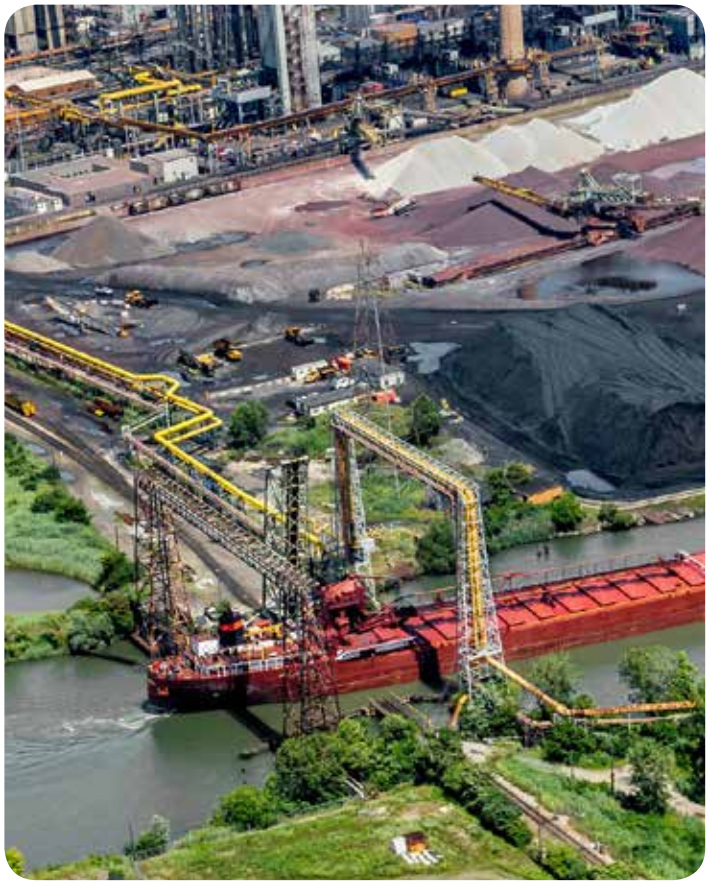
- Low-interest loans through the Freight Economic Development Program to assist new or expanding businesses with access to the rail system.
- Preservation of freight service on state-owned corridors through capital repairs, including track and bridge work.
- Safety projects to reduce motorist risk at crossings will include warning device enhancements and crossing elimination projects on roads under local jurisdiction.
- A special effort to eliminate railroad crossings by relocating track will be undertaken in FY 2018 as a result of a one-time infusion of funds provided under the FAST Act.
- 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 loans available for rail infrastructure preservation through the Michigan Rail Loan Assistance Program. 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 a new station in Ann Arbor and providing 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

For each of the next five years, MDOT anticipates providing $200,000 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, 95 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 MDOT's 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 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 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. A recent statewide economic impact study completed in 2017 stated 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 totals 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 minimize the shortfall.

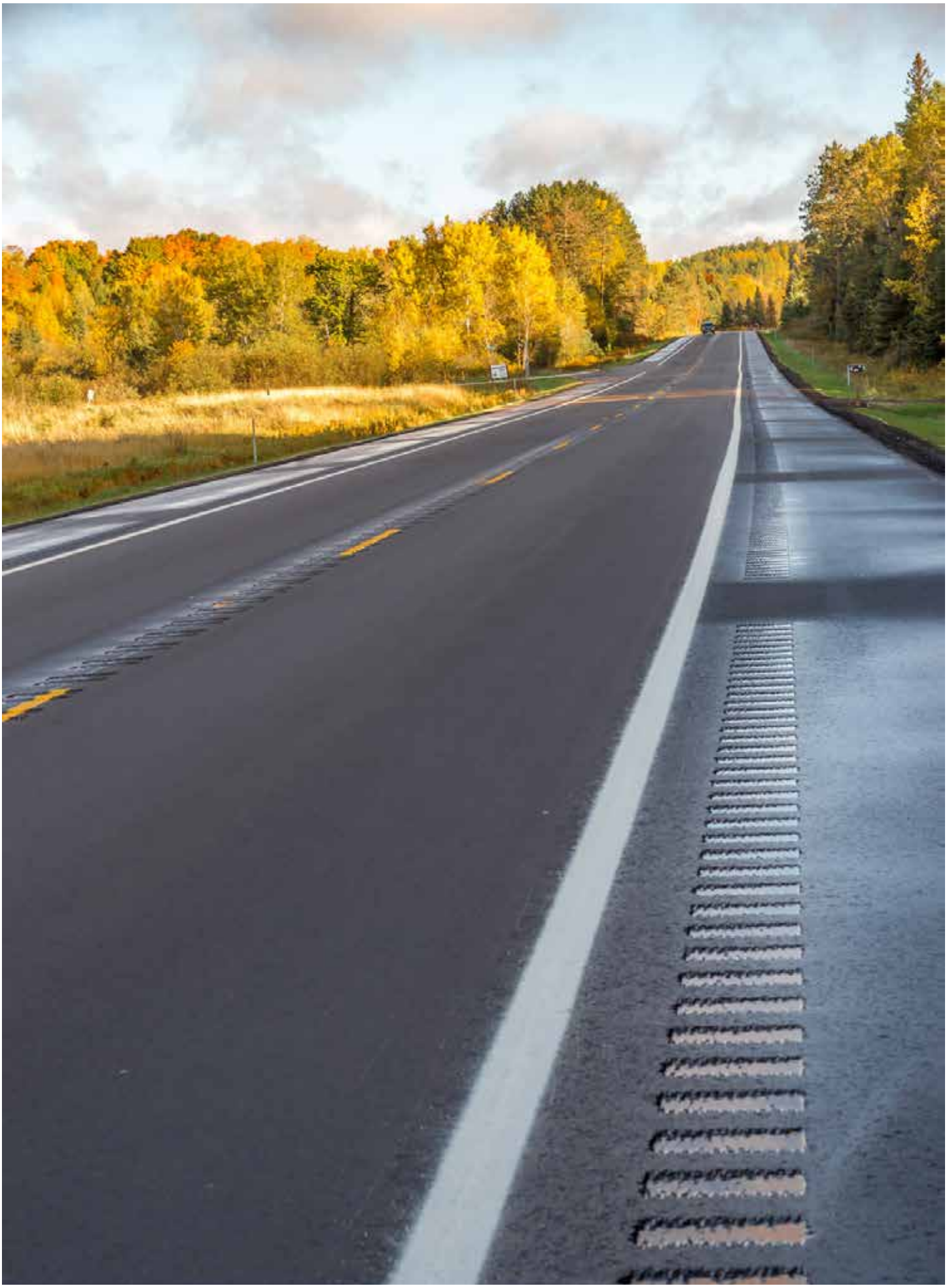
MDOT's Multi-Modal Investment Strategy

(Subject to appropriation of funds)

	Annual Average	Five-Year Total
AVIATION		
Airport Improvement Program (AIP)*	$97.5 million	$488 million
PUBLIC TRANSPORTATION PROGRAM		
(Local Transit, Intercity Bus, Passenger Rail, Rail Freight, and Ports)**		$2.3 billion
TOTAL		**$2.8 billion**

** Includes comprehensive program of needed investments for primary airports and general aviation airports as identified in the MDOT ACIP.*

*** Includes federal, local and sub-fund expenditure authority, which is often overstated to account for potential revenue.*



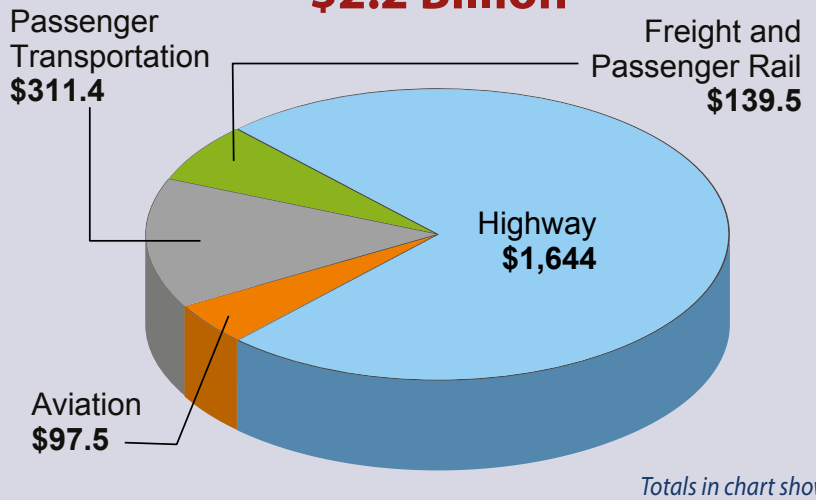
Highlighting Upcoming FY 2018

The Michigan Department of Transportation's (MDOT) $2.2 billion Fiscal Year (FY) 2018 Transportation Program is a vital part of Michigan's economy, estimated to support 30,900 jobs. This program continues to emphasize preservation of the transportation system, safe mobility for motorists, and efficient system operations.

In FY 2018, 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 2018 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 2018, MDOT will invest $548 million in state, federal, local, and private funds to maintain Michigan's multi-modal operations and infrastructure.

FY 2018 MDOT Transportation Program $2.2 Billion



Totals in chart shown in millions.

MDOT FY 2018 Transportation Program

Highway Program Revenue Assumptions:

The announced FY 2018 Highway Program investment is consistent with anticipated federal and state revenues. It is projected that approximately $793 million in federal funding will be available in FY 2018 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 2018 trunkline capital program and routine maintenance totals $645 million, after allowing for the state portion of debt service.

Public Transportation Program Revenue Assumptions:

The FY 2018 Public Transportation Program (bus, marine, passenger rail, freight rail, and port programs) is based on the state FY 2018 operating budget, and includes federal, state, local, and private revenue. The FY 2018 program budget includes $305.6 million of CTF. This is comprised of a portion of ORTA's revenue estimates, and estimated unreserved CTF fund balance at the end of FY 2017. The FY 2018 CTF program appropriation is approximately 5.1 percent more than the FY 2017 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 2017 levels and $60.1 million of federal spending authority in anticipation of possible grant opportunities under the FAST Act.

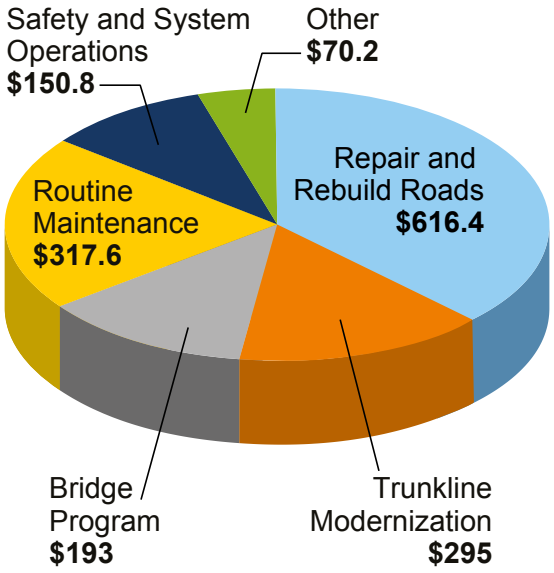
Aviation Program Revenue Assumptions:

Based upon the most current estimates available, the Office of Aeronautics' ongoing federal aid is projected to possibly increase or remain unchanged for FY 2018 from FY 2017 levels. The Federal Airport Improvement Program (AIP) was extended through FY 2017, with a new program expected to be passed in 2017. 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 $6 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 2018 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/*.

$2.2 Billion Total Investment

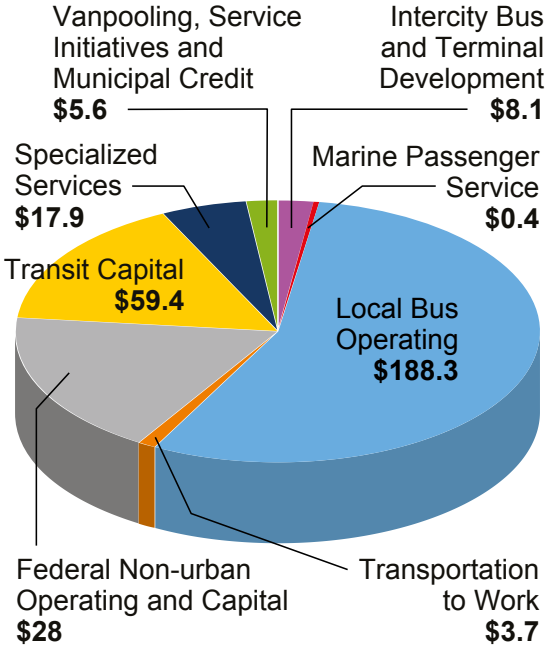
FY 2018 MDOT Highway Program $1.6 Billion



Highway Program Investment Strategy

- The FY 2018 Repair and Rebuild Roads $616 million total includes:
  - 383 lane miles of reconstruction and rehabilitation.
  - 1,435 lane miles of capital preventive maintenance.
  - 376 lane miles of freeway and non-freeway resurfacing.
- Bridge preservation activities, including bridge rehabilitation and reconstruction and capital preventive maintenance, will total $193 million.
- The Trunkline Modernization Program totals $295 million, I-75 modernization project in Oakland County (from 8 Mile Road to Coolidge Road). It also includes the construction of four bridges over I-94 in Detroit (Cass Avenue, French Road, Brush Street, and Second Avenue).
- Routine maintenance activities will total an estimated $317 million.

FY 2018 Passenger Transportation $311.4 Million

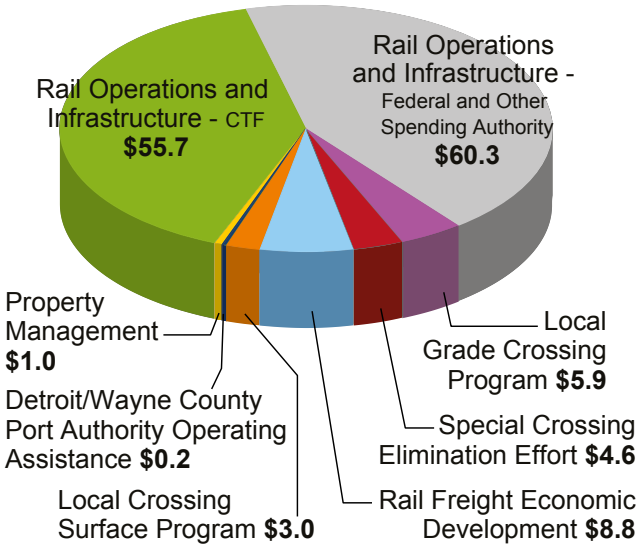


Passenger Transportation Investment Strategy:

- 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 chart shown in millions.

