

Modernizing Michigan's Transportation System:

Progress and Challenges in Providing Safe, Efficient and
Well-Maintained Roads, Highways and Bridges



Founded in 1971, TRIP® of Washington, DC, is a nonprofit organization that researches, evaluates and distributes economic and technical data on surface transportation issues. TRIP is sponsored by insurance companies, equipment manufacturers, distributors and suppliers; businesses involved in highway and transit engineering and construction; labor unions; and organizations concerned with efficient and safe surface transportation.

Executive Summary

Nine years after the nation suffered a significant economic downturn, Michigan is beginning to recover, with its population and economy starting to grow again and vehicle travel increasing in response to the growth. But, the rate of recovery could be slowed if Michigan is not able to provide a modern, well-maintained transportation system. The rate of economic growth, which will be greatly impacted by the reliability and condition of the state's transportation system, continues to have a significant impact on quality of life in the Great Lakes State.

An efficient, safe and well-maintained transportation system provides economic and social benefits by affording individuals access to employment, housing, healthcare, education, goods and services, recreation, entertainment, family, and social activities. It also provides businesses with access to suppliers, markets and employees, all critical to a business' level of productivity and ability to expand. Reduced accessibility and mobility - as a result of traffic congestion, a lack of adequate capacity, or deteriorated roads, highways, bridges and transit facilities - diminishes a region's quality of life by reducing economic productivity and limiting opportunities for economic, health or social transactions and activities.

With an economy based largely on agriculture, manufacturing, technology, natural resource extraction, and tourism, the quality of Michigan's transportation system plays a vital role in the state's economic growth and quality of life.

In late 2015, Michigan's governor signed into law a road funding package that relies on a combination of increased user fees, registration fees and general funds. While this increased funding will allow the state and local governments to move forward with numerous projects to repair and improve portions of the state's transportation system, the funding is not sufficient to adequately address the significant deterioration of the system, or to allow the state to provide many of the transportation improvements that are needed to support economic growth.

Achieving the state's goals for a modern, well-maintained and safe transportation system will require "staying the course" with Michigan's current transportation program and doubling down on this effort by obtaining additional increases in transportation investment.

POPULATION, ECONOMIC AND TRAVEL TRENDS IN MICHIGAN

Michigan's economy is beginning to recover following the Great Recession, with population, employment levels and vehicle travel approaching or surpassing pre-recession levels. The level of access and mobility will be a key factor in rebooting and growing the state's struggling economy.

- Michigan's population is again growing and nearing pre-recession levels after beginning to fall in 2005 and dropping each year until 2011. The state's population has increased each year from 2011 to 2016 and is currently at 9.9 million residents.
- Michigan has approximately 7.1 million licensed drivers.
- After falling significantly during the recession, vehicle miles of travel (VMT) have surpassed pre-recession levels and continue to increase.
- Between 2013 and 2016, vehicle miles of travel in Michigan increased by 10 percent – the 11th highest rate of increase nationally.
- Michigan's unemployment rate has returned to pre-recession levels. After beginning to rise in 2005 and peaking at 14.9 percent in mid-2009, the state's unemployment is currently 4.9 percent.

ROAD CONDITIONS IN MICHIGAN

A lack of adequate funding has left one-fifth of Michigan's state-maintained roads and highways with pavement surfaces in poor condition. Despite recent action by Michigan lawmakers to increase transportation funding, the condition of state-maintained roads is projected to deteriorate significantly over the next five years.

- The Michigan Department of Transportation (MDOT) estimates that 20 percent of state-maintained roads are in poor condition in 2016.
- Despite the increased funding made available by Michigan lawmakers, the condition of state-maintained roads is projected to deteriorate significantly over the next five years. While the additional funding has been helpful and has prevented a more precipitous decline in conditions, it is not sufficient to improve the condition of the state's roads and highways or even maintain their current condition.
- The number of lane miles of state-maintained roads in poor condition is projected to increase significantly in the next five years, with the share of lane miles in poor condition increasing from 20 percent in 2016 to 46 percent by 2020.

Michigan Trunkline Forecasted Pavement Condition		
Year	Percent Poor	Poor Lane Miles
2016	20%	5,965
2017	26%	7,850
2018	33%	9,890
2019	40%	11,927
2020	46%	13,854

BRIDGE CONDITIONS IN MICHIGAN

Approximately one-in-nine locally and state-maintained bridges in Michigan that are 20 feet or more in length show significant deterioration and are in need of repair. The share of state bridges that are deficient is expected to increase at current funding levels.

- Eleven percent of Michigan's bridges are structurally deficient. A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Structurally deficient bridges are often posted for lower weight or closed to traffic, restricting or redirecting large vehicles, including commercial trucks and emergency services vehicles.
- MDOT estimates that, based on available funding, the number of state-maintained bridges rated in poor condition will increase by approximately 50 percent from 236 bridges to 354 bridges between 2016 and 2023.

HIGHWAY SAFETY AND FATALITY RATES IN MICHIGAN

Traffic fatalities in Michigan have increased significantly for the last two years, surpassing 1,000 deaths in 2016, the first time since 2007.

- The number of traffic fatalities in Michigan increased 20 percent from 2014 to 2016. In Michigan, there were 876 traffic fatalities in 2014, 963 in 2015 and 1,047 in 2016.
- 2016 was the first year since 2007 that traffic fatalities in Michigan exceeded 1,000.
- The fatality rate on Michigan's non-interstate rural roads in 2015 was more than three-and-a-half times than on all other roads in the state (2.19 fatalities per 100 million vehicle miles of travel vs. 0.59).
- Roadway features that impact safety include the number of lanes, lane widths, lighting, lane markings, rumble strips, shoulders, guard rails, other shielding devices, median barriers and intersection design. The cost of serious crashes includes lost productivity, lost earnings, medical costs and emergency services.

- Several factors are associated with vehicle crashes that result in fatalities, including driver behavior, vehicle characteristics and roadway features. TRIP estimates that roadway features are likely a contributing factor in approximately one-third of fatal traffic crashes.
- Where appropriate, highway improvements can reduce traffic fatalities and crashes while improving traffic flow to help relieve congestion. Such improvements include removing or shielding obstacles; adding or improving medians and intersections; improved lighting; adding rumble strips, wider lanes, wider and paved shoulders; upgrading roads from two lanes to four lanes; and better road markings and traffic signals.
- Investments in rural traffic safety have been found to result in significant reductions in serious traffic crashes. A 2012 report by the [Texas Transportation Institute](#) (TTI) found that improvements completed recently by the Texas Department of Transportation that widened lanes, improved shoulders and made other safety improvements on 1,159 miles of rural state roadways resulted in 133 fewer fatalities on these roads in the first three years after the improvements were completed (as compared to the three years prior). TTI estimates that the improvements on these roads are likely to save 880 lives over 20 years.

TRANSPORTATION FUNDING AND NEEDED TRANSPORTATION PROJECTS

Additional transportation funding provided by the state legislature in 2016 will allow MDOT to complete numerous needed projects throughout the state. While the additional dollars have been helpful, many needed projects still remain on the drawing board due to a lack of available funding.

- In late 2015, Michigan's governor signed into law a road funding package that relies on a combination of increased user fees, such as gas taxes and registration fees and allocations from the General Fund.
- As a result of the funding increase, state funding for local roads and bridges, state roads and bridges and transit will increase from \$2.2 billion in 2015 to nearly \$3.4 billion in 2023. The chart below details the amount (in millions) of state funding for local roads and bridges, state roads and bridges and transit.

Year	State Funding for Local Roads & Bridges	State Funding for State Roads & Bridges	State Funding for Transit	Total Program State + Local
2015	1,070	877	276	2,223
2016	1,235	914	287	2,436
2017	1,340	870	315	2,525
2018	1,423	924	331	2,678
2019	1,520	986	328	2,834
2020	1,634	1,060	332	3,026
2021	1,808	1,171	336	3,315
2022	1,816	1,176	340	3,332
2023	1,827	1,184	344	3,355

- The 2015 transportation legislation will provide a total of \$4.2 billion in additional funding through 2023, of which \$2.3 billion from the state's General Fund is not guaranteed and will be distributed beginning in 2019 at the discretion of the legislature.

Year	Additional Funding	Non-Guaranteed GF Revenue
2015	N/A	N/A
2016	N/A	N/A
2017	452	N/A
2018	608	N/A
2019	613	150
2020	619	325
2021	625	600
2022	640	600
2023	655	600
TOTAL	4,212	2,275

- Additional transportation funding provided by the 2015 legislation will allow Michigan to move forward with numerous projects that otherwise may have remained unfunded. The list below details a sampling of projects in Michigan's major urban areas as well as throughout the state that are either underway or will be underway or completed no later than 2020, partly due to increased revenue.

