Finance White Paper

The Michigan Department of Transportation (MDOT) *2035 MI Transportation Plan Finance White Paper* presented information on the federal and state laws that govern the collection and distribution of transportation revenues in the state of Michigan. It also provided an estimate of future revenue available to support transportation in Michigan.

This white paper updates the federal and state estimated funding available to the state of Michigan using fiscal year (FY) 2016 as a base year and forecasting out to FY 2040. The focus of this report is the MDOT system; the transportation infrastructure that MDOT owns, operates and maintains (I, US and M routes); and the portion of revenues that MDOT receives for the Highway and Bridge Capital program. Funding estimates for the Public Transportation and Aeronautics programs are also included. For those programs, the majority of the infrastructure acquired using state and federal funding is owned, operated, and maintained by agencies other than MDOT.

Federal Transportation Funding

On Dec. 4, 2015, the Fixing America's Surface Transportation Act, or the FAST Act, was signed into law. This legislation replaces the Moving Ahead for Progress in the 21st Century Act (MAP-21), which expired on Sept. 30, 2014. The FAST Act authorizes the investment of $305 billion in federal funding in the nation's surface transportation system during the next five years, through FY 2020. The legislation breaks the cycle of short-term funding authorizations that have characterized the federal program for the past 10 years and, in covering nearly five full fiscal years, represents the longest surface transportation authorization bill enacted since 1998.

The FAST Act builds on the reforms included in MAP-21, which was put in place in 2012. MAP-21 increased the emphasis on freight by encouraging agencies to have greater interaction with freight stakeholders and engage in specific freight planning efforts. The FAST Act continues this focus on freight by creating two new programs to better target investments to projects that promote efficient movement of freight. MAP-21 also transformed federal Highway and Transit programs through the establishment of a performance-based approach to decision-making. The FAST Act supports this initiative by funding efforts to collect and manage data for performance analysis, and to improve capacity of transportation agencies to better link investments with outcomes.

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

Federal aid accounts for about 65 percent of the MDOT Highway Capital Program, on average. In Michigan, PA 51 of 1951 (Act 51) prescribes the amount of federal aid to be utilized by the MDOT system and the local system. Act 51 states MDOT's share of federal aid is 75 percent of the federal apportionment and the local share is 25 percent, to be used on federal aid-eligible roads.

For transit, the FAST Act to a large degree maintains the programs laid out in MAP-21. It continues all the transit formula programs as outlined in MAP-21, with increases that are roughly inflationary. New program requirements included in MAP-21 pertaining to transit asset management, and transit safety planning and related performance measures, remain in place. The FAST Act re-establishes a competitive program under Section 5339 that allows the Secretary of Transportation to make grants to states and transit agencies for bus and bus facility capital projects. In addition to federal transit funding that MDOT receives, a portion of the local transit providers also receive funding directly from the United States Department of Transportation (USDOT).

The FAST Act also makes changes to rail programs. A few highlights include improving rail infrastructure and safety by consolidating rail grant programs, cutting red tape, and dedicating resources for best use. It establishes a federal-state partnership for a State of Good Repair grant program. It also establishes a new competitive grant program for passenger and freight rail safety projects. However, federal rail grants are still awarded on a competitive basis.

Federal aviation funding is currently authorized under a short-term continuing resolution to an expired authorization law as Congress considers a new long-term aviation authorization bill.

State Transportation Funding

The state has experienced challenges in providing adequate transportation funding. For many years, Michigan has had difficulty finding state and local funds to match federal aid. General Fund dollars have been used in 2013, 2014, 2015 and 2016 to assure that MDOT did not lose available federal aid.