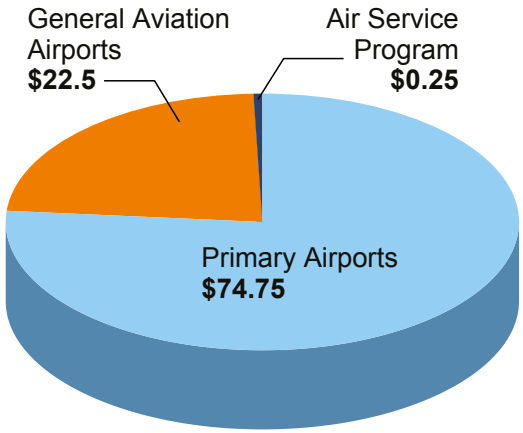
FY 2018 Freight and Passenger Rail $139.5 Million



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 2018 Aviation Program $97.5 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 chart shown in millions.

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.

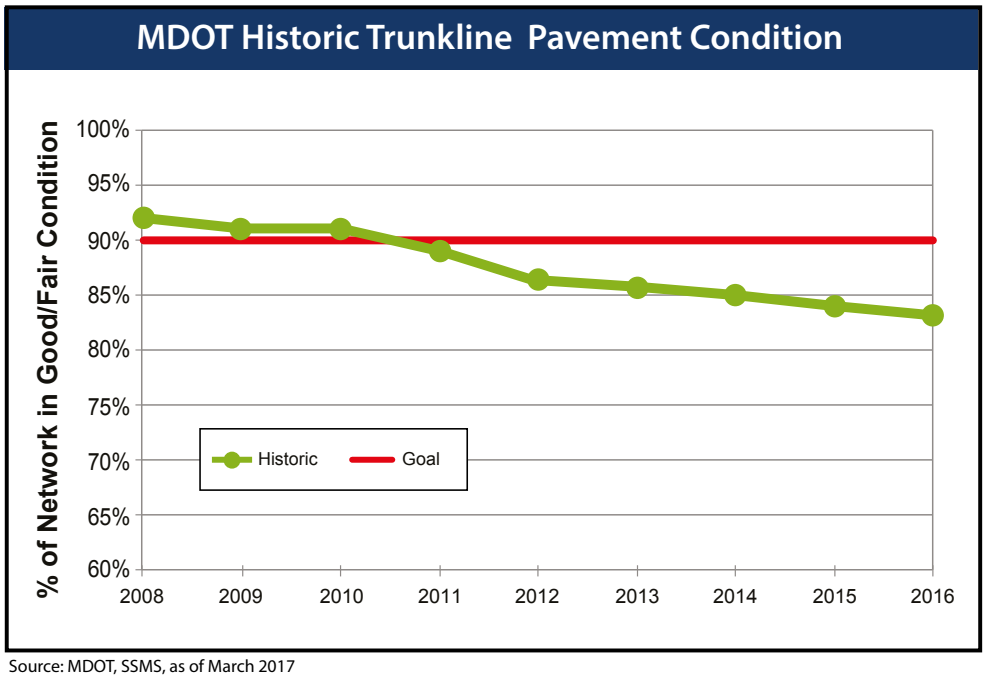
MDOT formalized its approach to improving, measuring, and reporting the condition of its transportation networks with the STC's 1997 adoption of pavement condition goals. Since then, MDOT has developed performance measures to reflect a broader range of the transportation system. The following sections 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 considered to be "poor," meaning they require these more expensive fixes. MDOT employs an asset management approach that implements short, medium, and long-term improvements to maintain 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 below 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. 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 income tax 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. As required by 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.



Source: MDOT, SSMS, as of March 2017

Federal Performance Measures

On May 20, 2017, National Performance Management Measures; Assessing Pavement Condition for the National Highway Performance Program (NHPP) and Bridge Condition for the National Highway Performance Program (23 CFR Part 490) went into effect. This federal rule requires MDOT to implement new performance measures based on a different set of metrics than the RSL approach that is currently used. Using the new metrics, MDOT is required to set targets for pavement and bridge condition on the NHS, which will be reviewed biennially by FHWA to ensure that significant progress toward target achievement is being met. Targets apply to both the trunkline and non-trunkline NHS, the latter not falling under MDOT jurisdiction. Therefore, as part of the target-setting process, MDOT will be required to coordinate with MPOs, who are also be required to set targets. The first set of MDOT targets are due on May 20, 2018, and MDOT is in the early stages of developing a process to establish these targets. Leading this process are 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.

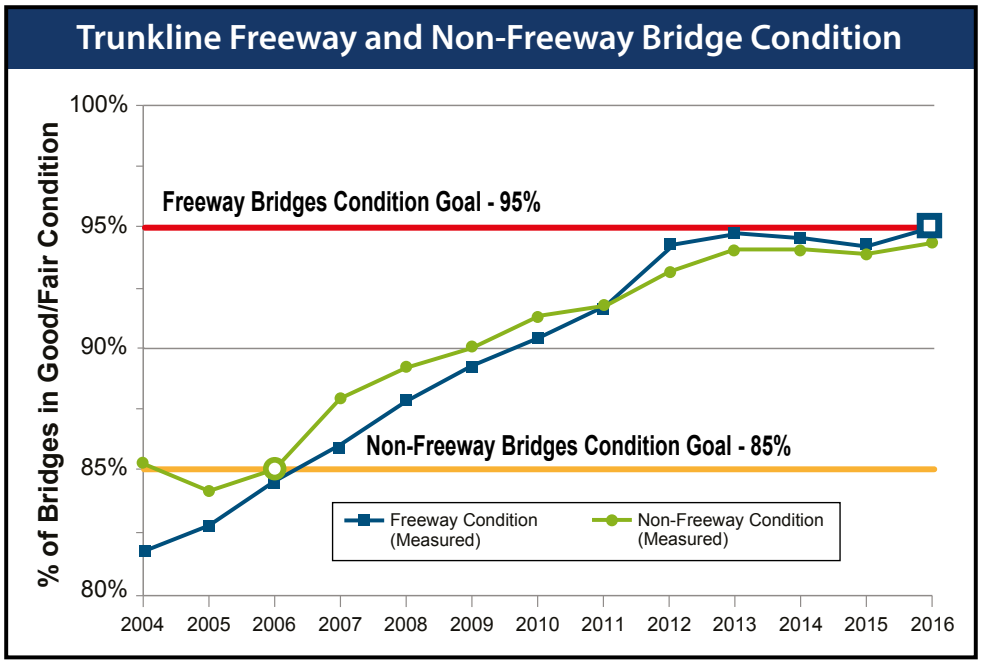
An important tool within the BMS used by MDOT to develop preservation policies is the Bridge Condition Forecasting System (BCFS). Working from current bridge conditions, bridge deterioration rates, project costs, expected inflation, and fix strategies, BCFS estimates the future condition of the state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

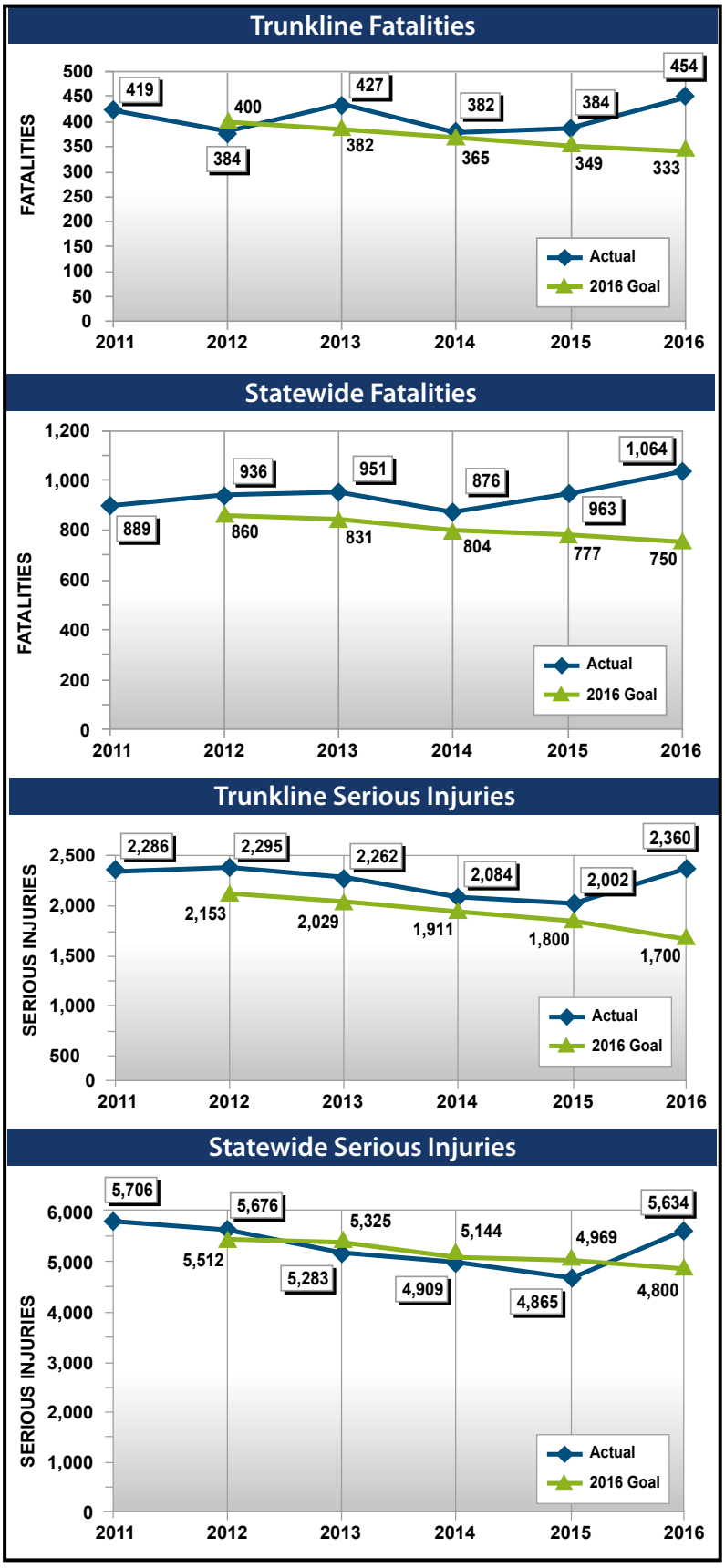
To meet the department's safety goal, the strategy of the Safety Program is to select cost-effective safety improvements, as identified in the SHSP, to address trunkline locations with correctable fatality (K) and serious injury (A) crashes. Locations identified will support the key focus areas of the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



In December 2016, the SHSP goal was revised from the 2013 goal to reduce traffic fatalities from reaching 967 and to prevent serious traffic injuries. In 2016, there were 1,064 fatalities and 5,634 serious injuries reported statewide.

MDOT is currently developing a new trunkline goal to reflect the latest statewide SHSP. While these are interim goals for the trunkline, MDOT's vision is TZD with the ultimate goal to reduce fatalities to zero and minimize serious injuries. The department's previous goal was to reduce fatalities and serious injuries from 419 and 2,286, respectively, in 2011 to no more than 333 and 1,700, respectively, in 2016. In 2016, there were 454 fatalities and 2,360 serious injuries reported on the state trunkline system.

At the right are statewide and trunkline graphs that compare the actual values of fatalities and serious injuries compared to the 2016 interim goals established in the SHSP.



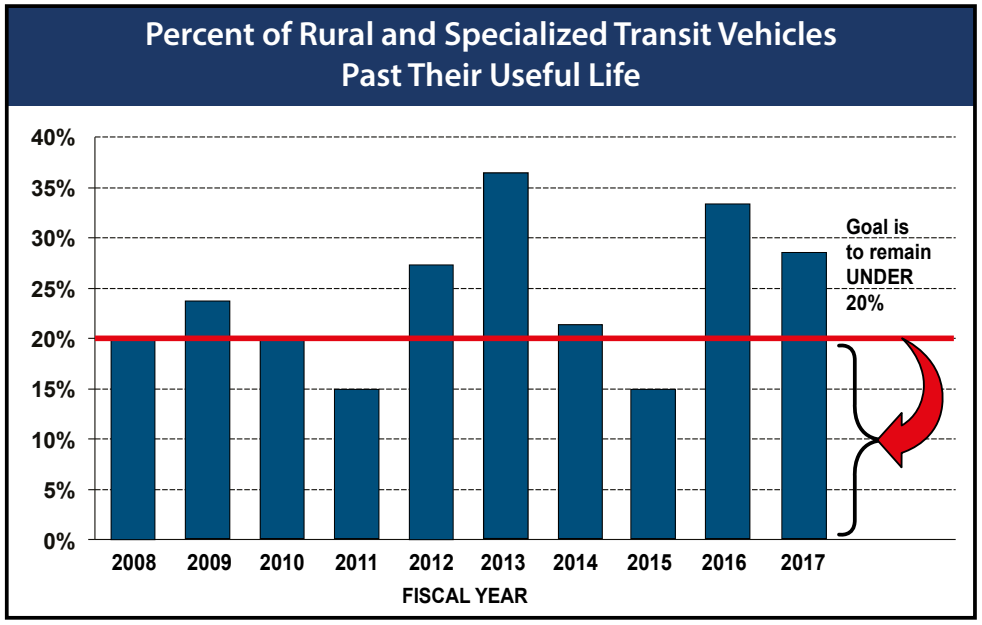
Multi-Modal Performance Measures

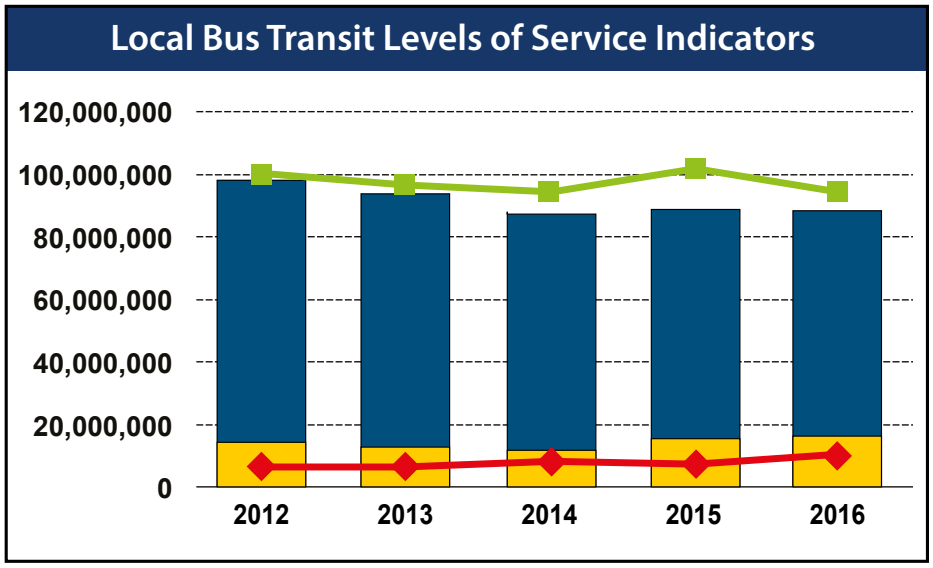
Local Transit Performance Measures

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 buses previously put into service with federal funding from the American Recovery and Reinvestment Act (ARRA) are now reaching the end of 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.