Detroit Regional Area						
COUNTY	ROUTE	LOCATION	WORK TYPE	DATE	BUDGET	LENGTH
Livingston	US-23, NB	North of 8 Mile Rd to south of M-36	Sound Barrier Rehabilitation	12/6/2019	\$2,214,950	0.8
Livingston	I-96	I-96 from Chilson to Dorr	Concrete Pavement Inlay	12/4/2020	\$17,360,000	22.4
Macomb	Rd)	M-53 to Hayes Rd	Reconstruction	2/3/2017	\$73,328,000	1.8
Monroe	I-75	I-75 from Ohio State line to Erie Rd	Reconstruction	12/7/2018	\$78,116,000	5.1
Monroe	I-75	I-75 NB/SB over Halfway Creek NB/SB Over Bay Creek Superstructure Replacement, NB/SB over Power Co RR Spur, Erie Rd over I-75 (9 Structures)	Bridge Replacement	12/7/2018	\$34,330,000	4.6
Oakland	I-96	From North Of 5 Mile To I-696/I-96 Interchange	Restoration and Rehabilitation	8/14/2015	\$86,286,000	13.0
Oakland	M-24	Harmon Road To Goldengate Ave	Resurface	3/4/2016	\$41,259,000	5.0
Oakland	I-75	From North of Cooidge Rd to South Blvd	Reconstruct and Add Lane(S)	5/6/2016	\$127,359,110	3.1
Oakland	I-75	From North of I-696 to South of 12 Mile	Major Rehabilitation	3/2/2018	\$207,100,000	2.0
Oakland	I-75	From North of Wattles Rd to North of Coolidge Rd	Major Rehabilitation	12/6/2019	\$93,420,000	1.6
St. Clair	I-69	I-69 from west of Riley Center Rd to M-19	Major Rehabilitation	12/4/2020	\$25,982,000	21.0
Washtenaw	US-23 (NB US-23)	US-23 from M-14 to M-36	ITS Applications-Active Traffic Management	10/7/2016	\$53,645,000	11.1
Wayne	I-75	I-75 NB and SB over Goddard Rd, Sexton-Kilfoil Drain	Deck Replacement	11/10/2016	\$63,678,000	2.0
Wayne	I-94	Mount Elliot Street over I-94, Wayne County	Bridge Replacement	12/2/2016	\$27,320,000	0.1
Wayne	I-94	Mount Elliot St over I-94, Wayne County	Bridge Replacement	12/2/2016	\$26,220,000	0.1
Wayne	I-94	Cadillac Avenue, Detroit, Wayne County	Bridge Replacement	1/13/2017	\$7,528,717	0.0
Wayne	I-94	Concord Avenue over I-94, Wayne County	Bridge Replacement	1/13/2017	\$7,533,313	0.1
Wayne	I-94	M-3 over I-94, Wayne County	Bridge Replacement	3/3/2017	\$18,385,567	0.0
Wayne	I-94	Cass Avenue, Detroit, Wayne County	Bridge Replacement	4/7/2017	\$11,238,724	0.1
Wayne	I-75	Springwells Ave to Clark St	Concrete Pavement Inlay	6/2/2017	\$38,800,000	17.8
Wayne	I-94	Chene Street over I-94, Wayne County	Bridge Replacement	9/1/2017	\$11,700,000	0.3
Wayne	I-94	Second Avenue over I-94, Wayne County	Bridge Replacement	12/1/2017	\$27,347,455	0.1
Wayne	I-94	French Rd over I-94, Wayne County	Bridge Replacement	12/1/2017	\$8,220,000	0.2
Wayne	I-94	Brush Street over I-94, Wayne County	Bridge Replacement	12/1/2017	\$11,920,000	0.1
Wayne	I-94	From Conner Avenue to Chene St	Reconstruct and Add Lane(S)	12/7/2017	\$249,000,000	7.6
Wayne	I-275	M-153 to 5 Mile	Milling and Two Course Asphalt Resurfacing	1/11/2019	\$61,662,000	33.6
Grand Rapids Regional Area						
Kent	US-131 SB	10 Mile Rd to M-46	Reconstruction	4/7/2017	\$33,832,000	7.4
Kent	US-131 NB	10 Mile Rd to M-46 (S Junction)	Reconstruction	12/1/2017	\$419,111,000	7.4
Kent	R Ford Fwy)	Fuller Ave to I-96, I-96 EB over Plymouth Ave	Reconstruction	12/7/2018	\$21,382,000	2.1
Ottawa	I-196	W 32nd Ave east to Ottawa/Kent County Line	Reconstruction	1/10/2018	\$14,000,000	9.9
Lansing Regional Area						
Eaton/Ingham	I-496	I-496 from I-96 to Lansing Rd	Concrete Reconstruction	1/10/2020	\$32,500,000	21.0
Michigan Statewide						
Berrien	I-94 EB, WB	From Red Arrow Hwy (Exit 16) to I-94 BL (Exit 23)	Resurface	10/7/2016	\$13,656,000	5.7
Berrien	I-196	I-94 to north of M-63 (Exit 7)	Resurface	11/2/2018	\$19,225,000	8.1
Cheboygan	I-75 SB	North of M-27 to Topinabee Mail Route	Unbonded Concrete Overlay	1/10/2020	\$4,582,000	4.5
Cheboygan	I-75 SB	Levinger Rd north 3.1 miles	Unbonded Concrete Overlay	12/4/2020	\$13,673,000	12.2
Delta	US-2	US-2, US-41 over Escanaba River and Els RR over US-2	Bridge Replacement	11/4/2016	\$21,514,000	0.4
Genesee	I-69	Ballenger Hwy to Fenton Rd	Reconstruction	7/4/2017	\$31,171,000	10.6
Genesee	I-69	I-69 over Hammerberg Rd	Bridge Replacement	7/14/2017	\$5,092,000	3.0
Genesee	I-475	Carpenter Rd to Clio Rd	Reconstruction	12/1/2017	\$42,137,000	15.8
Genesee	M-54 (Dort Hwy)	Coldwater Road to Mt. Morris Rd	Road Rehabilitation	12/7/2018	\$3,218,000	8.1
Houghton	US-41	US-41 from Scott St to Lake Annie Rd	Two Course Asphalt Resurfacing	12/6/2019	\$2,060,000	5.2
Isabella	US-127 BR	US-127 BR northerly to M-20	Minor Rehabilitation	12/6/2019	\$6,218,000	15.5
Jackson	M-50	M-50, US-127 to Napoleon rd	Asphalt Resurfacing	8/5/2016	\$10,542,050	12.1
Jackson	I-94 BL	Brown to Louis Glick	Concrete Reconstruction	3/3/2017	\$10,434,000	14.6
Jackson	I-94	M-60 to Sargent Rd	Reconstruction	12/1/2017	\$46,054,000	8.9
Jackson	I-94	I-94 over Conrail and Grand River	Bridge Replacement	12/1/2017	\$22,170,000	0.4
Kalamazoo	I-94	Portage Rd to Sprinkle Rd, I-94 over Olmstead Creek, Norfolk Southern, Gtw RR	Major Widening	12/6/2019	\$35,685,000	1.2
Kalamazoo	I-94	East of Lovers Lane to East of Portage Rd, I-94 over Portage Rd, Kilgore Rd over I-94	Major Widening	12/6/2019	\$34,048,000	1.2
Lapeer/Sanilac	M-53	M-53 from M-90 NJct to Marlette SCL	Major Rehabilitation	12/4/2016	\$4,999,000	11.5
Marquette	US-41	US-41 from County Road 456 northerly to M-94 east	Resurfacing	7/8/2016	\$2,837,000	7.6
Midland	M-20 (E Isabella Rd)	M-20 over Titabawassee River and CSX RR	Bridge Replacement	1/12/2018	\$27,424,000	1.0
Oceana	US-31	Shelby Road north to Polk Road	Maintenance of Traffic	2/7/2020	\$1,000,000	N/A
Saginaw	I-75	I-675 north junction to 200 feet north of Crane Rd	Reconstruction	6/3/2016	\$26,307,000	0.8
Saginaw	I-75, SB	Hess to south I-675 Interchange	Major Widening	12/6/2019	\$43,532,000	2.6

- Despite additional transportation funding provided by the 2015 legislation, numerous needed transportation projects in Michigan remain unfunded. The list below details projects in Michigan's major urban areas as well as throughout the state that lack adequate funding to proceed prior to 2020.