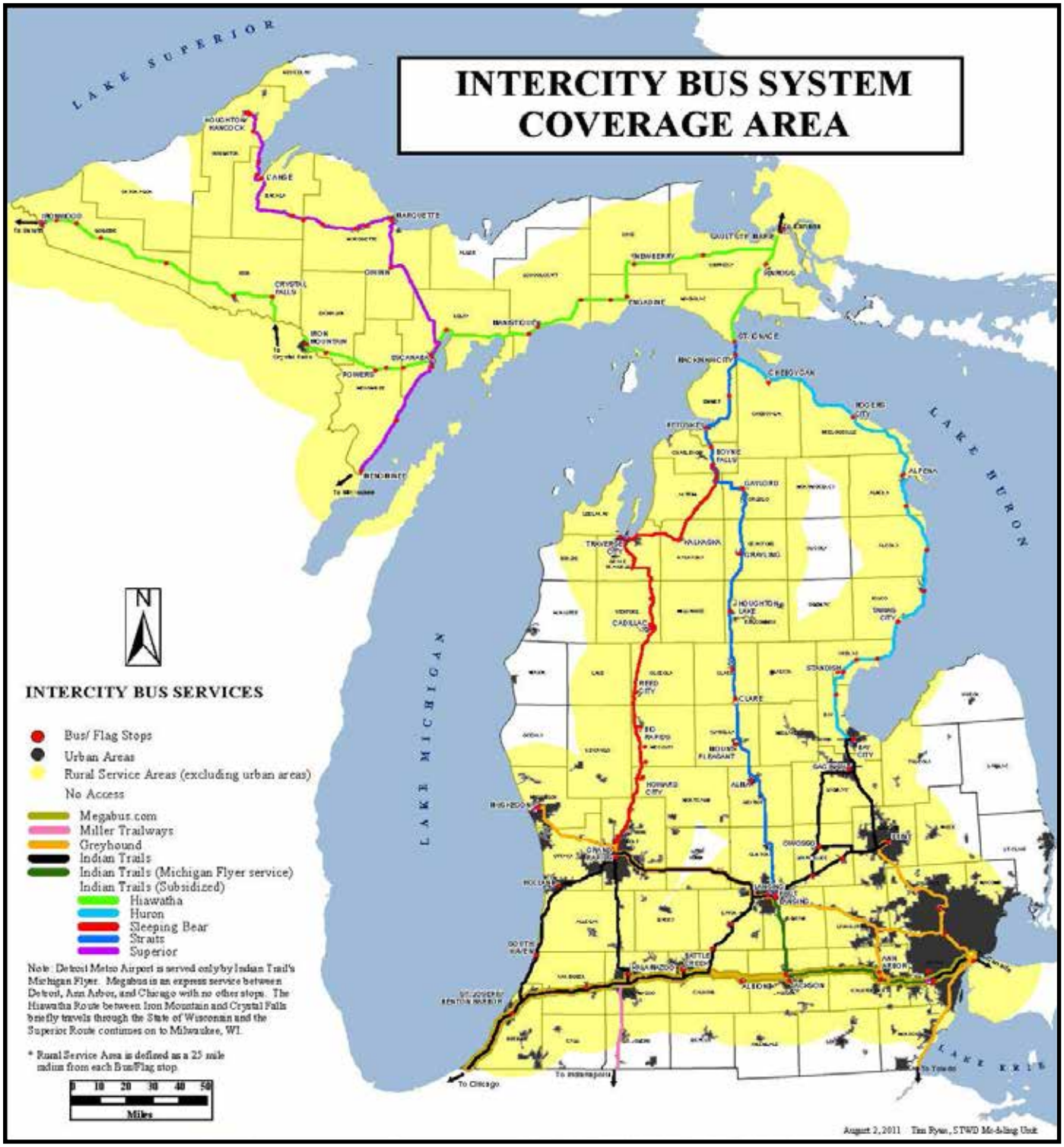




	2012	2013	2014	2015	2016
Passenger Trips Total (excluding marine)	98,266,915	96,198,970	89,444,565	89,692,521	89,380,345
Elderly and Disabled Passenger Trips (as subset of total - excluding marine)	13,287,228	12,587,813	12,269,803	12,727,836	12,999,471
Hours of Service (excluding marine)	6,076,923	6,035,194	6,717,358	6,470,836	8,371,898
Miles of Service (excluding marine and special service)	100,964,794	98,077,359	96,770,436	101,523,828	94,670,531

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 bus 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.

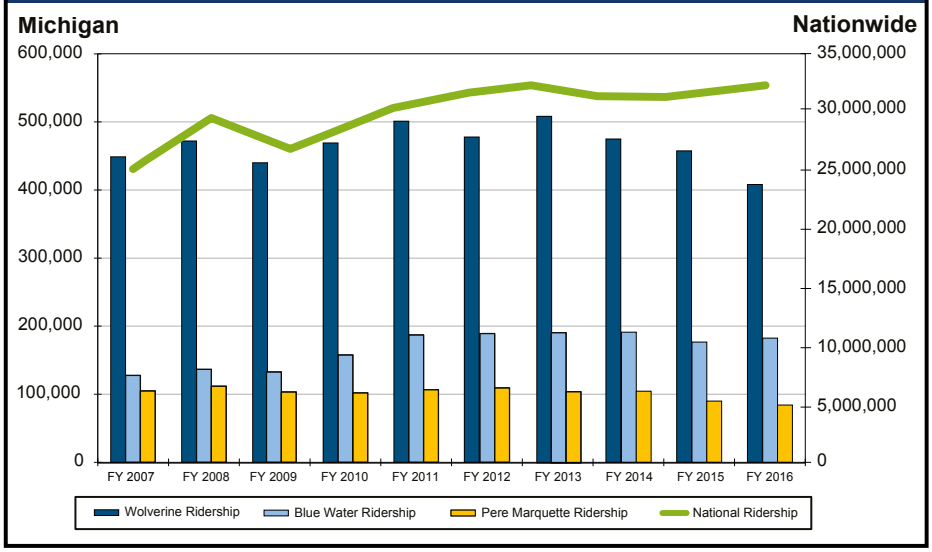
Rail Performance Measures

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

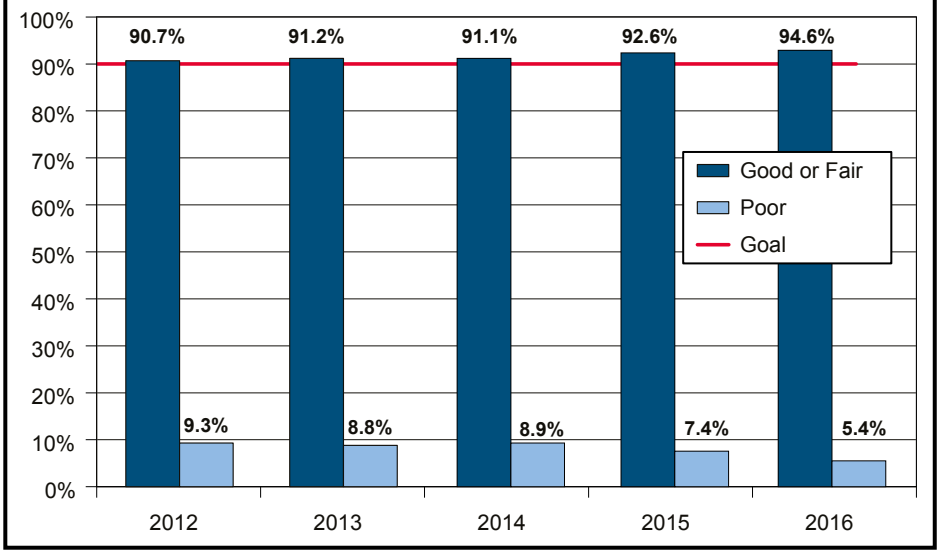
MDOT tracks the total number of passengers using state-supported passenger rail services, with a goal of maintaining ridership consistent with (within 10 percent) or better than national trends. MDOT is meeting its goal.

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. As of FY 2016, 94.6 percent of the crossing surfaces were in good or fair condition.

Passenger Rail Ridership Trends Michigan Routes and Amtrak Nationwide



Trunkline Highway-Railroad Grade Crossing Surface Conditions



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 airport 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.

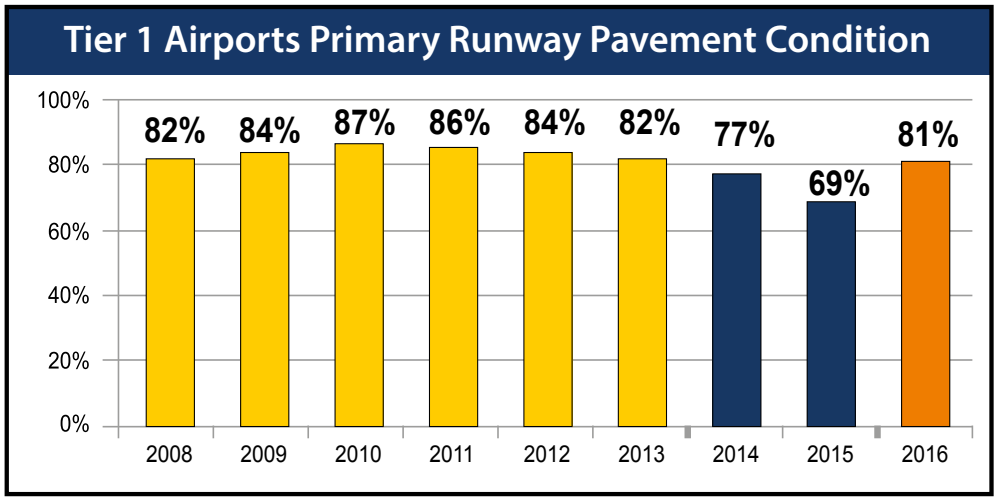
The Office of Aeronautics' current primary performance measurement goal is to maintain 90 percent of all Tier 1 Airport Primary Runways in good or fair condition, as determined by Pavement Condition Index (PCI) inspections. Previously, the goal was to maintain 100 percent of all Tier 1 Airport Primary 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 methodology used in calculating pavement PCI numbers changed approximately three years ago, and the result has been an overall decrease in the numbers beginning with year 2014. Since the new methodology results in lower PCI numbers overall, it is not necessarily an indication that runway pavement conditions have actually declined since year 2013. The Office of Aeronautics expects that pavement conditions of Primary Runways at Tier 1 airports have actually remained about the same during that timeframe.

Going forward, all future pavement inspections will use the new PCI rating methodology, and performance measurement tracking will be based on the recently revised goal. With the establishment of this new benchmark, the Office of Aeronautics will know with certainty whether or not progress toward achieving the overall goal of 90 percent is being made. The latest inspections show that the achievement rate toward the current goal (based on 2016 data) is 81 percent.

- **Measure: Airport PCI**
- **Goal: Maintain 90 percent of Tier 1 Airport Primary Runways in good or fair condition.**

Note: Decreases in goal achievement rates beginning in 2014 are due to revised pavement evaluation methodology effects on PCI number determinations. Also, a revised performance measurement goal was established for 2016 and beyond.



Transportation Funding Generates Michigan Jobs

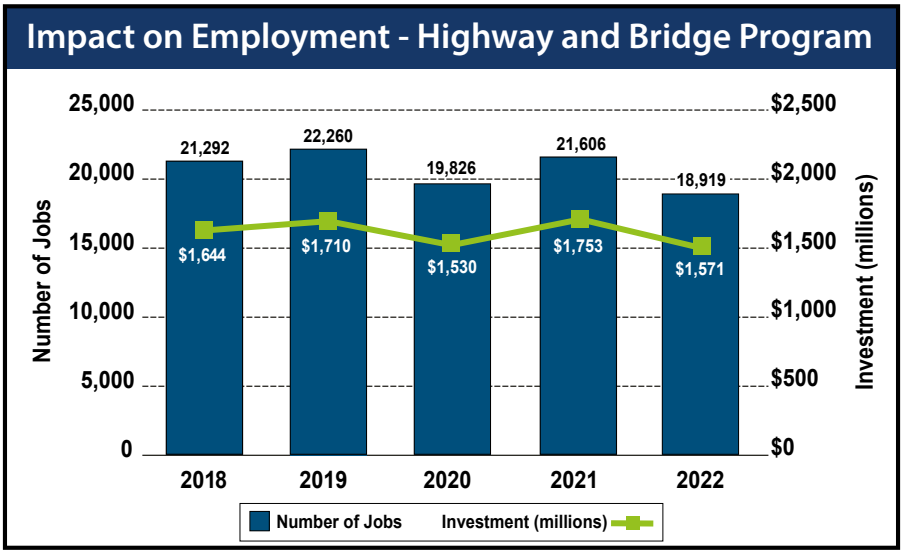
Highway Economic Impacts

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. In order to assess the economic impact of investment in the Highway and Bridge Program, MDOT uses a commissioned tool (the Michigan Benefits Estimation System for Transportation Tool, or MI BEST Tool) and an economic model (the REMI TranSight model) to evaluate the outcomes.

This analysis includes the spending impacts of capital and operations investment in the Highway and Bridge Program, as well as the economic benefits derived from the travel efficiencies of proposed projects. The following table and chart display the economic impacts of the $8.2 billion investment, including acceleration of I-75 modernization project, in the FY 2018-2022 Five-Year Transportation Plan. The program will support an average of 20,780 jobs annually, a total increase of $6.4 billion in real personal income, and add a total of $8.7 billion in gross state product during this five-year period.

Economic Impacts of FY 2018-2022 Highway and Bridge Program

	2018	2019	2020	2021	2022	Total
Investment (million $)	$1,644	$1,710	$1,530	$1,753	$1,571	$8,208
Employment Impact (jobs)	21,292	22,260	19,826	21,606	18,919	103,903
Real Personal Income (million '17$)	$1,180	$1,302	$1,219	$1,392	$1,272	$6,365
Gross State Product (million '17$)	$1,693	$1,821	$1,664	$1,849	$1,653	$8,680



Public Transportation Benefits

Local Transit

Transportation investments are a vital part of the state's overall economic development strategy. More than 100 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.

In order to assess the economic impacts of the FY 2018-2022 Transit Program (public transportation program), 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 $1.55 billion investment for the Transit Program in this Five-Year Transportation Plan. This public transportation program will support an average of 5,521 jobs annually, and add $1.7 billion in real personal income and $2.3 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 2018-2022 Transit Program for the state of Michigan.

Economic Impacts of FY 2018-2022 Transit Program

	2018	2019	2020	2021	2022	Total
Investment (millions)	$303	$306	$310	$314	$318	$1,551
Employment Impact (jobs)	5,386	5,566	5,605	5,573	5,473	27,603
Real Personal Income (millions)	$294	$328	$355	$376	$383	$1,736
Gross State Product (millions)	$432	$455	$467	$471	$469	$2,294

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 Program Benefits

In order 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 throughout 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 activity 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.

Training Youth for the Future Workforce

As discussed earlier in this Five-Year Transportation Program, innovation and technology are key in the future of transportation in Michigan. MDOT continues to help students across the state gain knowledge in technology and transportation careers to help the youth of the state prepare to take on key occupations in the future. MDOT annually utilizes federal training funding and partnerships to further science, technology, engineering and math (STEM) training options for youth in our state.