Detroit Regional Area					
COUNTY	ROUTE	LOCATION	WORK TYPE	COST	LENGTH
Livingston	I-96	US-23 to Oakland Co Line	Reconstruct	\$150,000,000	N/A
Livingston	M-59	Michigan Avenue to US-23	Capacity Improvement	\$100,000,000	N/A
Livingston	US-23	I-96 to Monroe Co Line	Rehab	\$200,000,000	N/A
Macomb	M-3	11 Mile to 14 Mile	Reconstruction	\$37,890,000	3.7
Macomb	M-53	27 Mile to 32 Mile	HMA Overlay and Concrete Repairs	\$25,500,000	5.0
Macomb	M-59	Romeo Plank to Elizabeth	Reconstruction	\$45,000,000	2.5
Oakland	I-75	M-24 to M-15	Mix of HMA M & R and Concrete Inlay	\$86,000,000	N/A
Oakland	I-96	West County Line to Novi Rd.	Reconstruction (4R)	\$140,000,000	10.8
Oakland	M-1	8 Mile to 12 Mile	Reconstruct	\$129,000,000	4.0
Oakland	M-1	12 to 16 Mile Road	Reconstruct	\$115,000,000	4.0
Oakland	M-15	Viola Dr to County Line	Mill and Resurface (3R)	\$9,500,000	4.1
Oakland	M-15	Dixie Hwy to Rattalee Lk	Mill and Resurface (3R)	\$8,250,000	3.8
Oakland	M-15	Rattalee Lk to Viola Dr.	Mill and Resurface (3R)	\$5,700,000	3.7
Oakland	US-24	Long Lake to Orchard Lake	Combination of Concrete Inlay and HMA Overlay	\$9,600,000	3.6
Oakland	US-24 BR	Cass to S. of Kenneth	Reconstruct	\$8,250,000	1.7
Oakland	M-34	Harriet to Davison	Mill and Overlay (3R)	\$17,300,000	4.0
Oakland	M-59	Porter to Williams Lk Rd	Mill and Resurface (3R)	\$28,010,000	3.8
Oakland	M-59	Duck Lk to Porter Rd	Mill and Resurface (3R)	\$18,250,000	3.2
Oakland	M-59	Milford to Duck Lk Rd	Mill and Resurface (3R)	\$16,970,000	2.7
Oakland	Old M-59 (Auburn Rd)	Adams Rd to Dequindre	Mill and Resurface and Addition of center turn lane (3R)	\$19,700,000	6.0
Oakland	Old M-5 (Grand River)	Purde to 10 Mile Road	Reconstruct	\$39,000,000	4.2
Washtenaw	I-94	Jackson Co. Line to Wayne Co. Line	Major Rehab	\$120,000,000	N/A
Washtenaw	I-94 EB	At Kalmbach Road	Realign mainline - Safety Improvement	\$15,000,000	1.18
Washtenaw	M-17	Ypsilanti	Rehab	\$7,000,000	
Washtenaw	M-14	I-94 to Huron River	Reconstruct	\$60,000,000	3.7
Washtenaw	M-14	US-23 to E Jet to US-23 W Jet	Major Rehab	\$18,000,000	N/A
Washtenaw	US-12	Industrial Drive to US-23	Capacity Improvement	\$150,000,000	N/A
Washtenaw	US-23	M-14 to Bemis	Rehab	\$30,000,000	N/A
Washtenaw	US-23	School Road to Ida Center	Reconstruct	\$40,000,000	N/A
Washtenaw	US-23 BR	I-94BL to M-14	Reconstruct/Rehab	\$12,000,000	N/A
Wayne	I-94	I-96 to Wyoming	Reconstruct	\$110,500,000	3.6
Wayne	M-10	Griswold to M-3	Mill & Resurface	\$15,800,000	1.5
Wayne	M-14	Newburgh to Sheldon	Reconstruct	\$92,300,000	3.6
Wayne	M-85	Rosa Parks to Griswold	Mill and Resurface	\$8,650,000	1.1
Wayne	M-97	Gratio to 8 Mile Rd	Mill and Overlay(3R)	\$14,600,000	2.9
Wayne	M-153	Wayne to Telegraph	HMA Mill and Overlay	\$33,800,000	6.0
Wayne	US-12	Rosa Parks to Cass	Reconstruction and Overlay	\$14,818,000	1.2
Wayne	US-12	Lotz to Pershing	3R Patch & Overlay	\$14,242,000	2.3
Wayne	US-12	Henry Ruff to Gully	3R Mill & Resurface	\$16,694,400	3.0
Wayne	US-24	Carter to Pennsylvania	Reconstruction	\$23,400,000	2.6
Grand Rapids Regional Area					
Allegan	US-31	I-196 north to Central Ave	Major Rehabilitation	\$8,000,000	3.3
Allegan	M-89	58th St east to 56th St	Resurface	\$1,000,000	1.1
Barry	M-37	Golden Ln north to Timber Creek Dr	Resurface	\$4,500,000	4.9
Ionia	I-96	M-66 east to the Grand River	Reconstruction	\$50,000,000	8
Ionia	I-96	Saranac Rest Area east to M-66	Reconstruction	\$36,000,000	5.6
Ionia	M-66	M-50 north to Portland Rd	Resurface	\$9,500,000	8
Kent	US-131	M-11 north to Wealthy St	Reconstruction	\$45,000,000	3
Kent	US-131	Allegan/Kent County Line north to 76th St	Reconstruction	\$21,500,000	4
Kent	M-11	Church St east to Burlingame Ave	Resurface	\$3,500,000	2.9
Ottawa	I-196	Byron Rd east to 32nd Ave	Reconstruction	\$40,500,000	6.3
Ottawa	US-31	Slayton St north to the south channel of Grand River	Reconstruction, Add Lanes	\$14,500,000	0.9
Lansing Regional Area					
Clinton	I-96	Ionia Co Line to I-69	Major Rehab	\$50,000,000	N/A
Clinton	Old US-127	Sheridan to I-69	Rehab	\$18,000,000	N/A
Eaton	I-69	I-96 to Lansing Road (Charlotte)	Reconstruct	\$90,000,000	N/A
Ingham/Livingston	I-96	M-52 to M-59	Reconstruct	\$100,000,000	N/A
Ingham	I-96BL	Waverly Road to MLK	Rehab	\$10,000,000	N/A
Ingham	I-496	Lansing Road to US-127	Reconstruct	\$50,000,000	N/A
Ingham	M-43	Rosemary to I-69BL	Rehab	\$25,000,000	N/A
Ingham	M-43	Park Lake Road to Oak Point	Rehab	\$20,000,000	N/A
Ingham	M-99	Holt Road to Victor Road	Reconstruct/Rehab	\$45,000,000	N/A
Ingham	US-127	I-96 to I-69	Major Rehab	\$75,000,000	N/A

Michigan Statewide					
Alger	M-28	From Onota St to FFH13-Wetmore	Mill and 2 course HMA overlay	\$3,512,780	9.0
Baraga	US-41	E. End of Tioga Creek PRL to East of M-28	Overlay, crush and shape shoulders	\$6,977,487	16.3
Bay	M-25	City of Bay City	Reconstruct	\$40,000,000	N/A
Bay	US-10 WB	Midland/Bay COL to Bay City	Reconstruct	\$80,000,000	N/A
Berrien	I-94	West of I-94BL (Exit 23) to St. Joseph River. 5.1 mile length.	Concrete Reconstruction	\$60,000,000	5.1
Berrien	I-94	0.5 Mile S. of Three Oaks Road to Red Arrow Hwy MileMark 10-15.5	Cold Mill and Two Course HMA.	\$18,000,000	7.8
Berrien	I-94	I-94 BL (Lakeshore Drive)	Replacement	\$10,000,000	N/A
Berrien	I-94	CSX Railroad	Joints, Deck Patching, Epoxy Ovly	\$350,000	N/A
Berrien	I-94	Under Washington Ave	Joints, Deck Patching, Epoxy Ovly	\$200,000	N/A
Berrien	I-94	Lincoln Ave	Joints, Deck Patching, Epoxy Ovly	\$500,000	N/A
Berrien	M-51	Indiana State Line 4.6 miles northely to M-60BR	Repair and HMA Resurface	\$15,000,000	4.6
Berrien	M-139	St. Joseph River for 3.9 miles northerly to I-94 BL	Repair and HMA Resurface	\$12,500,000	3.9
Berrien	US-12	St. Joseph River	Full Paint	\$3,000,000	N/A
Berrien	US-31	US-12 to M-139. 12.2 mile length.	Deep HMA Overlay on Concrete	\$48,766,000	12.2
Calhoun	I-94	6.5 Mile Rd. to M-311. Mile 99-104. 4.5 mile length.	Deep HMA Overlay on Concrete	\$25,000,000	4.5
Calhoun	I-94	I-69 Interchange Ramps	HMA Overlay	\$6,000,000	2
Calhoun	M-37 & M-96	M-37 from S. JCT M-96 and M-96 from S JCT M-37 to I-194 in City of Battle Creek. 8.9 mile length	Repair and HMA Resurface	\$18,000,000	8.8
Calhoun	M-311	Alder Creek	Replacement	\$1,000,000	N/A
Chippewa	M-28	I-75 to M-129	Mill and 2 course overlay	\$1,656,369	5.46
Emmet	US-31	South to North Village Limits	Reconstruction	\$7,500,000	1.1
Genesee	I-69	W of I-75 to Ballenger	Reconstruct	\$40,000,000	N/A
Genesee	I-69	I-475 Interchange	Reconstruct & Rehab	\$80,000,000	N/A
Genesee	I-75	Bristol Road to Flint River	Reconstruct	\$1,000,000,000	N/A
Genesee	I-475	Bristol Road to Carpenter Road	Reconstruct	\$90,000,000	N/A
Grand Traverse	US-31/M-72	East Side of Murchie Bridge easterly to 60' east of Garfield Ave in Traverse City	Reconstruction	\$13,800,000	N/A
Grand Traverse	US-31/M-72	From 100' northwest of Division Street southeasterly to 50' West of Murchie Bridge in Traverse City	Reconstruction	\$14,000,000	N/A
Grand Traverse/Leelanau	US-31/M-72	From 250' north of M-72/US-31/M-22 Intersection southeasterly to 100' northwest of Division Street in Traverse City	Reconstruction	\$13,000,000	N/A
Hillsdale	M-34	M-99 to US-127	Major Rehab	\$22,000,000	N/A
Hillsdale	M-49	Village of Camden	Reconstruct	\$12,000,000	1.0
Hillsdale	M-99	Fayette to US-12	Major Rehab	\$15,000,000	N/A
Hillsdale	M-99	US-12 to M-49	Major Rehab	\$12,000,000	N/A
Hillsdale	M-99	South of Steamburg to M-34	Rehab	\$4,000,000	N/A
Isaac	US-127	Church St to US-223	Major Rehab	\$18,000,000	8.1
Iosco	US-23	In Tawas City and East Tawas	Reconstruction	\$12,500,000	3.1
Jackson	I-94	M-60 to Sargent Road	Reconstruct/Widening	\$400,000,000	N/A
Jackson	I-94	Michigan Avenue to M-60	Reconstruct	\$90,000,000	7.3
Jackson	I-94	Calhoun Co Line to Michigan Avenue	Reconstruct	\$63,000,000	5.0
Jackson	I-94 BL	Cooper St to US-127	Reconstruct	\$38,000,000	N/A
Jackson	M-99	I-94 to Springport	Rehab	\$16,000,000	N/A
Jackson/Lenawee	M-106	Bunkerhill Road to M-52	Major Rehab	\$19,000,000	N/A
Jackson	US-127	US-223 to Ayres Road	Major Rehab	\$24,000,000	N/A
Kalamazoo	US-131 BR	M-43 to I-94	Repair and HMA Resurface	\$15,000,000	5.0
Kalamazoo	US-131 BR	Begin Freeway to US-131. Mile 0-4. 4.2 mile length.	Deep HMA Overlay on Concrete		4.2
Lenawee	M-34	Hazen Creek to M-52	Rehab	\$15,000,000	N/A
Lenawee	M-50	Village of Tecumseh	Reconstruct	\$22,000,000	1.4
Lenawee	M-156	State Line to M-34	Reconstruct	\$48,000,000	N/A
Lenawee	US-12	M-52 to Clinton East Village Limit	Major Rehab	\$10,000,000	N/A
Lenawee	US-223	Ogden Hwy to Ingham Co Line	Reconstruct	\$32,000,000	16.8
Lenawee	US-223	High Street to Jefferson Street (Blissfield)	Reconstruct	\$14,000,000	N/A
Lenawee	US-223	US-127 to Rome Road	Major Rehab	\$22,000,000	10.6
Lenawee	US-223BR	US-223 to M-52	Major Rehab	\$6,000,000	N/A
Mackinac	M-117	US-2 to Mack/Luce CL	Mill and 2 course ovlay	\$6,099,000	20.0
Marquette	US-41/M-28	From Furnace St to Roundabout in Marquette	Reconstruction	\$4,308,000	1.7
Menominee	US-41	Menominee to Wallace	Jnt Rpr, Mill and Fill	\$11,065,914	29.2
Midland	US-10BR/M-43	Tittabawassee River to Freeway	Reconstruct	\$40,000,000	N/A
Monroe	I-75	Otter Creek to Dixie Hwy	Reconstruct	\$150,000,000	N/A
Monroe	US-223	Lenawee County Line to Bacon Street	Major Rehab	\$8,000,000	N/A
Ogemaw	M-55/I-75BL	In City of West Branch	Reconstruction	\$3,600,000	0.7
Otsego	I-75BL	In Gaylord from I-75 to Wisconsin/Grandview St	Reconstruct	\$13,200,000	2.2
Saginaw	M-46	City of Saginaw	Reconstruct	\$40,000,000	N/A
Saginaw	M-58	City of Saginaw	Reconstruct	\$50,000,000	N/A
St. Joseph	US-131	Rocky River in Three Rivers for 10.8 miles northerly to CN Railroad in Schoolcraft	Repair and HMA Resurface	\$36,000,000	10.9
Van Buren	I-94 EB	0.8 Mi W of M-51 to 1.2 Mi. E of M-40. 7.3 mile length.	Deep HMA Overlay on Concrete	\$18,000,000	7.3
Van Buren	I-94 EB	E. of Hartford (Exit 46) to CR 681. 2.3 mile length	Deep HMA Overlay on Concrete	\$7,000,000	2.3
VanBuren	I-94	Over the PawPaw River	Micropiles	\$1,036,776	N/A
Van Buren	I-196 BL	I-196 BL from I-196 Exit 18 through City of South Haven to I-196 Exit 20 and on M-43. 4.4 miles total length	Reconstruction	\$30,000,000	4.5
VanBuren	I-696	Black River & Kal Haven Trail	Riprap	\$924,000	N/A
Van Buren	M-40	72nd Street to 66th Ave. 1.5 mile length	Reconstruct and Resurfacing	\$5,000,000	1.5

- The value of these needed transportation projects in Michigan that lack adequate funding to proceed is \$3.3 billion, including \$2 billion in the Detroit area, \$483 million in the Lansing area and \$234 million in the Grand Rapids area.

FEDERAL TRANSPORTATION FUNDING IN MICHIGAN

Investment in Michigan's roads, highways and bridges is funded by local, state and federal governments. Signed into law in December 2015, the five-year federal surface transportation program includes modest funding increases and provides states with greater funding certainty, but falls far short of providing the level of funding needed to meet the nation's highway and transit needs. The bill does not include a long-term and sustainable revenue source.

- Signed into law in December 2015, the [Fixing America's Surface Transportation Act \(FAST Act\)](#), provides modest increases in federal highway and transit spending, allows states greater long-term funding certainty and streamlines the federal project approval process. But the FAST Act does not provide adequate funding to meet the nation's need for highway and transit improvements and does not include a long-term and sustainable funding source.
- The five-year, \$305 billion FAST Act will provide approximately a 15 percent boost in national highway funding and an 18 percent boost in national transit funding over the duration of the program, which expires in 2020.
- In addition to federal motor fuel tax revenues, the FAST Act will also be funded by \$70 billion in U.S. general funds, which will rely on offsets from several unrelated federal programs including the Strategic Petroleum Reserve, the Federal Reserve and U.S. Customs.
- According to the [2015 AASHTO Transportation Bottom Line Report](#), a significant boost in investment in the nation's roads, highways, bridges and public transit systems is needed to improve their condition and to meet the nation's transportation needs.
- AASHTO's report found that based on an annual one percent increase in VMT annual investment in the nation's roads, highways and bridges needs to increase 36 percent, from \$88 billion to \$120 billion, to improve conditions and meet the nation's mobility needs, based on an annual one percent rate of vehicle travel growth. Investment in the nation's public transit system needs to increase from \$17 billion to \$43 billion.
- The Bottom Line Report found that if the national rate of vehicle travel increased by 1.4 percent per year, the needed annual investment in the nation's roads, highways and bridges would need to increase by 64 percent to \$144 billion. If vehicle travel grows by 1.6 percent annually the needed annual investment in the nation's roads, highways and bridges would need to increase by 77 percent to \$156 billion.

TRANSPORTATION AND ECONOMIC GROWTH IN MICHIGAN

The efficiency of Michigan's transportation system, particularly its highways, is critical to the health of the state's economy. Businesses rely on an efficient and dependable transportation system to move products and services. A key component in business efficiency and success is the level and ease of access to customers, markets, materials and workers.

- Annually, \$860 billion in goods are shipped to and from sites in Michigan, mostly by truck.
- Seventy percent of the goods shipped annually to and from sites in Michigan are carried by trucks.
- Increasingly, companies are looking at the quality of a region's transportation system when deciding where to re-locate or expand. Regions with congested or poorly maintained roads may see businesses relocate to areas with a smoother, more efficient and more modern transportation system.
- Highway accessibility was ranked the number two site selection factor behind only the availability of skilled labor in a 2015 survey of corporate executives by [Area Development Magazine](#).
- The [Federal Highway Administration](#) estimates that each dollar spent on road, highway and bridge improvements results in an average benefit of \$5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs and reduced emissions as a result of improved traffic flow.

Sources of information for this report include the Federal Highway Administration (FHWA), the Michigan Department of Transportation (MDOT), the American Association of State Highway and Transportation Officials (AASHTO), the Bureau of Transportation Statistics (BTS), the U. S. Census Bureau, the Congressional Budget Office (CBO), the Texas Transportation Institute (TTI) and the National Highway Traffic Safety Administration (NHTSA). All data used in the report are the most recent available.

Introduction

Michigan's roads, highways and bridges form vital transportation links for the state's residents, visitors and businesses, providing daily access to homes, jobs, shopping, natural resources and recreation. Modernizing Michigan's transportation system is critical to quality of life and economic competitiveness in the Great Lakes State.

Supporting quality of life and a robust economy in Michigan requires that the state provide a safe, efficient and well-maintained transportation system. Inadequate transportation investment, which will result in deteriorated transportation facilities and diminished access, will negatively affect economic competitiveness and quality of life in Michigan.

In late 2015, Michigan's governor signed into law a road funding package that relies on a combination of increased user fees, registration fees and general funds. While this funding will allow the state to make progress in improving the condition and efficiency of its transportation system, and to complete a host of needed projects, the funding is not sufficient to address the significant deterioration on the system, or to allow the state to rebound from the recession.

To maintain its level of economic competitiveness and achieve further economic growth, Michigan will need to maintain and modernize its roads, highways and bridges by improving the physical condition of its transportation network and enhancing the system's ability to provide efficient, reliable and safe mobility for residents, visitors and businesses. Making needed improvements to Michigan's roads, highways, bridges and transit systems could also provide a significant boost to the state's economy by creating jobs in the short term and stimulating long-term economic growth as a result of enhanced mobility and access.

This report examines the condition, use and safety of Michigan's roads, highways and bridges, funding needs, and the future mobility needs of the state. Sources of information for this report include the Michigan Department of Transportation (MDOT), the Federal Highway

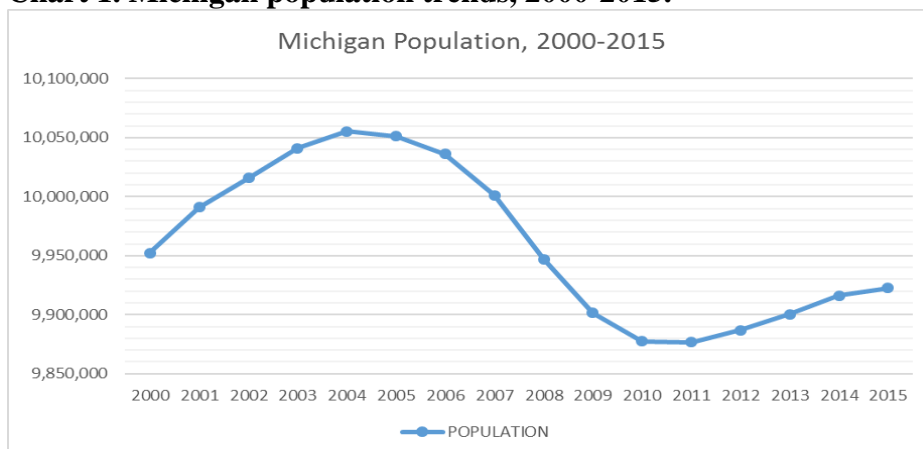
Administration (FHWA), the Bureau of Labor Statistics (BLS), the American Association of State Highway and Transportation Officials (AASHTO), the Bureau of Transportation Statistics (BTS), the U.S. Census Bureau, the Texas Transportation Institute (TTI), and the National Highway Traffic Safety Administration (NHTSA).

Population, Travel and Economic Trends in Michigan

Michigan residents and businesses require a high level of personal and commercial mobility. The state's economy is beginning to rebound following the Great Recession, with population, employment levels and vehicle travel approaching or surpassing pre-recession levels. The condition of the state's transportation system and the level of access and mobility it provides will be key factors in the rate of economic growth.

Michigan's population is nearing pre-recession levels after beginning to fall in 2005 and dropping each year until 2011. The state's population has increased each year from 2011 to 2016 and is currently at 9.9 million residents.¹ Michigan had approximately 7.1 million licensed drivers in 2015.²

Chart 1. Michigan population trends, 2000-2015.



Source: U.S. Census Bureau.

After falling significantly during the recession, vehicle miles of travel (VMT) have surpassed pre-recession levels and continue to increase. Between 2013 and 2016, vehicle miles of travel in Michigan increased by 10 percent – the 11th highest rate of increase nationally.³

Michigan's unemployment rate has also returned to pre-recession levels. After beginning to rise in 2005 and peaking at 14.9 percent in mid-2009, the state's unemployment rate is currently 4.9 percent.⁴

Condition of Michigan's Roads

The life cycle of Michigan's roads is greatly affected by state and local governments' ability to perform timely maintenance and upgrades to ensure that road and highway surfaces last as long as possible.