Youth Development and Mentoring Program (YDMP)

The mission of the MDOT YDMP is to prepare a diverse workforce for the future by providing youth opportunities and exposure to pursue higher education, personal growth, and transportation careers. The program values responsibility, empowerment, respect, integrity, relationship building, and safety.

MDOT, in partnership with the FHWA, offers mentoring activities and sessions to teach job and life skills, introduce college/university options, and present high school students and recent high school graduate students with information about careers in civil engineering, road construction and maintenance, planning, and other areas of transportation.

MDOT maintains local partnerships, including high school counselors and local community organizations, to attract and recruit eligible participants for the YDMP. Participants are responsible for various maintenance activities (cleaning, weeding, landscaping, etc.) during their participation in this program, but the focus of the program is attending and participating in mentoring sessions and activities. The work provides the participants with a meaningful work experience and practical knowledge, and serves as an invaluable tool for instilling a good work ethic. The program covers all seven MDOT regions. In 2016 (the ninth year of the program), 393 youths participated statewide in the program.

TRAC Program

The TRAC Program is an educational outreach program designed for 6th through 12th grade students to bring high-level, quality, hands-on tools into the classroom to enhance teachers' existing curriculum in the areas of math, science, and social science activities. MDOT's TRAC Program utilizes the following modules:

- Bridge Builder – Building Math Skills
- Highway Development and the Environment
- The Physics of Highway Safety
- Magnetic Levitation
- Motion and the Transportation Engineer – Physics
- Roadway Design and Construction
- Traffic Technology – Physics and Computers

These modules engage students in solving real-world problems while connecting them to the professional world of transportation. The TRAC curriculum is aligned with the National Education Standards for math, science, English, and social science. As expanded activities, the TRAC Program has created partnerships with Science Olympiad, Project Lead the Way, and seven Michigan universities that offer accredited civil engineering programs. For more information visit *www.michigan.gov/mdot-trac*.

TRAC Pipeline Internship

The TRAC Pipeline Internship Program includes internships and competitive scholarships for potential civil engineering majors once a participant has been accepted into an accredited college/university. The TRAC Internship/Pipeline Program is designed to increase the awareness of available careers in the transportation construction industry in Michigan by engaging 12th grade high school students across the state. The program focuses on engineering and transportation fields through practical work experience. Students are exposed to and will learn road and bridge design, construction inspection, soil investigation, traffic and safety planning, and material testing skills.

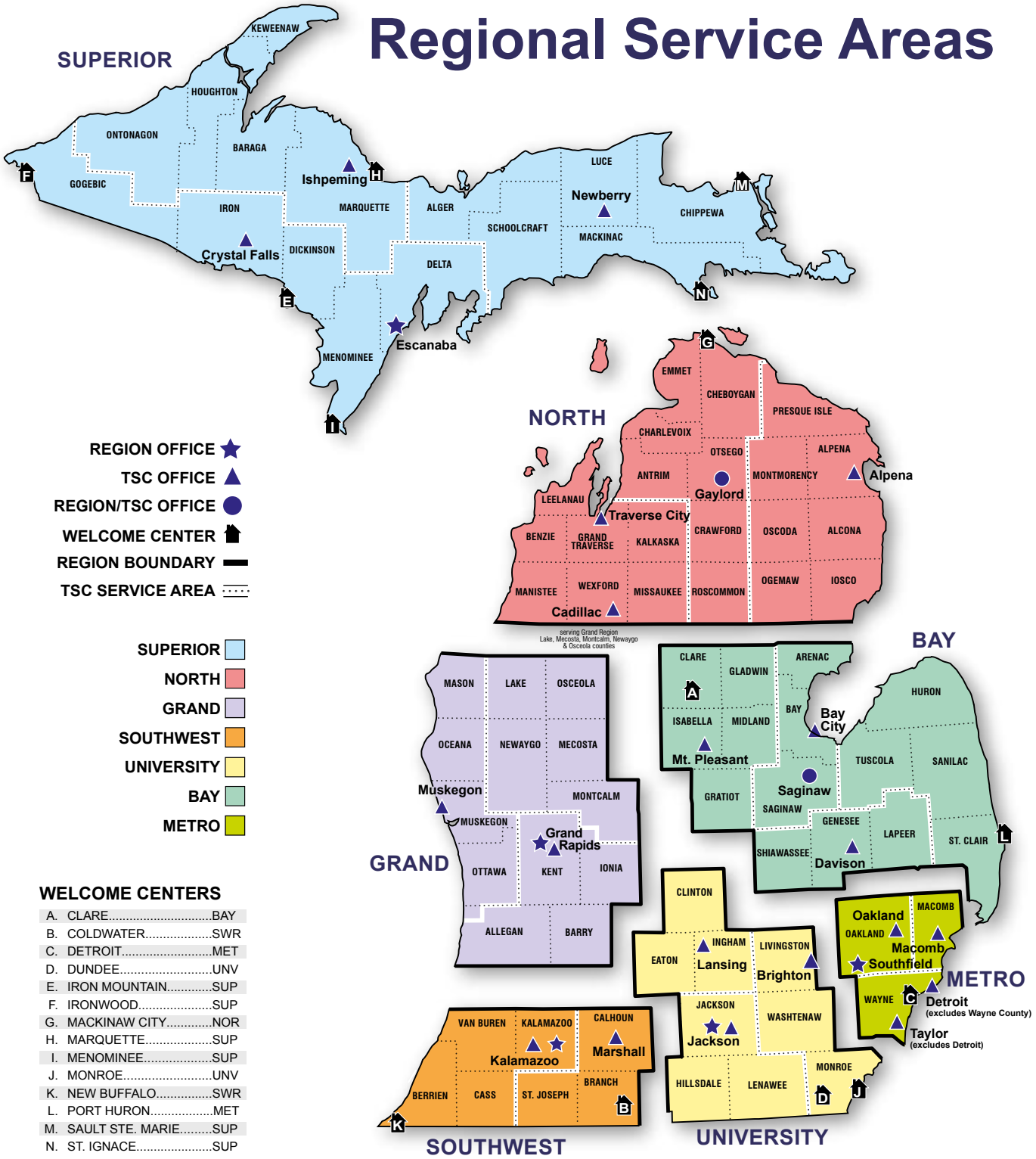
Regional Service Areas

Regional Service Areas create a framework within the state of Michigan for creating vibrant regional economies. Michigan's existing state, regional and local boundaries often have overlapping goals and competing priorities. With Regional Service Areas, MDOT reoriented its seven regional areas to correspond to Gov. Snyder's common geographic boundaries that all state agencies will recognize and use. This initiative is intended to simplify boundaries for the public and also be a catalyst for the development of a local "economic vision." Transportation infrastructure provides a key part of the core for these local economic activities - making MDOT a significant part of this initiative.

MDOT's regional road and bridge project lists, containing planned projects for the 2018-2022 time frame, also are subdivided by Regional Service Area boundaries.
The chosen projects reflect MDOT's efforts to coordinate road and bridge work, preserve the existing system, address safety needs, and make the most of anticipated revenues. To find your MDOT Regional Service Area, refer to the adjacent map and project lists. These projects can also be viewed on maps online at *http://mdotnetpublic.state.mi.us/fyp/*.
For assistance for the visually impaired, please call MDOT Environmental Section Supervisor Geralyn Ayers at 517-373-2227 or contact your local MDOT region office listed on page 79. Comments regarding any of these projects can be submitted to MDOT via e-mail at *mdot-five-year-program@michigan.gov* or contact your local region office.

MDOT
Michigan Department of Transportation

Regional Service Areas



REGION OFFICE ★
TSC OFFICE ▲
REGION/TSC OFFICE ●
WELCOME CENTER
REGION BOUNDARY
TSC SERVICE AREA

SUPERIOR
NORTH
GRAND
SOUTHWEST
UNIVERSITY
BAY
METRO

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	2018	2019	2020	2021	2022
BAY	M-13	M-13 AND M-84 OVER EAST CHANNEL SAGINAW RIVER	BRIDGE REPLACEMENT	0.210			CON		
BAY	M-25	M-25 OVER SAGINAW RIVER AND JFK DR	OVERLAY - EPOXY	0.177	CON				
				0.387					

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
ARENAC	I-75	I-75 SB OVER S BR PINE RIVER	SCOUR PROTECTION	3.003		CON			
ARENAC	I-75	I-75 NB OVER S BR PINE RIVER	SCOUR PROTECTION			CON			
ARENAC	I-75	WORTH ROAD OVER I-75	OVERLAY - EPOXY			CON			
ARENAC	I-75	US-23 OVER I-75	OVERLAY - EPOXY			CON			
ARENAC	I-75	I-75 SB OVER M-61	OVERLAY - EPOXY			CON			
ARENAC	I-75	I-75 NB OVER M-61	OVERLAY - EPOXY			CON			
ARENAC	I-75	LINCOLN ROAD OVER I-75 SB	OVERLAY - EPOXY			CON			
ARENAC	I-75	LINCOLN ROAD OVER I-75 NB	OVERLAY - EPOXY			CON			
ARENAC	I-75	US-23 RAMP F I-75 OVER I-75	HEALER SEALER			CON			
BAY	I-75	I-75 SB OVER KAWKAWLIN RIVER	OVERLAY - DEEP	2.397		CON			
BAY	I-75	I-75 NB OVER KAWKAWLIN RIVER	OVERLAY - DEEP			CON			
BAY	I-75	I-75 SB OVER M-13 SB 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 SB CONNECTOR	OVERLAY - DEEP			CON			
CLARE	US-127	US-127 NB OVER US-127 BR AND M-61	OVERLAY - EPOXY	1.159			CON		
CLARE	US-127	US-127 SB OVER US-127 BR AND M-61	OVERLAY - EPOXY				CON		
GENESEE	I-475	I-475 OVER DETROIT STREET	OVERLAY - EPOXY	0.435	CON				
GENESEE	I-75	S SAGINAW (OLD M-54) OVER I-75	OVERLAY - EPOXY	0.011	CON				
GENESEE	I-75	I-75 TO I-69 RAMP B OVER GTW RR AND I-75	OVERLAY - EPOXY	0.010			CON		
GRATIOT	US-127	US-127 NB OVER MAPLE RIVER	OVERLAY - EPOXY	1.257				CON	
ISABELLA	US-127	US-127 BR NB OVER US-127 SB	OVERLAY - EPOXY	0.380		CON			
ISABELLA	US-127	US-127 BR NB OVER US-127 SB	OVERLAY - DEEP			CON			
ISABELLA	US-127	US-127 NB OVER M-20	OVERLAY - EPOXY	0.782			CON		
ISABELLA	US-127	US-127 SB OVER M-20	OVERLAY - EPOXY				CON		
				9.434					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
ARENAC	US-23	MELITA ROAD OVER US-23	SUPERSTRUCTURE REPLACEMENT	0.031					CON
BAY	I-75	WILDER RD OVER I-75	DECK REPLACEMENT	1.690		CON			
BAY	I-75	CHIP RD OVER I-75	DECK REPLACEMENT			CON			
BAY	I-75	MACKINAW RD OVER I-75	DECK REPLACEMENT			CON			
CLARE	US-10	US-10 EB OVER LITTLE TOBACCO DRAIN	CULVERT REPLACEMENT	0.680	CON				
CLARE	US-10	US-10 WB OVER LITTLE TOBACCO DRAIN	CULVERT REPLACEMENT		CON				
GENESEE	I-475	GEORGE ST PED X OVER I-475	BRIDGE REMOVAL	1.086	CON				

EPE= Study/Environmental PE=Preliminary Engineering/Design PE-B=Preliminary Engineering/Design for Bridges
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BAY REGION

BRIDGE REPLACEMENT - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
GENESEE	I-475	HARVARD ST WALKOVR OVER I-475	BRIDGE REMOVAL		CON				
GENESEE	M-15 (State Road)	M-15 OVER PADDISON CO DRAIN	CULVERT REPLACEMENT	0.308		CON			
GRATIOT	M-57 (West Cleveland Road)	M-57 OVER BRADLO DRAIN	CULVERT REPLACEMENT	0.963			CON		
GRATIOT	US-127	US-127 SB OVER MAPLE RIVER	DECK REPLACEMENT	1.256				CON	
MIDLAND	M-20 (East Isabella Road)	M-20 OVER CSX/TITABAWASSEE RIVER (ABANDONED)	BRIDGE REPLACEMENT	1.036	CON				
SAGINAW	I-75	I-75 OVER CSX RR	DECK REPLACEMENT	0.596			CON		
SAGINAW	I-75	M-46 OVER I-75	BRIDGE REPLACEMENT				CON		
SAGINAW	M-46	M-46 OVER PLANK ROAD #16 DRAIN	CULVERT REPLACEMENT	2.086	CON				
SAGINAW	M-46	M-46 OVER WHITMORE DRAIN	CULVERT REPLACEMENT		CON				
SAGINAW	M-46	M-46 OVER MC CLELLAN RUN CREEK	CULVERT REPLACEMENT		CON				
ST. CLAIR	I-94	I-94 WB OVER M-25 CONN	DECK REPLACEMENT	0.197				CON	
ST. CLAIR	M-25	M-25 OVER HOWE DRAIN	SUPERSTRUCTURE REPLACEMENT	0.184	CON				
				10.113					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
ARENAC	US-23	I-75 TO M-13	ROAD REHABILITATION	2.486					CON
BAY	I-75	BEAVER RD TO COTTAGE GROVE	ROAD REHABILITATION	3.600				CON	
BAY	I-75 NB	M-13 CONNECTOR TO BEAVER ROAD	ROAD REHABILITATION	5.328		CON			
BAY	M-13 (Bay City Rd)	ZILWAUKEE BRIDGE TO BAY CITY SOUTH CITY LIMITS	ROAD REHABILITATION	6.268					CON
BAY	M-13 (Huron Rd)	NORTH ST TO BAY/ARENAC COUNTY LINE	ROAD REHABILITATION	3.335		CON			
CLARE	US-10	US-127 TO LEATON ROAD	ROAD REHABILITATION	3.599	CON				
GENESEE	I-475	CARPENTER RD TO CLIO RD	RECONSTRUCTION	3.061	CON				
GENESEE	I-69	FENTON ROAD TO M-54	RECONSTRUCTION	2.278					CON
GENESEE	M-54 (Dort Hwy)	COLDWATER ROAD TO MT. MORRIS ROAD	ROAD REHABILITATION	2.027		CON			
GRATIOT	US-127	GLC RR CROSSING TO BAGLEY RD	ROAD REHABILITATION	5.985					CON
GRATIOT	US-127 BR (State Road)	BARBER ST TO US-127	ROAD REHABILITATION	1.849					CON
HURON	M-142 (Sand Beach Rd)	JOHNSTON ROAD TO RUTH ROAD	ROAD REHABILITATION	3.092					CON
ISABELLA	US-10 EB	LEATON ROAD BRIDGE TO MIDLAND/ ISABELLA COUNTY LINE	ROAD REHABILITATION	5.350		CON			
ISABELLA	US-127	US-127 BR TO M-20	ROAD REHABILITATION	3.979			CON		
LAPEER	M-53 (Van Dyke Rd)	M-90 N JCT TO MARLETTE SCL	ROAD REHABILITATION	5.742				CON	
SAGINAW	I-75	HESS TO SOUTH I-675 INTERCHANGE	RECONSTRUCTION	2.551			CON		
SAGINAW	M-46 (Gratiot Road)	WEST LIMITS OF MERRILL TO BRENNAN ROAD	ROAD REHABILITATION	4.785	CON				
SAGINAW	M-46 (Gratiot Road)	BRENNAN ROAD TO M-52	ROAD REHABILITATION	5.975	CON				
SAGINAW	M-57 (W Brady Rd)	SAGINAW/GRATIOT COUNTY LINE TO M-52	ROAD REHABILITATION	10.194			CON		
SANILAC	M-46	M-46 AND M-25 IN PORT SANILAC	RECONSTRUCTION	1.076	CON				
ST. CLAIR	I-69	RILEY CENTER ROAD TO M-19	ROAD REHABILITATION	5.240				CON	
TUSCOLA	M-46 (Sanilac Road)	SHERIDAN ROAD TO M-24	ROAD REHABILITATION	4.921					CON
				92.721					

BAY REGION

CAPACITY IMPROVEMENT

BLUE WATER BRIDGE PLAZA AND I-94 / I-69 AT THE BLACK RIVER BRIDGE, PORT HURON

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
ST. CLAIR		COUNTYWIDE	PLANNING		EPE	EPE	EPE		
				0.000					

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GRAND REGION

GRAND REGION

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
ALLEGAN	I-196	I-196 WB OVER US-31 NB	OVERLAY - DEEP	0.292				CON	
ALLEGAN	I-196	I-196 WB OVER CSX RR	OVERLAY - DEEP	0.669				CON	
KENT	I-196 (Gerald R Ford Freeway)	I-196 EB OVER M-45 WB RAMP TO I-196 WB	OVERLAY - SHALLOW	0.000		CON			
KENT	I-196	I-196 EB OVER M-45	OVERLAY - SHALLOW	0.000		CON			
KENT	I-96	I-96 EB OVER MONROE AVE	DECK PATCHING	12.385	CON				
KENT	I-96	I-96 WB OVER MONROE AVE	DECK PATCHING		CON				
KENT	I-96	I-96 EB OVER COIT AVE	OVERLAY - DEEP		CON				
KENT	I-96	I-96 WB OVER COIT AVE	DECK PATCHING		CON				
KENT	I-96	I-96 EB OVER CSX, CR RR AND W RIVER DRV	DECK PATCHING		CON				
KENT	I-96	I-96 WB OVER CSX, CR RR AND W RIVER DRV	DECK PATCHING		CON				
KENT	I-96	I-96 EB OVER US-131	DECK PATCHING		CON				
KENT	I-96	I-96 WB OVER US-131	DECK PATCHING		CON				
KENT	I-96	I-96 EB OVER GRAND RIVER	OVERLAY - DEEP	0.383	CON				
KENT	I-96	I-96 WB OVER GRAND RIVER	OVERLAY - DEEP		CON				
KENT	M-11	M-11 OVER CSX RR & CHICAGO DR	OVERLAY - EPOXY	0.004	CON				
KENT	M-6	PATTERSON AVENUE OVER M-6	BRIDGE APPROACH	0.109	CON				
KENT	US-131	US-131 SB AND M-46 WB OVER CEDAR SPRINGS AVENUE	OVERLAY - DEEP	0.226	CON				
KENT	US-131	US-131 NB AND M-46 EB OVER CEDAR SPRINGS AVENUE	OVERLAY - DEEP		CON				
MECOSTA	M-20 (8 MILE RD)	M-20 (EIGHT MI RD) OVER MUSKEGON RIVER	OVERLAY - EPOXY	1.688	CON				
MUSKEGON	I-96	I-96 OVER HILE ROAD	OVERLAY - DEEP	0.310			CON		
MUSKEGON	I-96	I-96 EB OVER NORRIS CREEK	OVERLAY - DEEP	1.107			CON		
MUSKEGON	I-96	I-96 WB OVER NORRIS CREEK	OVERLAY - DEEP				CON		
MUSKEGON	US-31	US-31 SB OVER WHITE RIVER	OVERLAY - DEEP	1.017			CON		
MUSKEGON	US-31	US-31 NB OVER WHITE RIVER	OVERLAY - DEEP				CON		
OCEANA	OLD 31	US-31 (OLD) OVER PENTWATER RIVER	PAINTING COMPLETE	0.357			CON		
OTTAWA	I-196 BL	I-196 BL EB OVER BR OF BLACK RIVER	OVERLAY - DEEP	0.330			CON		
OTTAWA	I-196 BL	I-196 BL WB OVER BR OF BLACK RIVER	OVERLAY - DEEP				CON		
OTTAWA	I-196	I-196 EB OVER 32ND AVE	OVERLAY - EPOXY	0.390			CON		
OTTAWA	I-196	I-196 WB OVER 32ND AVE	OVERLAY - EPOXY	0.855		CON			
OTTAWA	I-196	I-196 WB OVER 22ND AVE	OVERLAY - EPOXY			CON			
OTTAWA	I-96	I-96 EB OVER CROCKERY CREEK	OVERLAY - DEEP	1.035			CON		
OTTAWA	I-96	I-96 WB OVER CROCKERY CREEK	OVERLAY - DEEP				CON		
				21.157					

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GRAND REGION

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
ALLEGAN	I-196 AND US-31	I-196 WB AND US-31SB OVER KUIPERS DRAIN	CULVERT REPLACEMENT	0.426				CON	
ALLEGAN	M-89	M-89 OVER KALAMAZOO RIVER OVERFLOW	SUPERSTRUCTURE REPLACEMENT	1.504	CON				
BARRY	M-66	M-66 OVER QUAKER BROOK	BRIDGE REPLACEMENT	0.092		CON			
IONIA	I-96	CUTLER ROAD OVER I-96	BRIDGE REPLACEMENT	0.604		CON			
KENT	I-196	I-196 M-21 WB OVER PLYMOUTH RD	BRIDGE REPLACEMENT	0.326		CON			
KENT	I-196	I-196 EB, M-21 OVER GRAND RIVER	DECK REPLACEMENT	0.162				CON	
KENT	I-96	I-196 WB AND M-21 OVER I-96 EB	BRIDGE REPLACEMENT	0.300	CON				
OCEANA	M-20	M-20 OVER GILLON LAKE DRAIN	CULVERT REPLACEMENT	0.509				CON	
OCEANA	US-31 BR (Polk Road)	US-31 BR (POLK ROAD) OVER RUSSELL CREEK	CULVERT REPLACEMENT	0.492			CON		
				4.415					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
ALLEGAN	I-196 SB	130TH AVENUE NORTH TO US-31	RECONSTRUCTION	7.375				CON	
ALLEGAN	I-196 WB	CSX RAILROAD EAST TO ALLEGAN/OTTAWA CO 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	134TH AVENUE NORTH TO 136TH AVENUE	ROAD REHABILITATION	1.598	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
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 WVL	ROAD REHABILITATION	3.330				CON	
IONIA	I-96 WB	BLISS ROAD EAST TO M-66	RECONSTRUCTION	5.570					CON
IONIA	I-96	SARANAC REST AREA EAST TO M-66	MAINTAINING TRAFFIC	5.009				CON	
IONIA	I-96 EB	BLISS ROAD EAST TO M-66	RECONSTRUCTION	5.570					CON
IONIA	M-21 (Lincoln Avenue)	WALL STREET EAST TO M-66 (E JCT)	ROAD REHABILITATION	1.047		CON			
KENT	I-196 EB (Gerald R Ford Freeway)	FULLER AVE TO I-96	RECONSTRUCTION	2.051		CON			
KENT	I-196 EB (Gerald R Ford Freeway)	I-196 M-21 EB OVER PLYMOUTH RD	BRIDGE REPLACEMENT			CON			
KENT	I-96	THORNAPPLE RIVER DR EAST TO W/ WHITNEYVILLE AVE	ROAD REHABILITATION	2.158				CON	
KENT	I-96	THORNAPPLE RIVER DRIVE EAST TO WHITNEYVILLE ROAD	MAINTAINING TRAFFIC	2.734		CON			
KENT	I-96	WEST RIVER DRIVE EAST TO THE GRAND RIVER	RECONSTRUCTION	6.717	CON				
KENT	US-131	10 MILE ROAD NORTH TO 14 MILE ROAD	RECONSTRUCTION	4.362	CON				
KENT	US-131	ALLEGAN/KENT COUNTY LINE NORTH TO 76TH STREET	ROAD REHABILITATION	4.039					CON
LAKE	M-37 (Michigan Avenue)	3RD STREET NORTH TO US-10	ROAD REHABILITATION	0.810	CON				
MASON	US-31	US-10 NORTH TO SUGAR GROVE ROAD	ROAD REHABILITATION	3.735		CON			
MASON	US-31	OCEANA/MASON CO LINE NORTH TO MEISENHEIMER ROAD	ROAD REHABILITATION	4.560				CON	
MASON	US-31	HOAGUE ROAD NORTH TO MASON/MANISTEE CO LINE	ROAD REHABILITATION	2.187				CON	
MONTCALM	M-46 (Howard City Edmore Road)	M-66 EAST TO SECOND STREET	ROAD REHABILITATION	2.103	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	1.541				CON	
NEWAYGO	M-37 (Maple Street)	COMMERCE STREET NORTH TO STATE STREET	ROAD REHABILITATION	0.378	CON				
OCEANA	US-31	SHELBY ROAD NORTH TO POLK ROAD	ROAD REHABILITATION	4.989				CON	
OCEANA	US-31 NB	AT THE ROTHBURY REST AREA #529	ROADSIDE FACILITIES - IMPROVE	0.647				CON	
OSCEOLA	US-10 BR (Chestnut Street)	CHURCH STREET NORTH TO US-10	ROAD REHABILITATION	1.011	CON				
OTTAWA	I-196 EB	WEST OF 32ND AVENUE EAST TO OTTAWA/KENT COUNTY LINE	RECONSTRUCTION	15.605			CON		
OTTAWA	I-196 WB	WEST OF 32ND AVENUE EAST TO OTTAWA/KENT COUNTY LINE	RECONSTRUCTION	15.640		CON			
OTTAWA	I-196 WB	32ND AVENUE EAST TO OTTAWA/KENT COUNTY LINE	MAINTAINING TRAFFIC	4.868	CON				
				127.179					

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METRO REGION

METRO REGION

BRIDGE - BIG BRIDGE PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
OAKLAND	I-696	PLAZA OVER I-696	BRIDGE BARRIER RAILING REPAIR	0.087	CON				
WAYNE	OLD 700 (Douglas MacArthur Bridge)	BELLE ISLE TRAFFIC OVER DETROIT RIVER	HEALER SEALER	0.430	CON				
WAYNE	OLD 700 (Douglas MacArthur Bridge)	BELLE ISLE TRAFFIC OVER DETROIT RIVER	SUPERSTRUCTURE REPAIR, CONCRETE	0.427					CON
				0.944					

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
MACOMB	I-94	21 MI ROAD OVER I-94	OVERLAY - EPOXY	1.843			CON		
MACOMB	I-94	COTTON ROAD OVER I-94	HEALER SEALER				CON		
MACOMB	I-94	I-94 EB OVER SALT RIVER	PAINTING COMPLETE	2.521			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	I-94	I-94 OVER CLINTON RIVER CONTROL CH	OVERLAY - EPOXY	13.341				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 RDS	SCOUR PROTECTION					CON	
MACOMB	I-94	I-94 EB OVER CLINTON RIVER, NORTH AND SOUTH RDS	SCOUR PROTECTION					CON	
MACOMB	I-94	I-94 EB OVER SELFRIDGE ANGB SPUR TRK	HEALER SEALER					CON	
MACOMB	I-94	I-94 WB OVER SELFRIDGE ANGB SPUR TRK	HEALER SEALER					CON	
MACOMB	I-94	I-94 EB OVER CROCKER RD	OVERLAY - EPOXY					CON	
MACOMB	I-94	I-94 WB OVER CROCKER RD	OVERLAY - EPOXY					CON	
MACOMB	I-94	I-94 EB OVER JOY RD	SUPERSTRUCTURE REPAIR, CONCRETE					CON	
MACOMB	I-94	I-94 WB OVER JOY RD	SUPERSTRUCTURE REPAIR, CONCRETE					CON	
MACOMB	M-53	M-53 SB OVER CLINTON RIVER	OVERLAY - DEEP	0.372				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-696	I-696 EB OVER ROUGE R	SCOUR PROTECTION	0.458	CON				
OAKLAND	I-696	I-696 WB OVER ROUGE R	SCOUR PROTECTION		CON				
OAKLAND	I-75	I-75 NB OVER CLINTON RIVER	SCOUR PROTECTION	0.807	CON				
OAKLAND	I-75	I-75 SB OVER CLINTON RIVER	SCOUR PROTECTION		CON				
OAKLAND	I-96	NOVI ROAD OVER I-96	OVERLAY - EPOXY	0.069			CON		
OAKLAND	M-10	MOUNT VERNON ST OVER M-10	OVERLAY - SHALLOW	0.000			CON		
OAKLAND	M-10	EVERGREEN RD (NB) OVER M-10	OVERLAY - SHALLOW				CON		
OAKLAND	M-10	EVERGREEN RD (SB) OVER M-10	OVERLAY - SHALLOW				CON		
OAKLAND	M-10	10 MI RD OVER M-10	SUPERSTRUCTURE REPAIR, STEEL				CON		
OAKLAND	M-24	M-24 OVER PAINT CREEK	OVERLAY - EPOXY	0.226		CON			
OAKLAND	M-5	I-96 BL (GRAND RIVER) OVER M-5	OVERLAY - DEEP	0.261		CON			
OAKLAND	M-5	DRAKE RD OVER M-5	DECK PATCHING			CON			