Despite the increased funding made available by Michigan lawmakers, the condition of state-maintained roads is projected to deteriorate significantly over the next five years. While the additional funding has been helpful and has prevented a more precipitous decline in conditions, it is not sufficient to improve the condition of the state's roads and highways or even maintain their current condition.

MDOT estimates that 20 percent of state-maintained roads were in poor condition in 2016.⁵ The number of state-maintained lane miles in poor condition is projected to increase significantly in the next five years, more than doubling from 5,695 lane miles in poor condition in 2016 to 13,854 lane miles in poor condition by 2020 and increasing in share to 46 percent.⁶

Chart 2. Share of lane miles of state-maintained road in poor condition, 2016-2020.

Michigan Trunkline Forecasted Pavement Condition		
Year	Percent Poor	Poor Lane Miles
2016	20%	5,965
2017	26%	7,850
2018	33%	9,890
2019	40%	11,927
2020	46%	13,854

Source: MDOT response to TRIP survey.

Pavement failure is caused by a combination of traffic, moisture and climate. Moisture often works its way into road surfaces and the materials that form the road's foundation. Road surfaces at intersections are even more prone to deterioration because the slow-moving or standing loads occurring at these sites subject the pavement to higher levels of stress. It is critical that roads are fixed before they require major repairs because reconstructing roads costs approximately four times more than resurfacing them.⁷ As roads and highways continue to age, they will reach a point of deterioration where routine paving and maintenance will not be adequate to keep pavement surfaces in good condition and costly reconstruction of the roadway and its underlying surfaces will become necessary.

Bridge Conditions in Michigan

Michigan's bridges form key links in the state's highway system, providing communities and individuals access to employment, schools, shopping and medical facilities, and facilitating commerce and access for emergency vehicles.

Approximately one-in-nine (twelve percent) of Michigan's locally and state-maintained bridges (20 feet or longer) are currently rated as structurally deficient.⁸ A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major

components. Bridges that are structurally deficient may be posted for lower weight limits or closed if their condition warrants such action. Deteriorated bridges can have a significant impact on daily life. Restrictions on vehicle weight may cause many vehicles – especially emergency vehicles, commercial trucks, school buses and farm equipment – to use alternate routes to avoid posted bridges. Redirected trips also lengthen travel time, waste fuel and reduce the efficiency of the local economy.

MDOT estimates that, based on available funding, the number of state-maintained bridges that are rated in poor condition will increase by 50 percent between 2016 and 2023 from 236 bridges to 354 bridges.⁹

The service life of bridges can be extended by performing routine maintenance such as resurfacing decks, painting surfaces, insuring that a facility has good drainage and replacing deteriorating components. But, most bridges will eventually require more costly reconstruction or major rehabilitation to remain operable.

Traffic Safety in Michigan

The number of traffic fatalities in Michigan increased 20 percent from 2014 to 2016. In Michigan, there were 876 traffic fatalities in 2014, 963 in 2015 and 1,047 in 2016.¹⁰ 2016 was the first year since 2007 that traffic fatalities in Michigan exceeded 1,000.¹¹

Three major factors are associated with fatal vehicle crashes: driver behavior, vehicle characteristics and roadway features. It is estimated that roadway features are likely a contributing factor in approximately one-third of fatal traffic crashes. Roadway features that impact safety include the number of lanes, lane widths, lighting, lane markings, rumble strips, shoulders, guard rails, other shielding devices, median barriers and intersection design.

The traffic fatality rate on the state's rural roads is disproportionately high. The fatality rate on Michigan's non-interstate rural roads is more than three-and-a-half times that on all other roads in the state (2.19 fatalities per 100 million vehicle miles of travel vs. 0.59).¹²

Improving safety on Michigan's roadways can be achieved through further improvements in vehicle safety; improvements in driver, pedestrian, and bicyclist behavior; and a variety of improvements in roadway safety features.

The severity of serious traffic crashes could be reduced through roadway improvements, where appropriate, such as adding turn lanes, removing or shielding obstacles, adding or improving medians, widening lanes, widening and paving shoulders, improving intersection layout, and providing better road markings and upgrading or installing traffic signals. Roads with poor geometry, with insufficient clear distances, without turn lanes, having inadequate shoulders for the posted speed limits, or poorly laid out intersections or interchanges, pose greater risks to motorists, pedestrians and bicyclists.

Investments in rural traffic safety have been found to result in significant reductions in serious traffic crashes. A [2012 report by TTI](#) found that improvements completed recently by TxDOT that widened lanes, improved shoulders and made other safety improvements on 1,159 miles of rural state roadways resulted in 133 fewer fatalities on these roads in the first three years after the improvements were completed (as compared to the three years prior).¹³ TTI estimates that the improvements on these roads are likely to save 880 lives over 20 years.¹⁴

Transportation Funding Increases in Michigan and Needed Projects

While the 2015 transportation funding package will allow the state to increase investment in road, highway and bridge repairs and to complete numerous needed projects, the funding is

not sufficient to reverse the significant deterioration on the system, or to allow the state to proceed with numerous projects to support economic development and to improve quality of life in Michigan.

MDOT funding for local roads and bridges, state roads and bridges and transit will increase from \$2.2 billion in 2015 to nearly \$3.4 billion in 2023.¹⁵ The chart below details the amount of state funding (in millions) available each year for local roads and bridges, state roads and bridges and transit.

Chart 3. Annual funding for local roads, state roads and transit (in millions).

Year	State Funding for Local Roads & Bridges	State Funding for State Roads & Bridges	State Funding for Transit	Total Program State + Local
2015	1,070	877	276	2,223
2016	1,235	914	287	2,436
2017	1,340	870	315	2,525
2018	1,423	924	331	2,678
2019	1,520	986	328	2,834
2020	1,634	1,060	332	3,026
2021	1,808	1,171	336	3,315
2022	1,816	1,176	340	3,332
2023	1,827	1,184	344	3,355

Source: MDOT response to TRIP survey.

The 2015 transportation legislation will provide a total of \$4.2 billion in additional funding through 2023.¹⁶ The \$4.2 billion in additional spending includes \$2.3 billion from the state's General Fund, which is not guaranteed and will be distributed each year starting in 2019 at the discretion of the legislature.¹⁷

Chart 4. Additional transportation funding provided by 2015 legislation and non-guaranteed proceeds from the state's General Fund (in millions).

Year	Additional Funding	Non-Guaranteed GF Revenue
2015	N/A	N/A
2016	N/A	N/A
2017	452	N/A
2018	608	N/A
2019	613	150
2020	619	325
2021	625	600
2022	640	600
2023	655	600
TOTAL	4,212	2,275

Source: MDOT response to TRIP survey.

Additional transportation funding provided by the 2015 legislation will allow Michigan to move forward with numerous projects that otherwise may have remained unfunded. The list below details projects that are either underway or will be underway or completed no later than 2020, partly due to increased revenue in the state.

Chart 5. Michigan transportation projects that are underway or will be completed by 2020, partly due to increased transportation revenue in the state.