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METRO REGION

BRIDGE - PRESERVATION - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
OAKLAND	I-75	NB JOSLYN TO I-75 OVER GTW RR	SUPERSTRUCTURE REPAIR, CONCRETE	0.948	CON				
OAKLAND	I-75	FEATHERSTONE RD OVER I-75	JOINT REPLACEMENT		CON				
OAKLAND	I-75	FEATHERSTONE RD OVER I-75	OVERLAY - EPOXY		CON				
OAKLAND	I-75	M-24 CONN EB OVER I-75	HEALER SEALER		CON				
OAKLAND	I-75	M-24 CONN WB OVER I-75	HEALER SEALER		CON				
WAYNE	I-94	WB E GRAND BLVD OVER I-94	HEALER SEALER	0.208					CON
WAYNE	I-94	CHENE RAMP TO I-94 OVER E BD E GRAND BLVD	SUBSTRUCTURE PATCHING						CON
WAYNE	I-94/M-10 RAMP	I-94 EB RMP TO M-10 OVER I-94 WB AND M-10 SB	OVERLAY - SHALLOW	0.000		CON			
WAYNE	I-275	SB TO EB I-96 OVER I-275 NB	OVERLAY - EPOXY	0.458		CON			
WAYNE	I-275	FIVE MILE ROAD OVER I-96	OVERLAY - DEEP			CON			
WAYNE	I-75	I-75 NB OVER ALLEN RD	SUPERSTRUCTURE REPAIR, STEEL	0.473	CON				
WAYNE	I-75	I-75 SB OVER ALLEN RD	SUPERSTRUCTURE REPAIR, STEEL		CON				
WAYNE	I-75	DAVISON TO I-75 RAMP OVER I-75, M-8 AND GTW RR	DECK PATCHING - FULL DEPTH	2.080				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 CANDD OVER M-8 (DAVISON) AND SERVICE ROADS	DECK PATCHING - FULL DEPTH					CON	
WAYNE	I-75	M-8 (DAVISON) RAMP OVER I-75	DECK PATCHING - FULL DEPTH					CON	
WAYNE	I-75	M-8 (DAVISON) RAMP TO I-75 OVER DEQUINDRE AVENUE	OVERLAY - EPOXY					CON	
WAYNE	I-75	I-75 NB OVER GTW RR	PAINTING COMPLETE	0.044	CON				
WAYNE	I-75	I-75 SB OVER GTW RR	PAINTING COMPLETE		CON				
WAYNE	I-94	CSX RR OVER I-94	SUBSTRUCTURE REPAIR	0.000		CON			
WAYNE	I-94	CONRAIL RR OVER I-94	SUBSTRUCTURE REPAIR			CON			
WAYNE	I-94	GTW AND CONRAIL RR OVER I-94	PAINTING COMPLETE			CON			
WAYNE	I-94	I-94 WB OVER WAYNE RD	SUBSTRUCTURE REPAIR	0.070		CON			
WAYNE	I-94	I-94 EB OVER MERRIMAN RD	OVERLAY - EPOXY	0.924		CON			
WAYNE	I-94	I-94 WB OVER MERRIMAN RD	OVERLAY - EPOXY			CON			
WAYNE	I-94	I-94 EB OVER INKSTER RD	OVERLAY - EPOXY			CON			
WAYNE	I-94	I-94 WB OVER INKSTER RD	OVERLAY - EPOXY			CON			
WAYNE	I-94	VINING RD OVER I-94	OVERLAY - EPOXY			CON			
WAYNE	I-94	I-94 EB OVER WAYNE RD	OVERLAY - EPOXY	1.897		CON			
WAYNE	I-94	I-94 EB OVER MIDDLEBELT RD	OVERLAY - EPOXY			CON			
WAYNE	I-94	I-94 WB OVER MIDDLEBELT RD	OVERLAY - EPOXY			CON			
WAYNE	I-94	I-94 EB OVER ECORSE RD	OVERLAY - EPOXY			CON			
WAYNE	I-94	I-94 EB OVER BEECH-DALY RD	OVERLAY - EPOXY			CON			
WAYNE	I-94	I-94 WB OVER BEECH-DALY RD	OVERLAY - EPOXY			CON			
WAYNE	I-96	I-96 RAMP OVER LAND	JOINT REPLACEMENT	0.006					CON
WAYNE	I-96	I-96 RAMP OVER WB SERVICE RD	BRIDGE BARRIER RAILING REPLACE						CON
WAYNE	I-96	WEST CHICAGO AVE OVER I-96	OVERLAY - EPOXY						CON
WAYNE	I-96	W GD BLVD AND TIREMA OVER I-96	SUBSTRUCTURE PATCHING	0.276					CON
WAYNE	I-96	W GD BLVD AND TIREMAN OVER I-96	JOINT REPAIR						CON
WAYNE	I-96	TURN RDWY EB TO SB OVER WB AND U-TURN SERVICE ROADS	OVERLAY - DEEP	0.000					CON
WAYNE	I-96	TURN RDWY 3RD LEVL OVER I-96 ROADWAYS	OVERLAY - DEEP						CON
WAYNE	I-96	I-96 RAMP OVER OPEN GROUND	OVERLAY - DEEP						CON
WAYNE	I-96	FULLERTON AVE OVER I-96 (JEFFRIES FWY)	OVERLAY - DEEP						CON
WAYNE	I-96	SCHAEFER RD OVER I-96 (JEFFRIES FWY)	OVERLAY - EPOXY	3.586					CON
WAYNE	I-96	MEYERS RD OVER I-96 (JEFFRIES FWY)	OVERLAY - EPOXY						CON
WAYNE	I-96	WYOMING AVE OVER I-96 (JEFFRIES FWY)	OVERLAY - EPOXY						CON
WAYNE	I-96	I-96 WB COLLECTOR OVER RAMP TO M-8	OVERLAY - EPOXY	3.586					CON
WAYNE	I-96	WB TO SB TURN RDWY OVER 3RD LEVEL TURN RDWY	OVERLAY - EPOXY	11.786					CON
WAYNE	I-96	U-TRN SERV RD OVER M-39(SOUTHFIELD EXPR)	OVERLAY - EPOXY						CON
WAYNE	I-96	I-96 WB COLLECTOR OVER M-39 (SOUTHFIELD EXPR)	OVERLAY - EPOXY						CON
WAYNE	I-96	I-96 WB MAIN RDWY OVER M-39 (SOUTHFIELD EXPR)	OVERLAY - EPOXY						CON

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METRO REGION

BRIDGE - PRESERVATION - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
WAYNE	I-96	I-96 RAMP OVER EB SERVICE RD	OVERLAY - EPOXY						CON
WAYNE	M-153	MILLER ROAD OVER M-153	OVERLAY - EPOXY	0.524			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	0.098			CON		
WAYNE	M-153	M-153 EB OVER ROUGE RIVER	OVERLAY - SHALLOW				CON		
WAYNE	M-39	M-39 OVER ROUGE RIVER	JOINT REPLACEMENT	0.555			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	OLD 701	CENTRAL AVE OVER CANOE STREAM	ASPHALT CAP (NO MEMBRANE)	0.671					CON
WAYNE	OLD 701	OAKWAY TRAIL OVER CANOE STREAM	SCOUR PROTECTION						CON
WAYNE	US-24	US-24 NB OVER ROUGE RIVER	OVERLAY - EPOXY	0.170		CON			
WAYNE	US-24	US-24 SB OVER ROUGE RIVER	OVERLAY - EPOXY			CON			
				44.863					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
OAKLAND	I-696	I-696 OVER PEBBLE CREEK	CULVERT REPLACEMENT	0.663					CON
WAYNE	I-75	I-75 SB OVER BLAKELY DRAIN	DECK REPLACEMENT	0.639	CON				
WAYNE	I-75	I-75 NB OVER BLAKELY DRAIN	DECK REPLACEMENT		CON				
WAYNE	I-75	I-75 SB OVER US-24 CONN	DECK REPLACEMENT	9.359	CON				
WAYNE	I-75	I-75 NB OVER EUREKA RD	DECK REPLACEMENT		CON				
WAYNE	I-75	I-75 SB OVER EUREKA RD	DECK REPLACEMENT		CON				
WAYNE	I-75	I-75 NB OVER NORTH LINE RD	DECK REPLACEMENT		CON				
WAYNE	I-75	I-75 SB OVER NORTH LINE RD	DECK REPLACEMENT		CON				
WAYNE	I-75	14TH ST OVER I-75	SUBSTRUCTURE REPAIR	1.000	CON				
WAYNE	I-75	TRUMBULL AVE OVER I-75	SUBSTRUCTURE REPAIR		CON				
WAYNE	I-75	M-3 NB CONN OVER I-75 AND I-375	HEALER SEALER		CON				
WAYNE	I-75	M-3 SB CONN OVER I-75 AND I-375	HEALER SEALER		CON				
WAYNE	I-75	I-375 N W TURN RD OVER I-75 AND RAMP	SUBSTRUCTURE REPAIR		CON				
WAYNE	I-75	WARREN AVE OVER I-75	SUBSTRUCTURE REPAIR		CON				
WAYNE	I-75	I-75 SB EXIT RAMP OVER I-75 E AND W TO SB TURN RDWY	HEALER SEALER		CON				
WAYNE	I-94	I-94 WB OVER ECORSE RD	BRIDGE REPLACEMENT	0.375		CON			
WAYNE	I-96	HUBBELL AVE OVER I-96 (JEFFRIES FWY)	DECK REPLACEMENT	0.000					CON
WAYNE	I-96	FULLERTON AVE OVER I-96 (JEFFRIES FWY)	DECK REPLACEMENT						CON
WAYNE	I-96	I-96 RAMP NB TO EB OVER M-39 RAMP AND E SERVICE RD	DECK REPLACEMENT	0.000					CON
WAYNE	M-39	SAWYER AVE WALKOVER OVER M-39	BRIDGE REPLACEMENT	2.100		CON			
WAYNE	M-39	VERNE ST PED-X OVER M-39	NEW STRUCTURE ON EXISTING ROUTE			CON			
WAYNE	M-39	VASSAR AVE WALKOVER OVER M-39	BRIDGE REPLACEMENT			CON			
WAYNE	OLD 14	HINES DRIVE OVER OLD M-14 (ANN ARBOR RD)	BRIDGE REPLACEMENT	0.139		CON			
WAYNE	OLD 14	OLD M-14 OVER MIDDLE ROUGE RIVER	BRIDGE REPLACEMENT	0.139		CON			
WAYNE	OLD 705	VISTA AVE OVER CANOE STREAM	BRIDGE REPLACEMENT	0.039					CON
WAYNE	US-12	US-12 EB OVER M-39	DECK REPLACEMENT	0.017			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	0.626					CON
WAYNE	US-24	US-24 NB OVER FRANK AND POET DRAIN	BRIDGE REPLACEMENT						CON
				15.096					

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METRO REGION

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
MACOMB	I-696	DEQUINDRE RD TO NEIMAN RD	ROAD REHABILITATION	6.682			CON		
OAKLAND	M-24	S OF GODENGATE TO HARRIET	ROAD REHABILITATION	4.510		CON			
OAKLAND	M-59	TIPISCO LAKE ROAD TO MILFORD ROAD	ROAD REHABILITATION	3.183	CON				
WAYNE	I-275	S OF M-153 TO 5 MILE ROAD	ROAD REHABILITATION	5.662		CON			
WAYNE	I-275	S OF ECORSE ROAD TO M-153	ROAD REHABILITATION	5.275				CON	
WAYNE	I-375 BS	S OF I-75/I-375 INTERCHANGE TO JEFFERSON AVE	RECONSTRUCTION	5.317					CON
WAYNE	US-24	GRAND RIVER TO N OF 8 MILE ROAD	RECONSTRUCTION	1.438				CON	
				32.067					

NEW ROADS

GORDIE HOWE INTERNATIONAL BRIDGE

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
WAYNE	I-75	FROM CLARK STREET TO WEST END	NEW ROAD	1.755				CON	CON
WAYNE	GORDIE HOWE INTERNATIONAL	GORDIE HOWE INTERNATIONAL BRIDGE-PLAZA AREA	NEW ROAD		ROW	ROW	ROW		
WAYNE	GORDIE HOWE INTERNATIONAL	GORDIE HOWE INTERNATIONAL BRIDGE-PLAZA AREA	NEW ROAD		PE	PE	PE		
WAYNE	GORDIE HOWE INTERNATIONAL	AT THE GORDIE HOWE INTERNATIONAL BRIDGE	PROJECT MANAGEMENT CONTRACT		ROW	ROW	ROW		
WAYNE	GORDIE HOWE INTERNATIONAL	AT THE GORDIE HOWE INTERNATIONAL BRIDGE	PROJECT MANAGEMENT CONTRACT		PE	PE	PE		
WAYNE	GORDIE HOWE INTERNATIONAL	GORDIE HOWE INT'L BRIDGE-INTERCHANGE AREA	NEW ROAD		ROW	ROW	ROW	ROW	
WAYNE	GORDIE HOWE INTERNATIONAL	GORDIE HOWE INT'L BRIDGE-INTERCHANGE AREA	NEW ROAD		PE	PE	PE	PE	
WAYNE	GORDIE HOWE INTERNATIONAL	GORDIE HOWE INTERNATIONAL BRIDGE-BRIDGE AREA	NEW ROAD		ROW	ROW	ROW	ROW	
WAYNE	GORDIE HOWE INTERNATIONAL	GORDIE HOWE INTERNATIONAL BRIDGE-BRIDGE AREA	NEW ROAD		PE	PE	PE	PE	
WAYNE	GORDIE HOWE INTERNATIONAL	SE MICHIGAN & SW ONTARIO	NEW ROAD		EPE	EPE	EPE	EPE	
				1.755					

TRUNKLINE MODERNIZATION

I-75, OAKLAND COUNTY

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
OAKLAND	I-75	FROM 8 MILE RD TO NORTH OF 13 MILE RD	RECONSTRUCTION	5.403	CON	CON	CON	CON	CON
OAKLAND	I-75	FROM NORTH OF 13 MILE RD TO COOLIDGE HWY	RECONSTRUCTION	8.879	CON	CON	CON	CON	
OAKLAND	I-75	FROM 8 MILE TO M-59, OAKLAND COUNTY	PROJECT MANAGEMENT CONTRACT		EPE	EPE	EPE	EPE	EPE
OAKLAND	I-75	FROM 8 MILE TO M-59, OAKLAND COUNTY	REAL ESTATE ACTIVITIES		ROW	ROW			
OAKLAND	I-75	FROM NORTH OF COOLIDGE ROAD TO SOUTH BOULEVARD	RECONSTRUCTION	3.608	CON				
				17.89					

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METRO REGION

TRUNKLINE MODERNIZATION - *CONTINUED*

I-94, DETROIT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
WAYNE	M-3	GRATIOT AVE OVER I-94, WAYNE COUNTY	SPECIAL NEEDS	0.077	CON				
WAYNE	I-94 EB	AT BURNS STREET (S12 OF 82024)	BRIDGE REPLACEMENT	0.000		CON	CON		
WAYNE	I-94 EB	AT BURNS STREET (S12 OF 82024)	BRIDGE REPLACEMENT		PE	PE			
WAYNE	I-94 EB	AT CONRAIL RAILROAD (X01 OF 82025)	BRIDGE REPLACEMENT	0.000		CON	CON		
WAYNE	I-94 EB	AT CONRAIL RAILROAD (X02 OF 82024)	BRIDGE REPLACEMENT	0.000		CON	CON		
WAYNE	I-94 EB	AT FORTENAC ST (S08 OF 82024)	BRIDGE REPLACEMENT	0.000		CON	CON		
WAYNE	I-94 EB	AT FORTENAC ST (S08 OF 82024)	BRIDGE REPLACEMENT		PE	PE			
WAYNE	I-94 EB	AT GRAND RIVER AVE (S17 OF 82024)	BRIDGE REPLACEMENT	0.175		CON	CON		
WAYNE	I-75 EB	AT GRAND RIVER AVE (S17 OF 82024)	BRIDGE REPLACEMENT		PE	PE			
WAYNE	I-75 EB	AT MILWAUKEE AVE (S17 OF 82251)	BRIDGE REPLACEMENT	0.000		CON	CON		
WAYNE	I-94 EB	AT MILWAUKEE AVE (S17 OF 82251)	BRIDGE REPLACEMENT		PE	PE			
WAYNE	I-94 EB	BETWEEN CONCORD ST. AND CONNER AVE.	BRIDGE REMOVAL	1.441	CON	CON			
WAYNE	I-94 (Ford Freeway)	BRUSH STREET OVER I-94, WAYNE COUNTY	BRIDGE REPLACEMENT	0.138	CON	CON			
WAYNE	I-94 (Ford Freeway)	BRUSH ST OVER I-94	BRIDGE REPLACEMENT		PE-B				
WAYNE	I-94 (Ford Freeway)	CASS AVENUE, DETROIT, WAYNE COUNTY	BRIDGE REPLACEMENT	0.130	CON				
WAYNE	I-94 (Ford Freeway)	CASS AVE OVER I-94	BRIDGE REPLACEMENT		PE-B				
WAYNE	I-94 (Ford Freeway)	CHENE STREET OVER I-94, WAYNE COUNTY	BRIDGE REPLACEMENT	0.339	CON				
WAYNE	I-94 (Ford Freeway)	CHENE STREET OVER I-94, WAYNE COUNTY	BRIDGE REPLACEMENT		ROW				
WAYNE	I-94 (Ford Freeway)	CHENE ST OVER I-94	BRIDGE REPLACEMENT		PE-B				
WAYNE	I-94 (Ford Freeway)	CONCORD AVENUE OVER I-94, WAYNE COUNTY	BRIDGE REPLACEMENT	0.129	CON	CON			
WAYNE	I-94 EB	E. GRAND BLVD OVER I-94	BRIDGE REPLACEMENT	0.000		CON	CON		
WAYNE	I-94 EB	E. GRAND BLVD OVER I-94	BRIDGE REPLACEMENT		PE	PE			
WAYNE	I-94 (Ford Freeway)	FRENCH RD OVER I-94, WAYNE COUNTY	BRIDGE REPLACEMENT	0.189	CON	CON			
WAYNE	I-94 (Ford Freeway)	FRENCH ROAD OVER I-94	BRIDGE REPLACEMENT		PE-B				
WAYNE	I-94 (Ford Freeway)	FROM CONNER AVENUE TO CHENE STREET	RECONSTRUCTION		ROW				
WAYNE	I-94 (Ford Freeway)	FROM CONNER AVENUE TO CHENE STREET	RECONSTRUCTION		PE	PE	PE		
WAYNE	I-94	FROM CONNER AVENUE TO CHENE STREET	RECONSTRUCTION	3.704				CON	CON
WAYNE	I-94	FROM I-96 TO CONNER	DYNAMIC LANE USE	6.394		CON	CON		
WAYNE	I-94	FROM I-96 TO CONNER	DYNAMIC LANE USE		PE	PE			
WAYNE	I-94 (Ford Freeway)	M-3 OVER I-94, WAYNE COUNTY	BRIDGE REPLACEMENT	0.001	CON	CON	CON		
WAYNE	I-94 (Ford Freeway)	M-3 (GRATIOT) OVER I-94	BRIDGE REPLACEMENT		PE-B				
WAYNE	I-94 (Ford Freeway)	CADILLAC AVENUE, DETROIT, WAYNE COUNTY	BRIDGE REPLACEMENT	0.010	CON				
WAYNE	I-94 (Ford Freeway)	I-96 TO CONNER AVENUE, WAYNE COUNTY	PROJECT MANAGEMENT CONTRACT		EPE				
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO EAST OF CONNER AVENUE	PROJECT MANAGEMENT CONTRACT		EPE				
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO EAST OF CONNER AVENUE	PROJECT MANAGEMENT CONTRACT			EPE			
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO CONNER AVENUE, CITY OF DETROIT	BRIDGE REPLACEMENT		PE				
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO CONNER AVENUE, CITY OF DETROIT	BRIDGE REPLACEMENT		PE				
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO CONNER AVENUE, CITY OF DETROIT	BRIDGE REPLACEMENT		PE				
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO EAST OF CONNER AVENUE	PROJECT MANAGEMENT CONTRACT				EPE		
WAYNE	I-94 (Ford Freeway)	FROM I-96 TO EAST OF CONNER AVENUE	PROJECT MANAGEMENT CONTRACT					PE	
WAYNE	I-94 (Ford Freeway)	MOUNT ELLIOT STREET OVER I-94, WAYNE COUNITY	BRIDGE REPLACEMENT	0.074	CON	CON			
WAYNE	I-94 (Ford Freeway)	SECOND AVENUE OVER I-94, WAYNE COUNTY	BRIDGE REPLACEMENT	0.074	CON	CON			
WAYNE	I-94 (Ford Freeway)	SECOND AVENUE OVER I-94, WAYNE COUNTY	BRIDGE REPLACEMENT		ROW				
WAYNE	I-94 (Ford Freeway)	SECOND BLVD OVER I-94	BRIDGE REPLACEMENT		PE-B				
				12.875					

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NORTH REGION

NORTH REGION

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
MANISTEE	M-55	M-55 OVER MANISTEE RIVER	SUBSTRUCTURE PATCHING	0.746		CON			
OGEMAW	M-55	M-55 OVER RIFLE RIVER	JOINT REPLACEMENT	2.808			CON		
OGEMAW	I-75 BL	I-75 BL OVER W BR RIFLE RIVER	SUPERSTRUCTURE REPAIR, CONCRETE				CON		
OGEMAW	I-75 SB	I-75 SB OVER M-55	SUBSTRUCTURE REPAIR				CON		
OGEMAW	I-75 NB	I-75 NB OVER M-55	SUBSTRUCTURE REPAIR				CON		
PRESQUE ISLE	US-23	US-23 OVER SWAN RIVER	BRIDGE BARRIER RAILING REPLACE	0.521			CON		
ROSCOMMON	I-75	M-18 OVER I-75	OVERLAY - DEEP	0.310	CON				
WEXFORD	M-115	M-115 OVER MANISTEE RIVER	OVERLAY - DEEP	0.430				CON	
				4.815					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
EMMET	US-23	US-23 SB OVER I-75	SUPERSTRUCTURE REPLACEMENT	0.470					CON
ROSCOMMON	M-18 (N Roscommon Rd)	M-18 OVER BACKUS CREEK	CULVERT REPLACEMENT	0.189		CON			
				0.659					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
ALCONA	US-23	WASHINGTON ST TO LAKESHORE DR	ROAD REHABILITATION	1.979				CON	
BENZIE	US-31	M-115 SOUTH TO THE BETSIE RIVER	RECONSTRUCTION	1.416			CON		
BENZIE	US-31	EAST OF BEULAH EASTERLY TO WEST OF HONOR	ROAD REHABILITATION	2.114					CON
CHARLEVOIX	US-131	FROM CHERRY HILL ROAD NORTH TO M-75	RECONSTRUCTION	1.884				CON	
CHEBOYGAN	I-75	FROM LEVERING RD TO SOUTH OF HEBRON TOWN HALL RD	ROAD REHABILITATION	4.400				CON	
CHEBOYGAN	I-75	NORTH OF M-27 TO TOPINABEE MAIL ROUTE	ROAD REHABILITATION	2.245			CON		
CHEBOYGAN	I-75	FROM SOUTH OF HEBRON TOWN HALL RD NORTH TO US-31	ROAD REHABILITATION	5.168					CON
CHEBOYGAN	US-23	FROM CORDWOOD RD TO DUNCAN AVE	ROAD REHABILITATION	7.473				CON	
CRAWFORD	M-72	KALKASKA/CRAWFORD COUNTY LINE TO M-93	ROAD REHABILITATION	6.074		CON			
EMMET	I-75 S	FROM OLD M-108 NORTH TO MACKINAC BRIDGE	ROAD REHABILITATION	2.058					CON
EMMET	US-31	FROM LIBERTY STREET TO ROSEDALE AVENUE	RECONSTRUCTION	1.339		CON			
EMMET	US-31	M-119 TO MANVEL RD; AND M-119, FROM US-31 TO PICKE	ROAD REHABILITATION	0.240			CON		
EMMET	US-31	BLUMKE RD NORTH TO MILTON RD	RECONSTRUCTION	4.117					CON
GRAND TRAVERSE	M-37	VANCE ROAD TO BLAIR TOWNHALL ROAD.	ROAD REHABILITATION	1.532				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 CHUM'S CORNER	MINOR WIDENING	0.623			CON		
GRAND TRAVERSE	US-31	MURCHIE BRIDGE EAST TO GARFIELD AVENUE	RECONSTRUCTION	0.861					CON
IOSCO	US-23	TAWAS BEACH ROAD NORTH TO KIRKLAND DRIVE	RECONSTRUCTION	5.975	CON				
KALKASKA	M-72	GRAND TRAVERSE COUNTY LINE EAST TO KALKASKA ROAD	ROAD REHABILITATION	7.731	CON				
MANISTEE	M-55	CLAYBANK RD TO UDELL HILLS RD	ROAD REHABILITATION	8.012			CON		
MONTMORENCY	M-32	JEROME STREET TO HAAS ROAD	ROAD REHABILITATION	3.381			CON		
OSCODA	M-33	CHERRY CREEK RD TO WEST OF THE M-33/M-72 JCT	ROAD REHABILITATION	6.719		CON			
ROSCOMMON	US-127	FROM M-55 TO MUSKEGON RIVER BRIDGE	ROAD REHABILITATION	5.469			CON		
				84.834					

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SOUTHWEST REGION

SOUTHWEST REGION

BRIDGE - BIG BRIDGE PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
BERRIEN	I-94 BL	I-94 BL OVER ST JOSEPH RIVER	OVERLAY - EPOXY	0.179		CON			
BERRIEN	M-63	M-63 OVER ST JOSEPH RIVER	OVERLAY - EPOXY	0.189		CON			
				0.368					

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
BERRIEN	I-94	LAPORTE ROAD OVER I-94	OVERLAY - DEEP	1.493	CON				
BERRIEN	I-94	KRUGER ROAD OVER I-94	OVERLAY - DEEP		CON				
BERRIEN	I-94	LAKESIDE ROAD OVER I-94	OVERLAY - DEEP		CON				
BERRIEN	I-94	MAUDLIN ROAD OVER I-94	PAINTING COMPLETE	0.000	CON				
BERRIEN	I-94	UNION PIER ROAD OVER I-94	PAINTING COMPLETE		CON				
BERRIEN	I-94	GLENLORD ROAD OVER I-94	OVERLAY - EPOXY	0.385		CON			
BERRIEN	I-94	CLEVELAND AVENUE OVER I-94	OVERLAY - DEEP			CON			
BERRIEN	US-31	US-31 SB OVER US-12	OVERLAY - SHALLOW	0.410			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	1.840			CON		
BRANCH	I-69	STATE ROAD OVER I-69	OVERLAY - DEEP				CON		
BRANCH	I-69	NEWTON ROAD OVER I-69	OVERLAY - DEEP				CON		
CALHOUN	I-69	N DRIVE NORTH OVER I-69	OVERLAY - DEEP	2.325				CON	
CALHOUN	I-69	GARFIELD ROAD OVER I-69	OVERLAY - DEEP					CON	
CALHOUN	M-66	I-194 AND M-66 NB OVER I-94	BRIDGE BARRIER RAILING REPLACE	14.161				CON	
CALHOUN	M-66	I-194 AND M-66 SB OVER I-94	BRIDGE BARRIER RAILING REPLACE					CON	
KALAMAZOO	I-94	9TH STREET OVER I-94	BRIDGE BARRIER RAILING REPLACE	0.000	CON				
KALAMAZOO	I-94	MILLER RD (L AVE) OVER I-94	PAINTING COMPLETE	3.428	CON				
KALAMAZOO	I-94	I-94 BL EB OVER I-94	PAINTING COMPLETE		CON				
KALAMAZOO	I-94	SHAFTER RD (35TH) OVER I-94	PAINTING COMPLETE		CON				
KALAMAZOO	I-94	SCOTT ROAD (38TH) OVER I-94	PAINTING COMPLETE		CON				
ST. JOSEPH	M-66	M-66 OVER PRAIRIE RIVER	MISCELLANEOUS BRIDGE CPM	1.286	CON				
ST. JOSEPH	M-66	M-66 OVER ST JOSEPH RIVER	OVERLAY - EPOXY		CON				
ST. JOSEPH	US-131	US-131 NB OVER ROCKY RIVER	OVERLAY - DEEP	1.162	CON				
ST. JOSEPH	US-131	US-131 SB OVER ROCKY RIVER	OVERLAY - EPOXY		CON				
VAN BUREN	I-196	I-196 NB OVER KAL-HAVEN TRL AND BLACK RV	SCOUR PROTECTION	0.345					CON
VAN BUREN	I-196	I-196 SB OVER KAL-HAVEN TRL AND BLACK RV	SCOUR PROTECTION						CON
VAN BUREN	I-94	I-94 EB OVER PAW PAW RIVER	SCOUR PROTECTION	0.818					CON
VAN BUREN	I-94	32ND ST (CR653) OVER I-94	OVERLAY - SHALLOW	1.014				CON	
				28.667					

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SOUTHWEST REGION

BRIDGE - REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
BERRIEN	I-196	M-63 OVER I-196	BRIDGE REPLACEMENT	0.300	CON				
BRANCH	US-12	US-12 OVER MICHIGAN SOUTHERN RAILROAD	BRIDGE REMOVAL	0.587	CON				
CALHOUN	M-311	M-311 (11 MILE ROAD) OVER KALAMAZOO RIVER	BRIDGE REPLACEMENT	0.499		CON			
KALAMAZOO	US-131	US-131 NB OVER AMTRAK AND KL AVE	BRIDGE REPLACEMENT	0.754		CON			
KALAMAZOO	US-131	US-131 SB OVER AMTRAK AND KL AVE	BRIDGE REPLACEMENT			CON			
ST. JOSEPH	M-66	M-66 OVER NYC RR (ABANDONED)	BRIDGE REMOVAL	0.228	CON				
ST. JOSEPH	US-131 BR	US-131 BR OVER ST JOSEPH RIVER	DECK REPLACEMENT	0.204				CON	
				2.572					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
BERRIEN	EB I-94	BRITAIN AVENUE TO I-196	RECONSTRUCTION	9.182				CON	
BERRIEN	EB I-94	HIGHLAND ROAD OVER I-94	BRIDGE REMOVAL					CON	
BERRIEN	EB I-94	I-94 BL EB (MAIN) OVER I-94	BRIDGE REMOVAL					CON	
BERRIEN	EB I-94	TERRITORIAL ROAD OVER I-94	BRIDGE REPLACEMENT					CON	
BERRIEN	EB I-94	NB US-31 AND WB I-94 BL OVER I-94	NEW STRUCTURE ON RELOCATED ROUTE					CON	
BERRIEN	EB I-94	SB US-31 AND EB I-94 BL OVER I-94	NEW STRUCTURE ON RELOCATED ROUTE					CON	
BERRIEN	I-196	I-94 TO NORTH OF M-63 (EXIT 7)	ROAD REHABILITATION	8.281	CON				
BERRIEN	I-94	INDIANA STATE LINE TO M-239	ROAD REHABILITATION	1.466	CON				
BERRIEN	I-94	ST. JOSEPH RIVER TO BRITAIN AVENUE.	RECONSTRUCTION	4.066					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	I-196 TO 0.7 MILES WEST OF M-140	ROAD REHABILITATION	5.603			CON		
CALHOUN	I-69	N DRIVE NORTH (EXIT 42) TO EATON COUNTY LINE	RECONSTRUCTION	5.056					CON
CALHOUN	M-199 (25 1/2 Mile Road)	EATON ST TO I-94	ROAD REHABILITATION	1.255			CON		
CALHOUN	M-311 (11 Mile Road)	AT THE KALAMAZOO RIVER	ROAD REHABILITATION	13.432		CON			
CASS	M-40	1 MILE SOUTH OF M-60	ROAD REHABILITATION	0.094	CON				
CASS	US-12	WEST VILLAGE LIMITS OF EDWARSBURG TO M-62	ROAD REHABILITATION	0.840	CON				
KALAMAZOO	I-94	EAST OF LOVERS LANE TO EAST OF PORTAGE ROAD	MAJOR WIDENING	2.483			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	FROM PORTAGE ROAD TO SPRINKLE ROAD	MAJOR WIDENING	1.258			CON		
KALAMAZOO	I-94	I-94 OVER DAVIS CREEK	REPLACE BRIDGE, ADD LANES				CON		
KALAMAZOO	I-94	I-94 OVER NORFOLK SOUTHERN	REPLACE BRIDGE, ADD LANES				CON		
KALAMAZOO	I-94	I-94 EB OVER GTW RR	REPLACE BRIDGE, ADD LANES				CON		
KALAMAZOO	I-94	I-94 WB OVER GTW RR	REPLACE BRIDGE, ADD LANES				CON		
KALAMAZOO	I-94 BL (Stadium Drive)	AT HOWARD STREET INTERSECTION	MINOR WIDENING	0.556	CON				
KALAMAZOO	I-94 BL (Stadium Drive)	EAST OF SENECA TO HOWARD	ROAD REHABILITATION	2.762	CON				
ST. JOSEPH	US-131	BROADWAY ROAD TO THE ROCKY RIVER BRIDGE	RECONSTRUCTION	1.613	CON				
				57.947					