Detroit Regional Area						
COUNTY	ROUTE	LOCATION	WORK TYPE	DATE	BUDGET	LENGTH
Livingston	US-23, NB	North of 8 Mile Rd to south of M-36	Sound Barrier Rehabilitation	12/6/2019	\$2,214,950	0.8
Livingston	I-96	I-96 from Chilson to Dorr	Concrete Pavement Inlay	12/4/2020	\$17,360,000	22.4
Macomb	Rd)	M-53 to Hayes Rd	Reconstruction	2/3/2017	\$73,328,000	1.8
Monroe	I-75	I-75 from Ohio State line to Erie Rd	Reconstruction	12/7/2018	\$78,116,000	5.1
Monroe	I-75	I-75 NB/SB over Halfway Creek NB/SB Over Bay Creek Superstructure Replacement, NB/SB over Power Co RR Spur, Erie Rd over I-75 (9 Structures)	Bridge Replacement	12/7/2018	\$34,330,000	4.6
Oakland	I-96	From North Of 5 Mile To I-696/I-96 Interchange	Restoration and Rehabilitation	8/14/2015	\$86,286,000	13.0
Oakland	M-24	Harmon Road To Goldengate Ave	Resurface	3/4/2016	\$41,259,000	5.0
Oakland	I-75	From North of Cooidge Rd to South Blvd	Reconstruct and Add Lane(S)	5/6/2016	\$127,359,110	3.1
Oakland	I-75	From North of I-696 to South of 12 Mile	Major Rehabilitation	3/2/2018	\$207,100,000	2.0
Oakland	I-75	From North of Wattles Rd to North of Coolidge Rd	Major Rehabilitation	12/6/2019	\$93,420,000	1.6
St. Clair	I-69	I-69 from west of Riley Center Rd to M-19	Major Rehabilitation	12/4/2020	\$25,982,000	21.0
Washtenaw	US-23 (NB US-23)	US-23 from M-14 to M-36	ITS Applications-Active Traffic Management	10/7/2016	\$53,645,000	11.1
Wayne	I-75	I-75 NB and SB over Goddard Rd, Sexton-Kilfoil Drain	Deck Replacement	11/10/2016	\$63,678,000	2.0
Wayne	I-94	Mount Elliot Street over I-94, Wayne County	Bridge Replacement	12/2/2016	\$27,320,000	0.1
Wayne	I-94	Mount Elliot St over I-94, Wayne County	Bridge Replacement	12/2/2016	\$26,220,000	0.1
Wayne	I-94	Cadillac Avenue, Detroit, Wayne County	Bridge Replacement	1/13/2017	\$7,528,717	0.0
Wayne	I-94	Concord Avenue over I-94, Wayne County	Bridge Replacement	1/13/2017	\$7,533,313	0.1
Wayne	I-94	M-3 over I-94, Wayne County	Bridge Replacement	3/3/2017	\$18,385,567	0.0
Wayne	I-94	Cass Avenue, Detroit, Wayne County	Bridge Replacement	4/7/2017	\$11,238,724	0.1
Wayne	I-75	Springwells Ave to Clark St	Concrete Pavement Inlay	6/2/2017	\$38,800,000	17.8
Wayne	I-94	Chene Street over I-94, Wayne County	Bridge Replacement	9/1/2017	\$11,700,000	0.3
Wayne	I-94	Second Avenue over I-94, Wayne County	Bridge Replacement	12/1/2017	\$27,347,455	0.1
Wayne	I-94	French Rd over I-94, Wayne County	Bridge Replacement	12/1/2017	\$8,220,000	0.2
Wayne	I-94	Brush Street over I-94, Wayne County	Bridge Replacement	12/1/2017	\$11,920,000	0.1
Wayne	I-94	From Conner Avenue to Chene St	Reconstruct and Add Lane(S)	12/7/2017	\$249,000,000	7.6
Wayne	I-275	M-153 to 5 Mile	Milling and Two Course Asphalt Resurfacing	1/11/2019	\$61,662,000	33.6
Grand Rapids Regional Area						
Kent	US-131 SB	10 Mile Rd to M-46	Reconstruction	4/7/2017	\$33,832,000	7.4
Kent	US-131 NB	10 Mile Rd to M-46 (S Junction)	Reconstruction	12/1/2017	\$419,111,000	7.4
Kent	R Ford Fwy)	Fuller Ave to I-96, I-96 EB over Plymouth Ave	Reconstruction	12/7/2018	\$21,382,000	2.1
Ottawa	I-196	W 32nd Ave east to Ottawa/Kent County Line	Reconstruction	1/10/2018	\$14,000,000	9.9
Lansing Regional Area						
Eaton/Ingham	I-496	I-496 from I-96 to Lansing Rd	Concrete Reconstruction	1/10/2020	\$32,500,000	21.0
Michigan Statewide						
Berrien	I-94 EB, WB	From Red Arrow Hwy (Exit 16) to I-94 BL (Exit 23)	Resurface	10/7/2016	\$13,656,000	5.7
Berrien	I-196	I-94 to north of M-63 (Exit 7)	Resurface	11/2/2018	\$19,225,000	8.1
Cheboygan	I-75 SB	North of M-27 to Topinabee Mail Route	Unbonded Concrete Overlay	1/10/2020	\$4,582,000	4.5
Cheboygan	I-75 SB	Levering Rd north 3.1 miles	Unbonded Concrete Overlay	12/4/2020	\$13,673,000	12.2
Delta	US-2	US-2, US-41 over Escanaba River and Els RR over US-2	Bridge Replacement	11/4/2016	\$21,514,000	0.4
Genesee	I-69	Ballenger Hwy to Fenton Rd	Reconstruction	7/4/2017	\$31,171,000	10.6
Genesee	I-69	I-69 over Hammerberg Rd	Bridge Replacement	7/14/2017	\$5,092,000	3.0
Genesee	I-475	Carpenter Rd to Clio Rd	Reconstruction	12/1/2017	\$42,137,000	15.8
Genesee	M-54 (Dort Hwy)	Coldwater Road to Mt. Morris Rd	Road Rehabilitation	12/7/2018	\$3,218,000	8.1
Houghton	US-41	US-41 from Scott St to Lake Annie Rd	Two Course Asphalt Resurfacing	12/6/2019	\$2,060,000	5.2
Isabella	US-127 BR	US-127 BR northerly to M-20	Minor Rehabilitation	12/6/2019	\$6,218,000	15.5
Jackson	M-50	M-50, US-127 to Napoleon rd	Asphalt Resurfacing	8/5/2016	\$10,542,050	12.1
Jackson	I-94 BL	Brown to Louis Glick	Concrete Reconstruction	3/3/2017	\$10,434,000	14.6
Jackson	I-94	M-60 to Sargent Rd	Reconstruction	12/1/2017	\$46,054,000	8.9
Jackson	I-94	I-94 over Conrail and Grand River	Bridge Replacement	12/1/2017	\$22,170,000	0.4
Kalamazoo	I-94	Portage Rd to Sprinkle Rd, I-94 over Olmstead Creek, Norfolk Southern, Gtw RR	Major Widening	12/6/2019	\$35,685,000	1.2
Kalamazoo	I-94	East of Lovers Lane to East of Portage Rd, I-94 over Portage Rd, Kilgore Rd over I-94	Major Widening	12/6/2019	\$34,048,000	1.2
Lapeer/Sanilac	M-53	M-53 from M-90 NJct to Marlette SCL	Major Rehabilitation	12/4/2016	\$4,999,000	11.5
Marquette	US-41	US-41 from County Road 456 northerly to M-94 east	Resurfacing	7/8/2016	\$2,837,000	7.6
Midland	M-20 (E Isabella Rd)	M-20 over Titabawassee River and CSX RR	Bridge Replacement	1/12/2018	\$27,424,000	1.0
Oceana	US-31	Shelby Road north to Polk Road	Maintenance of Traffic	2/7/2020	\$1,000,000	N/A
Saginaw	I-75	I-675 north junction to 200 feet north of Crane Rd	Reconstruction	6/3/2016	\$26,307,000	0.8
Saginaw	I-75, SB	Hess to south I-675 Interchange	Major Widening	12/6/2019	\$43,532,000	2.6

Source: MDOT response to TRIP survey.

Despite additional transportation funding provided by the 2015 legislation, numerous needed transportation projects in Michigan remain unfunded. The value of these needed transportation projects in Michigan that lack adequate funding to proceed is \$3.3 billion, including \$2 billion in the Detroit area, \$483 million in the Lansing area and \$234 million in the Grand Rapids area.¹⁸

The list below details needed projects in Michigan's major urban areas as well as throughout the state that lack adequate funding to proceed prior to 2020.

Chart 6. Needed transportation projects that lack funding to proceed before 2020.

Detroit Regional Area						
COUNTY	ROUTE	LOCATION	TEMPLATE	WORK TYPE	COST	LENGTH
Livingston	I-96	US-23 to Oakland Co Line	Reconstruct	Reconstruct	\$150,000,000	N/A
Livingston	M-59	Michigan Avenue to US-23	Capacity Improvement	Capacity Improvement	\$100,000,000	N/A
Livingston	US-23	I-96 to Monroe Co Line	Rehab	Rehab	\$200,000,000	N/A
Macomb	M-3	11 Mile to 14 Mile	Road	Reconstruction	\$37,890,000	3.7
Macomb	M-53	27 Mile to 32 Mile	Road	Repairs	\$25,500,000	5.0
Macomb	M-59	Romeo Plank to Elizabeth	Road	Reconstruction	\$45,000,000	2.5
Oakland	I-75	M-24 to M-15	Road	Mix of HMA M & R and Concrete Inlay	\$86,000,000	N/A
Oakland	I-96	West County Line to Novi Rd.	Road	Reconstruction (4R)	\$140,000,000	10.8
Oakland	M-1	8 Mile to 12 Mile	Road	Reconstruct	\$129,000,000	4.0
Oakland	M-1	12 to 16 Mile Road	Road	Reconstruct	\$115,000,000	4.0
Oakland	M-15	Viola Dr to County Line	Road	Mill and Resurface (3R)	\$9,500,000	4.1
Oakland	M-15	Dixie Hwy to Rattalee Lk	Road	Mill and Resurface (3R)	\$8,250,000	3.8
Oakland	M-15	Rattalee Lk to Viola Dr.	Road	Mill and Resurface (3R)	\$5,700,000	3.7
Oakland	US-24	Long Lake to Orchard Lake	Road	Combination of Concrete Inlay and HMA Overlay	\$9,600,000	3.6
Oakland	US-24 BR	Cass to S. of Kenneth	Road	Reconstruct	\$8,250,000	1.7
Oakland	M-34	Harriet to Davison	Road	Mill and Overlay (3R)	\$17,300,000	4.0
Oakland	M-59	Porter to Williams Lk Rd	Road	Mill and Resurface (3R)	\$28,010,000	3.8
Oakland	M-59	Duck Lk to Porter Rd	Road	Mill and Resurface (3R)	\$18,250,000	3.2
Oakland	M-59	Milford to Duck Lk Rd	Road	Mill and Resurface (3R)	\$16,970,000	2.7
Oakland	Old M-59 (Auburn Rd)	Adams Rd to Dequindre	Road	Mill and Resurface and Addition of center turn lane (3R)	\$19,700,000	6.0
Oakland	Old M-5 (Grand)	Purde to 10 Mile Road	Road	Reconstruct	\$39,000,000	4.2
Washtenaw	I-94	Jackson Co. Line to Wayne Co. Line	Major Rehab	Major Rehab	\$120,000,000	N/A
Washtenaw	I-94 EB	At Kalmbach Road	Realign mainline - Safety Improvement	Realign mainline - Safety Improvement	\$15,000,000	1.18
Washtenaw	M-17	Ypsilanti	Rehab	Rehab	\$7,000,000	
Washtenaw	M-14	I-94 to Huron River	Reconstruct	Reconstruct	\$60,000,000	3.7
Washtenaw	M-14	US-23 to E Jct to US-23 W Jct	Major Rehab	Major Rehab	\$18,000,000	N/A
Washtenaw	US-12	Industrial Drive to US-23	Capacity Improvement	Capacity Improvement	\$150,000,000	N/A
Washtenaw	US-23	M-14 to Bemis	Rehab	Rehab	\$30,000,000	N/A
Washtenaw	US-23	School Road to Ida Center	Reconstruct	Reconstruct	\$40,000,000	N/A
Washtenaw	US-23 BR	I-94BL to M-14	Reconstruct/Rehab	Reconstruct/Rehab	\$12,000,000	N/A
Wayne	I-94	I-96 to Wyoming	Road	Reconstruct	\$110,500,000	3.6
Wayne	M-10	Griswold to M-3	Road	Mill & Resurface	\$15,800,000	1.5
Wayne	M-14	New Burgh to Sheldon	Road	Reconstruct	\$92,300,000	3.6
Wayne	M-85	Rosa Parks to Griswold	Road	Mill and Resurface	\$8,650,000	1.1
Wayne	M-97	Gratio to 8 Mile Rd	Road	Mill and Overlay(3R)	\$14,600,000	2.9
Wayne	M-153	Wayne to Telegraph	Road	HMA Mill and Overlay	\$33,800,000	6.0
Wayne	US-12	Rosa Parks to Cass	Road	Reconstruction and Overlay	\$14,818,000	1.2
Wayne	US-12	Lotz to Pershing	Road	3R Patch & Overlay	\$14,242,000	2.3
Wayne	US-12	Henry Ruff to Gully	Road	3R Mill & Resurface	\$16,694,400	3.0
Wayne	US-24	Carter to Pennsylvania	Road	Reconstruction	\$23,400,000	2.6
Grand Rapids Regional Area						
Allegan	US-31	I-196 north to Central Ave	Road	Major Rehabilitation	\$8,000,000	3.3
Allegan	M-89	58th St east to 56th St	Road	Resurface	\$1,000,000	1.1
Barry	M-37	Golden Ln north to Timber Creek Dr	Road	Resurface	\$4,500,000	4.9
Ionia	I-96	M-66 east to the Grand River	Road	Reconstruction	\$50,000,000	8
Ionia	I-96	Saranac Rest Area east to M-66	Road	Reconstruction	\$36,000,000	5.6
Ionia	M-66	M-50 north to Portland Rd	Road	Resurface	\$9,500,000	8
Kent	US-131	M-11 north to Wealthy St	Road	Reconstruction	\$45,000,000	3
Kent	US-131	Allegan/Kent County Line north to 76th St	Road	Reconstruction	\$21,500,000	4
Kent	M-11	Church St east to Burlingame Ave	Road	Resurface	\$3,500,000	2.9
Ottawa	I-196	Byron Rd east to 32nd Ave	Road	Reconstruction	\$40,500,000	6.3
Ottawa	US-31	Slayton St north to the south channel of Grand River	Road	Reconstruction, Add Lanes	\$14,500,000	0.9
Lansing Regional Area						
Clinton	I-96	Ionia Co Line to I-69	Major Rehab	Major Rehab	\$50,000,000	N/A
Clinton	Old US-127	Sheridan to I-69	Rehab	Rehab	\$18,000,000	N/A
Eaton	I-69	I-96 to Lansing Road (Charlotte)	Reconstruct	Reconstruct	\$90,000,000	N/A
Ingham/Living	I-96	M-52 to M-59	Reconstruct	Reconstruct	\$100,000,000	N/A
Ingham	I-96BL	Waverly Road to MLK	Rehab	Rehab	\$10,000,000	N/A
Ingham	I-496	Lansing Road to US-127	Reconstruct	Reconstruct	\$50,000,000	N/A
Ingham	M-43	Rosemary to I-69BL	Rehab	Rehab	\$25,000,000	N/A
Ingham	M-43	Park Lake Road to Oak Point	Rehab	Rehab	\$20,000,000	N/A
Ingham	M-99	Holt Road to Victor Road	Reconstruct/Rehab	Reconstruct/Rehab	\$45,000,000	N/A
Ingham	US-127	I-96 to I-69	Major Rehab	Major Rehab	\$75,000,000	N/A