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SUPERIOR REGION

SUPERIOR REGION

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2019	2021	2022
ALGER	M-28	M-28 OVER SAND RIVER	OVERLAY - SHALLOW	0.522		CON			
DELTA	M-35	US-2, US-41 OVER FORD RIVER	JOINT REPLACEMENT	0.810	CON				
HOUGHTON	US-41	US-41 OVER STURGEON RIVER SLOUGH	PAINTING COMPLETE	2.030			CON		
IRON	US-2	US-2 OVER S BRANCH IRON RIVER	BRIDGE BARRIER RAILING REPLACE	0.660		CON			
MARQUETTE	M-95	M-95 OVER MICHIGAMME RIVER	SUBSTRUCTURE REPAIR	0.194		CON			
MENOMINEE	M-35	M-35 OVER BIG CEDAR RIVER	PAINTING COMPLETE	0.810	CON				
MENOMINEE	M-35	M-35 OVER DEER CREEK	SUPERSTRUCTURE REPAIR, CONCRETE	1.470			CON		
ONTONAGON	US-45	US-45 OVER ROSELAWN CREEK	SUPERSTRUCTURE REPAIR, STEEL	0.085			CON		
SCHOOLCRAFT	M-28	M-28, M-77 OVER FOX RIVER	PAINTING COMPLETE	0.269			CON		
				6.85					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2019	2021	2022
ALGER	US-41	US-41 OVER WEST BRANCH WHITEFISH RIVER	DECK REPLACEMENT	1.230				CON	
DICKINSON	US-8	US-8 OVER MENOMINEE RIVER	DECK REPLACEMENT	0.343	CON				
IRON	US-141	US-141 OVER E BR NET RIVER	OVERLAY - SHALLOW	1.000					CON
MACKINAC	US-2	US-2 OVER BREVORT RIVER	BRIDGE REPLACEMENT	0.200		CON			
MENOMINEE	US-2	US-2 OVER BIG CEDAR RIVER	DECK REPLACEMENT	0.722		CON			
ONTONAGON	M-28	M-28 OVER BALTIMORE RIVER	DECK REPLACEMENT	1.000			CON		
ONTONAGON	M-64	M-64 OVER FLOODWOOD RIVER	DECK REPLACEMENT	0.588		CON			
				5.083					

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2019	2021	2022
ALGER	M-28	FROM 0.86 MI E OF FFR 2275 TO 0.13 MI E. OF MUNAVE	ROAD REHABILITATION	4.339			CON		
ALGER	M-28	FROM ONOTA ST TO FFH-13 (WETMORE)	ROAD REHABILITATION	3.014					CON
ALGER	M-28	FROM FFH13 in WETMORE TO SHINGLETON	ROAD REHABILITATION	7.534					CON
BARAGA	US-41	FROM OLD US-41 NORTH TO THE HOUGHTON COUNTY LINE	ROAD REHABILITATION	6.946	CON				
BARAGA	US-41	US-41, COVINGTON AND SPUR TOWNSHIPS, BARAGA COUNTY	ROAD REHABILITATION	11.312			CON		
BARAGA	US-41/M-28	M-28 TO NESTORIA HERMAN RD	ROAD REHABILITATION	7.542					CON
CHIPPEWA	I-75 BS (Ashmun St)	FROM I-75/3 MILE RAMPS TO M-129	RECONSTRUCTION	1.739	CON				
CHIPPEWA	I-75BS	FROM 15TH ST TO 10TH STREET	ROAD REHABILITATION	0.443	CON				
CHIPPEWA	M-28	FROM I-75 TO M-129	ROAD REHABILITATION	2.693					CON
DELTA	US-2	WESTBOUND US-2 BETWEEN GLADSTONE AND RAPID RIVER	ROAD REHABILITATION	5.521	CON				
DELTA	US-2	EASTBOUND US-2 BETWEEN GLADSTONE AND RAPID RIVER	ROAD REHABILITATION	5.549			CON		
DELTA	US-2	US-2 AT 3RD AVENUE NORTH IN ESCANABA.	TRAFFIC SAFETY	0.000	CON				
DICKINSON	M-95	FROM CHANNING NORTH TO MARQUETTE COUNTY LINE	ROAD REHABILITATION	9.494	CON				
GOGEBIC	US-2 (Lead Street)	POWDERMILL CREEK TO OLD US-2 (BESSEMER)	RECONSTRUCTION	1.813				CON	

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SUPERIOR REGION

REPAIR AND REBUILD ROADS - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2019	2021	2022
HOUGHTON	US-41	CITY OF HANCOCK AND FRANKLIN TWP, HOUGHTON COUNTY	ROAD REHABILITATION	1.673			CON		
HOUGHTON	US-41	US-41 FROM MACINNES DRIVE TO ISLE ROYAL STREET	RECONSTRUCTION	1.066				CON	
IRON	US-2	ANGELI'S PLAZA EASTERLY TO BATES-AMASA ROAD	ROAD REHABILITATION	3.490		CON			
MACKINAC	US-2	FROM EAST LIMITS OF NAUBINWAY TO BORGSTROM ROAD	ROAD REHABILITATION	5.884		CON			
MACKINAC	US-2	BETWEEN HIAWATHA TRAIL AND CUT RIVER, MACKINAC CO.	RELOCATION OF EXISTING ROUTE	1.392				CON	
MARQUETTE	US-41 N	FROM CR HQ TO WEST OF BRICKYARD ROAD, MARQUETTE	RECONSTRUCTION	1.364		CON			
MARQUETTE	US-41/M-28	US-41/M-28 FROM FRONT ST TO COUNTY RD HQ	ROAD REHABILITATION	2.652				CON	
MARQUETTE	US-41/M-28	FURNACE ST TO US-41 BYPASS	RECONSTRUCTION	0.390					CON
MENOMINEE	US-41	FROM MENOMINEE TO WALLACE	ROAD REHABILITATION	12.336					CON
SCHOOLCRAFT	US-2	FROM M-149 TO MANISTIQUE CL	ROAD REHABILITATION	4.036				CON	
				102.222					

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UNIVERSITY REGION

BRIDGE - BIG BRIDGE PROGRAM

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
MONROE	I-75	I-75 OVER CONRAIL RR, RAISIN RIVER, FRONT STREET	OVERLAY - EPOXY	0.131		CON			
				0.131					

BRIDGE - PRESERVATION

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
CLINTON	I-69	I-69 SB OVER CSX RR	OVERLAY - EPOXY	3.829				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 & WB TURNING ROAD	OVERLAY - EPOXY					CON	
CLINTON	I-69	EB TURNING RDWY OVER I-96	OVERLAY - EPOXY					CON	
EATON	I-69	I-69 SB OVER INDIAN CREEK	OVERLAY - EPOXY	9.093			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	BASE LINE HIGHWAY OVER I-69	OVERLAY - EPOXY				CON		
EATON	I-69	BUTTERFIELD HIGHWAY OVER I-69	OVERLAY - EPOXY				CON		
EATON	I-69	SHERWOOD 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		
EATON	I-69	AINGER ROAD OVER I-69	OVERLAY - DEEP	0.348			CON		
EATON	I-69	I-96 EB OVER GRAND RIVER	OVERLAY - EPOXY	3.829				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	
INGHAM	CONN-81	M-143 E MICH AVE OVER GRAND RIVER	OVERLAY - EPOXY	0.120	CON				
INGHAM	I-96	HAGADORN ROAD OVER I-96	DECK PATCHING	3.854			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	WILLIAMSTON ROAD OVER I-96	DECK PATCHING				CON		

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UNIVERSITY REGION

BRIDGE - PRESERVATION - *Continued*

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
INGHAM	I-96	ELM ROAD OVER I-96	DECK PATCHING				CON		
INGHAM	I-96	WALLACE ROAD OVER I-96	OVERLAY - EPOXY				CON		
MONROE	I-75	LUNA PIER RD OVER I-75	OVERLAY - EPOXY	0.000				CON	
MONROE	I-75	ALLEN COVE RD OVER I-75	OVERLAY - EPOXY					CON	
MONROE	I-75	OTTER CREEK RD OVER I-75	OVERLAY - EPOXY					CON	
MONROE	S I-75/SUMMIT RAMP	I-75 AND M-125 CONN OVER I-75	OVERLAY - DEEP	0.378		CON			
MONROE	S I-75/SUMMIT RAMP	I-75 RAMP B OVER I-75	OVERLAY - DEEP			CON			
WASHTENAW	US-23	US-23 NB OVER CONRAIL AND HURON RIVER	OVERLAY - EPOXY	2.142		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			
				23.593					

BRIDGE REPLACEMENT

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
INGHAM	I-496	I-496 WB RAMP OVER CSX RR	BRIDGE REPLACEMENT	0.010					CON
INGHAM	I-96 BL	I-96 BL OVER HORESBROOK CREEK	CULVERT REPLACEMENT	0.072					CON
JACKSON	I-94	I-94 OVER CONRAIL RR AND GRAND RIVER	BRIDGE REPLACEMENT	0.404	CON				
JACKSON	I-94	M-106 NB OVER I-94	BRIDGE REPLACEMENT	0.204	CON				
JACKSON	I-94	M-106 SB OVER I-94	BRIDGE REPLACEMENT		CON				
JACKSON	M-60 E	M-60 EB RMP I-94 OVER I-94	BRIDGE REPLACEMENT	0.267			CON		
JACKSON	M-60 E	M-60 WB RAMP I-94 OVER I-94	BRIDGE REPLACEMENT				CON		
MONROE	I-75	LAPLAISANCE RD OVER I-75	BRIDGE REPLACEMENT	0.782				CON	
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 NB OVER MUDDY CREEK	BRIDGE REPLACEMENT	2.624				CON	
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 SB OVER MUDDY CREEK	BRIDGE REPLACEMENT					CON	
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 NB OVER OTTER CREEK	BRIDGE REPLACEMENT					CON	
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 SB OVER OTTER CREEK	BRIDGE REPLACEMENT					CON	
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 NB OVER HALFWAY CREEK	BRIDGE REPLACEMENT	4.254		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			
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 CO RR SPUR	BRIDGE REPLACEMENT			CON			
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 SB OVER POWER CO RR SPUR	BRIDGE REPLACEMENT			CON			
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 NB OVER BAY CREEK RD	BRIDGE REPLACEMENT			CON			
MONROE	I-75 N (Detroit-Toledo Freeway)	I-75 SB OVER BAY CREEK RD	BRIDGE REPLACEMENT			CON			
MONROE	I-75 N (Detroit-Toledo Freeway)	ERIE RD OVER I-75	BRIDGE REPLACEMENT			CON			
				8.617					

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UNIVERSITY REGION

REPAIR AND REBUILD ROADS

COUNTY	ROUTE (COMMON NAME)	LOCATION	TYPE OF WORK	LENGTH	2018	2019	2020	2021	2022
CLINTON	I-69	I-96 TO AIRPORT ROAD	RECONSTRUCTION	5.636				CON	
CLINTON	US-127	US-127 FROM S. OF M-43 TO 875 FT SOUTH OF CLARK RD	ROAD REHABILITATION	2.507					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 CO LINE TO M-50	ROAD REHABILITATION	13.087			CON		
INGHAM	M-99	M-99 FROM 1,700 FT NORTH OF HOLT HWY TO EDGEWOOD	RECONSTRUCTION	2.376					CON
JACKSON	I-94	I-94 AT ELM ROAD	RECONSTRUCTION	1.499				CON	
JACKSON	I-94	ELM RD OVER I-94	BRIDGE REPLACEMENT					CON	
JACKSON	I-94 W	M-60 TO SARGENT ROAD	RECONSTRUCTION	8.925	CON				
JACKSON	M-60	EMERSON RD TO RENFREW RD	ROAD REHABILITATION	2.528					CON
JACKSON	M-60	CHAPEL ROAD TO EMERSON ROAD	ROAD REHABILITATION	2.100	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	3.725				CON	
LIVINGSTON	M-59	M-59 FROM WEST OF LAKENA RD TO THE COUNTY LINE	ROAD REHABILITATION	3.309					CON
LIVINGSTON	NB US-23	NB US-23 BET 8 MILE AND M-36	NOISE WALL CONSTRUCTION	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 RD TO OTTER CREEK RD	RECONSTRUCTION	3.731				CON	
WASHTENAW	M-17/US-12 BR (Cross St)	NORMAL TO MICH, I-94 TO MICH, HAMILTON TO ECORSE	ROAD REHABILITATION	2.588					CON
WASHTENAW	US-23 BR (Main Street)	I-94 BL TO M- 14	ROAD REHABILITATION	1.242					CON
				71.607					

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

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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

Acronyms and Definitions - *continued*

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 - *continued from page 17*

DB (design-build) is an innovative contracting model that allows for overlapping steps between design and construction, thus saving the overall time to complete the work of the project. DB allows for more contractor innovation as they can apply their unique expertise and strengths as builders of the infrastructure during the design phase. However, long-term risk for the infrastructure performance (for example, pavement and bridge condition) largely remains with MDOT; once the project work is complete, MDOT assumes responsibility for the ongoing performance and maintenance of the road.

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 to 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

2018-2022
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.