Michigan Statewide						
Alger	M-28	From Onota St to FFH13-Wetmore	Road	Mill and 2 course HMA overlay	\$3,512,780	9.0
Baraga	US-41	E. End of Tioga Creek PRL to East of M-28	Road	Overlay, crush and shape shoulder	\$6,977,487	16.3
Bay	M-25	City of Bay City	Road	Reconstruct	\$40,000,000	N/A
Bay	US-10 WB	Midland/Bay COL to Bay City	Road	Reconstruct	\$80,000,000	N/A
Berrien	I-94	West of I-94BL (Exit 23) to St. Joseph River. 5.1 mile length.	Road	Concrete Reconstruction	\$60,000,000	5.1
Berrien	I-94	0.5 Mile S. of Three Oaks Road to Red Arrow Hwy	Road	Cold Mill and Two Course HMA	\$18,000,000	7.8
Berrien	I-94	I-94 BL (Lakeshore Drive)	Bridge	Replacement	\$10,000,000	N/A
Berrien	I-94	CSX Railroad	Bridge	Joints, Deck Patching, Epoxy Overlay	\$350,000	N/A
Berrien	I-94	Under Washington Ave	Bridge	Joints, Deck Patching, Epoxy Overlay	\$200,000	N/A
Berrien	I-94	Lincoln Ave	Bridge	Joints, Deck Patching, Epoxy Overlay	\$500,000	N/A
Berrien	M-51	Indiana State Line 4.6 miles northely to M-60BR	Road	Repair and HMA Resurface	\$15,000,000	4.6
Berrien	M-139	St. Joseph River for 3.9 miles northerly to I-94 BL	Road	Repair and HMA Resurface	\$12,500,000	3.9
Berrien	US-12	St. Joseph River	Bridge	Full Paint	\$3,000,000	N/A
Berrien	US-31	US-12 to M-139. 12.2 mile length.	Road	Deep HMA Overlay on Concrete	\$48,766,000	12.2
Calhoun	I-94	6.5 Mile Rd. to M-311. Mile 99-104. 4.5 mile length.	Road	Deep HMA Overlay on Concrete	\$25,000,000	4.5
Calhoun	I-94	I-69 Interchange Ramps	Road	HMA Overlay	\$6,000,000	2
Calhoun	M-37 & M-96	M-37 from S. JCT M-96 and M-96 from S JCT M-37 to I-194 in City of Battle Creek. 8.9 mile length	Road	Repair and HMA Resurface	\$18,000,000	8.8
Calhoun	M-311	Alder Creek	Bridge	Replacement	\$1,000,000	N/A
Chippewa	M-28	I-75 to M-129	Road	Mill and 2 course overlay	\$1,656,369	5.46
Emmet	US-31	South to North Village Limits	Road	Reconstruction	\$7,500,000	1.1
Genesee	I-69	W of I-75 to Ballenger	Road	Reconstruct	\$40,000,000	N/A
Genesee	I-69	I-475 Interchange	Road	Reconstruct & Rehab	\$80,000,000	N/A
Genesee	I-75	Bristol Road to Flint River	Road	Reconstruct	\$1,000,000,000	N/A
Genesee	I-475	Bristol Road to Carpenter Road	Road	Reconstruct	\$90,000,000	N/A
Grand Traverse	US-31/M-72	East Side of Murchie Bridge easterly to 60' east of Garfield Ave in Traverse City	Road	Reconstruction	\$13,800,000	N/A
Grand Traverse	US-31/M-72	From 100' northwest of Division Street southeasterly to 50' West of Murchie Bridge in Traverse City	Road	Reconstruction	\$14,000,000	N/A
Grand Traverse/Leelanau	US-31/M-72	From 250' north of M-72/US-31/M-22 Intersection southeasterly to 100' northwest of Division Street in Traverse City	Road	Reconstruction	\$13,000,000	N/A
Hillsdale	M-34	M-99 to US-127	Major Rehab	Major Rehab	\$22,000,000	N/A
Hillsdale	M-49	Village of Camden	Reconstruct	Reconstruct	\$12,000,000	1.0
Hillsdale	M-99	Fayette to US-12	Major Rehab	Major Rehab	\$15,000,000	N/A
Hillsdale	M-99	US-12 to M-49	Major Rehab	Major Rehab	\$12,000,000	N/A
Hillsdale	M-99	South of Steamburg to M-34	Rehab	Rehab	\$4,000,000	N/A
Hillsdale	US-127	Church St to US-223	Major Rehab	Major Rehab	\$18,000,000	8.1
Iosco	US-23	In Tawas City and East Tawas	Road	Reconstruction	\$12,500,000	3.1
Jackson	I-94	M-60 to Sargent Road	Reconstruct/Widening	Reconstruct/Widening	\$400,000,000	N/A
Jackson	I-94	Michigan Avenue to M-60	Reconstruct	Reconstruct	\$90,000,000	7.3
Jackson	I-94	Calhoun Co Line to Michigan Avenue	Reconstruct	Reconstruct	\$63,000,000	5.0
Jackson	I-94 BL	Cooper St to US-127	Reconstruct	Reconstruct	\$38,000,000	N/A
Jackson	M-99	I-94 to Springport	Rehab	Rehab	\$16,000,000	N/A
Jackson/Lena	M-106	Bunkerhill Road to M-52	Major Rehab	Major Rehab	\$19,000,000	N/A
Jackson	US-127	US-223 to Ayres Road	Major Rehab	Major Rehab	\$24,000,000	N/A
Kalamazoo	US-131 BR	M-43 to I-94	Road	Repair and HMA Resurface	\$15,000,000	5.0
Kalamazoo	US-131 BR	Begin Freeway to US-131. Mile 0-4. 4.2 mile length.	Road	Deep HMA Overlay on Concrete		4.2
Lenawee	M-34	Hazen Creek to M-52	Rehab	Rehab	\$15,000,000	N/A
Lenawee	M-50	Village of Tecumseh	Reconstruct	Reconstruct	\$22,000,000	1.4
Lenawee	M-156	State Line to M-34	Reconstruct	Reconstruct	\$48,000,000	N/A
Lenawee	US-12	M-52 to Clinton East Village Limit	Major Rehab	Major Rehab	\$10,000,000	N/A
Lenawee	US-223	Ogden Hwy to Ingham Co Line	Reconstruct	Reconstruct	\$32,000,000	16.8
Lenawee	US-223	High Street to Jefferson Street (Blissfield)	Reconstruct	Reconstruct	\$14,000,000	N/A
Lenawee	US-223	US-127 to Rome Road	Major Rehab	Major Rehab	\$22,000,000	10.6
Lenawee	US-223BR	US-223 to M-52	Major Rehab	Major Rehab	\$6,000,000	N/A
Mackinac	M-117	US-2 to Mack/Luce CL	Road	Mill and 2 course overlay	\$6,099,000	20.0
Marquette	US-41/M-28	From Furnace St to Roundabout in Marquette	Road	Reconstruction	\$4,308,000	1.7
Menominee	US-41	Menominee to Wallace	Road	Jnt Rpr, Mill and Fill	\$11,065,914	29.2
Midland	US-10BR/M-2	Tittabawassee River to Freeway	Road	Reconstruct	\$40,000,000	N/A
Monroe	I-75	Otter Creek to Dixie Hwy	Reconstruct	Reconstruct	\$150,000,000	N/A
Monroe	US-223	Lenawee County Line to Bacon Street	Major Rehab	Major Rehab	\$8,000,000	N/A
Ogemaw	M-55/I-75BL	In City of West Branch	Road	Reconstruction	\$3,600,000	0.7
Otsego	I-75BL	In Gaylord from I-75 to Wisconsin/Grandview St	Road	Reconstruction	\$13,200,000	2.2
Saginaw	M-46	City of Saginaw	Road	Reconstruct	\$40,000,000	N/A
Saginaw	M-58	City of Saginaw	Road	Reconstruct	\$50,000,000	N/A
St. Joseph	US-131	Rocky River in Three Rivers for 10.8 miles northerly to CN Railroad in Schoolcraft	Road	Repair and HMA Resurface	\$36,000,000	10.9
Van Buren	I-94 EB	0.8 Mi W of M-51 to 1.2 Mi. E of M-40. 7.3 mile length.	Road	Deep HMA Overlay on Concrete	\$18,000,000	7.3
Van Buren	I-94 EB	E. of Hartford (Exit 46) to CR 681. 2.3 mile length	Road	Deep HMA Overlay on Concrete	\$7,000,000	2.3
VanBuren	I-94	Over the PawPaw River	Bridge	Micropiles	\$1,036,776	N/A
Van Buren	I-196 BL	I-196 BL from I-196 Exit 18 through City of South Haven to I-196 Exit 20 and on M-43. 4.4 miles total length	Road	Reconstruction	\$30,000,000	4.5
VanBuren	I-696	Black River & Kal Haven Trail	Bridge	Riprap	\$924,000	N/A
Van Buren	M-40	72nd Street to 66th Ave. 1.5 mile length	Road	Reconstruct and Resurfacing	\$5,000,000	1.5

Federal Transportation Funding in Michigan

Investment in Michigan's roads, highways and bridges is funded by local, state and federal governments. A lack of sufficient funding at all levels will make it difficult to adequately maintain and improve the state's existing transportation system.

The federal government is a critical source of funding for Michigan's roads, highways, bridges and transit systems and provides a significant return to Michigan in road and bridge funding based on the revenue generated in the state by the federal motor fuel tax.

Most federal funds for highway and transit improvements in Michigan are provided by federal highway user fees, largely an 18.4 cents-per-gallon tax on gasoline and a 24.4 cents-per-gallon tax on diesel fuel. Since 2008 revenue into the federal Highway Trust Fund has been inadequate to support legislatively set funding levels so Congress has transferred approximately \$53 billion in general funds and an additional \$2 billion from a related trust fund into the federal Highway Trust Fund.¹⁹

Signed into law in December 2015, the [Fixing America's Surface Transportation Act \(FAST Act\)](#), provides modest increases in federal highway and transit spending. The five-year bill also provides states with greater funding certainty and streamlines the federal project approval process. But, the FAST Act does not provide adequate funding to meet the nation's need for highway and transit improvements and does not include a long-term and sustainable funding source.

The five-year, \$305 billion FAST Act will provide approximately a 15 percent boost in highway funding and an 18 percent boost in transit funding over the duration of the program, which expires in 2020.²⁰ In addition to federal motor fuel tax revenues, the FAST Act will also be funded by \$70 billion in U.S. general funds, which will rely on offsets from several unrelated

federal programs including the Strategic Petroleum Reserve, the Federal Reserve and U.S. Customs.

According to the [2015 AASHTO Transportation Bottom Line Report](#), a significant boost in investment in the nation's roads, highways, bridges and public transit systems is needed to improve their condition and to meet the nation's transportation needs. The AASHTO report found that based on an annual 1 percent increase in VMT that annual investment in the nation's roads, highways and bridges needs to increase by 36 percent, from \$88 billion to \$120 billion to improve conditions and meet the nation's mobility needs.²¹ Investment in the nation's public transit system needs to increase from \$17 billion to \$43 billion.²²

The [2015 AASHTO Transportation Bottom Line Report](#) found that if the rate of vehicle travel increased by 1.4 percent per year, the needed annual investment in the nation's roads, highways and bridges would need to increase by 64 percent, to \$144 billion. If vehicle travel grows by 1.6 percent annually the needed annual investment in the nation's roads, highways and bridges would need to increase by 77 percent, to \$156 billion.²³

Importance of Transportation to Economic Growth

Today's culture of business demands that an area have well-maintained and efficient roads, highways and bridges if it is to remain economically competitive. Global communications and the impact of free trade in North America and elsewhere have resulted in a significant increase in freight movement, making the quality of a region's transportation system a key component in a business's ability to compete locally, nationally and internationally.

Businesses have responded to improved communications and the need to cut costs with a variety of innovations including just-in-time delivery, increased small package delivery, demand-

side inventory management and e-commerce. The result of these changes has been a significant improvement in logistics efficiency as firms move from a push-style distribution system, which relies on large-scale warehousing of materials, to a pull-style distribution system, which relies on smaller, more strategic movement of goods. These improvements have made mobile inventories the norm, resulting in the nation's trucks literally becoming rolling warehouses.

Highways are vitally important to continued economic development in Michigan, particularly to the state's manufacturing, agriculture and tourism industries. As the economy expands, creating more jobs and increasing consumer confidence, the demand for consumer and business products grows. In turn, manufacturers ship greater quantities of goods to market to meet this demand, a process that adds to truck traffic on the state's highways and major arterial roads.

Every year, \$860 billion in goods are shipped to and from sites in Michigan, mostly by trucks.²⁴ Seventy percent of the goods shipped annually to and from sites in Michigan are carried by trucks.²⁵

The cost of road and bridge improvements are more than offset by the reduction of user costs associated with driving on rough roads, the improvement in business productivity, the reduction in delays and the improvement in traffic safety. The [Federal Highway Administration estimates](#) that each dollar spent on road, highway and bridge improvements results in an average benefit of \$5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs and reduced emissions as a result of improved traffic flow.²⁶

Local, regional and state economic performance is improved when a region's surface transportation system is expanded or repaired. This improvement comes as a result of the initial job creation and increased employment created over the long-term because of improved access, reduced transport costs and improved safety.

Increasingly, companies are looking at the quality of a region's transportation system when deciding where to re-locate or expand. Regions with congested or poorly maintained roads may see businesses relocate to areas with a smoother, more efficient and more modern transportation system. In fact, highway accessibility was ranked the number two site selection factor behind only the availability of skilled labor in a 2015 survey of corporate executives by [Area Development Magazine](#).²⁷

Conclusion

As Michigan works to build a thriving, growing and dynamic state, it will be critical that it is able to address the state's most significant transportation issues by providing a well-maintained 21st century network of roads, highways, bridges and transit that can accommodate the mobility demands of a modern society.

Michigan will need to modernize its surface transportation system by improving the physical condition of its transportation network and enhancing the system's ability to provide efficient, safe and reliable mobility for residents, visitors and businesses. Making needed improvements to the state's roads, highways, bridges and transit systems could provide a significant boost to the economy by creating jobs in the short term and stimulating long-term economic growth as a result of enhanced mobility and access.

While the funding increase provided in 2015 will be helpful, overall road and bridge conditions will still continue to worsen and numerous projects to improve the condition and expand the capacity of Michigan's roads, highways, bridges and transit systems will not be able to proceed without a substantial boost in state or local transportation funding. If Michigan is unable to complete needed transportation projects it will hamper the state's ability to improve the

condition and efficiency of its transportation system or enhance economic development opportunities and quality of life.

#

ENDNOTES

-
- ¹ Michigan Department of Community Health, 2016. <http://www.mdch.state.mi.us>. U.S. Census data.
- ² Highway Statistics (2015). Federal Highway Administration. DL-1C
- ³ TRIP analysis of Federal Highway Administration 2000 Highway Statistics and FHWA Traffic Volume trends report https://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm
- ⁴ United States Bureau of Labor Statistics, 2016.
- ⁵ Michigan Department of Transportation response to TRIP survey, 2016.
- ⁶ Ibid.
- ⁷ Selecting a Preventative Maintenance Treatment for Flexible Pavements. R. Hicks, J. Moulthrop. Transportation Research Board. 1999. Figure 1.
- ⁸ Federal Highway Administration National Bridge Inventory, 2016.
- ⁹ Ibid.
- ¹⁰ Michigan Office of Highway Safety Planning.
- ¹¹ Ibid.
- ¹² TRIP analysis of National Highway Traffic Safety Administration data.
- ¹³ Adding Highway Shoulders, Width, Reduce Crash Numbers and Save Lives (August 9, 2012). Texas Transportation Institute.
- ¹⁴ Ibid.
- ¹⁵ MDOT response to TRIP survey.
- ¹⁶ Ibid.
- ¹⁷ Ibid.
- ¹⁸ Michigan Department of Transportation response to TRIP survey (2016).
- ¹⁹ "Surface Transportation Reauthorization and the Solvency of the Highway Trust Fund," presentation by Jim Tymon, American Association of State Highway and Transportation Officials (2014).
- ²⁰ 2015 "Fixing America's Surface Transportation Act." (2015) American Road and Transportation Builders Association. <http://www.artba.org/newsline/wp-content/uploads/2015/12/ANALYSIS-FINAL.pdf>
- ²¹ 2015 AASHTO Bottom Line Report (2014) AASHTO. P. 2.
- ²² Ibid.
- ²³ Ibid.
- ²⁴ TRIP analysis of Bureau of Transportation Statistics, U.S. Department of Transportation. 2012 Commodity Flow Survey, State Summaries.
- ²⁵ Ibid.
- ²⁶ FHWA estimate based on its analysis of 2006 data. For more information on FHWA's cost-benefit analysis of highway investment, see the 2008 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance.
- ²⁷ Area Development Magazine (2016). 30th Annual Survey of Corporate Executives: Availability of Skilled Labor New Top Priority. <http://www.areadevelopment.com/Corporate-Consultants-Survey-Results/Q1-2016/corporate-executive-site-selection-facility-plans-441729.shtml>