On Nov. 10, 2015, Gov. Rick Snyder signed into law a funding package that will provide more state transportation revenue. The nine-bill package includes registration fee increases, motor fuel tax increases, and appropriations from the General Fund. Gov. Snyder said of the new law, *"It will go a long way to improve Michigan's roads and ensure a safe and efficient system of transportation essential to a stronger future. Residents and visitors alike deserve much better than what we drive on today. This targeted, ongoing investment will help preserve and fix our infrastructure now and in the future, which is fundamental to continuing and accelerating our economic comeback."*

The new revenue package will generate $1.2 billion for transportation when it takes full effect in FY 2021: $600 million from gas taxes and registration fees, and $600 million from general funds. Almost 94 percent of the new revenue will be distributed through the usual Act 51 formula for road agencies: 39.1 percent for state highways, 39.1 percent for Michigan's 83 county road agencies, and 21.8 percent for 515 villages and cities. Almost 10 percent of the new revenue from gas taxes and registration fees will go into the Comprehensive Transportation Fund (CTF) for public transportation and/or rail. These funds come "off the top," prior to being applied to the Act 51 formula.

The gasoline tax will be increased from 19 to 26.3 cents per gallon on Jan. 1, 2017, and the diesel fuel tax will increase from 15.0 to 26.3 cents per gallon. The motor fuel tax will be applied to natural gas (CNG) as well. Fuel tax rates will be tied to inflation beginning in 2022 to help remedy the decline in purchasing power of the fuel tax.

Registration fees for most cars and trucks will increase by 20 percent on Jan. 1, 2017. New electric car fees of $100 per year, and $30 for plug-in hybrid cars, will equalize road-user fees for vehicles that use little or no taxed fuel. The user fee increases will generate an additional $600 million per year for the Michigan Transportation Fund (MTF). Starting in FY 2019, $150 million in General Fund revenues will be appropriated for roads, increasing to $325 million in FY 2020, and then $600 million in FY 2021. The forecasted revenue from FY 2021 to FY 2040 is based on the assumption that $600 million will be transferred from the General Fund every year to the MTF. These revenues will be distributed to roads agencies only, under the usual Act 51 formula.

The State Aeronautics Fund primarily consists of revenue from the aviation fuel tax, a 2 percent fuel sales tax redirection, the airport parking tax, and other license and registration fees.

The CTF provides state funding for the Public Transportation Program, which includes local transit, intercity bus, rail passenger, rail freight, and marine/ports. The CTF receives up to 10 percent of the MTF, but only after statutory deductions are completed. The resulting share for the CTF has been approximately 8.5 percent.

In addition to a share of the MTF, the other major revenue source for the CTF is motor vehicle-related sales tax revenue. The Michigan Constitution provides that not more than 25 percent of the state general sales tax on motor vehicle-related products shall be used for comprehensive transportation purposes. The General Sales Tax Act states that not less than 27.9 percent of 25 percent of the sales tax collected, at 4 percent on motor vehicle-related sales, be given to the CTF. This distribution has been reduced in the past.

In past years, MDOT has also sold bonds to help support the CTF programs. General Fund money has also been appropriated the last few years due to the CTF revenue being insufficient to match federal funds, and to support a continuation level of service. In FY 2016, $25.0 million was appropriated for these programs.

The new transportation legislation changes the revenue distribution to the CTF beginning in FY 2017. In addition to the MTF revenue received under the current distribution, the CTF will receive a portion of the new MTF revenue generated by the legislation. The additional MTF (less General Fund) revenue distributed to the CTF is much closer to 10 percent due to less deductions required before the distribution to the CTF.

Table 1 summarizes the state and federal financial baseline amounts, which were used to forecast future transportation revenue by mode. These amounts represent FY 2016 funding levels with the exception of the Public Transportation Program (PTP). For PTP, state funding uses the FY 2017 estimated revenue for the baseline. Federal Transit Administration (FTA) funding is based on FY 2015 actual adjusted by the growth rate, and no baseline revenue is used for the Federal Railroad Administration funding or Marine/Port programs.

Table 1: 2016 Revenue Available by Program (in millions)

Program	Federal	State	Total
Highway Capital and Maintenance Program	$799.8	$973.8	$1,773.6
Public Transportation Program	$32.4	$316.7	$349.1
Aeronautics Program	$79.0	$3.5	$82.5
Total MDOT Transportation Revenue	***$911.2***	***$1,294.0***	***$2,205.2***

Amounts are before capital and non-capital uses.
Source: MDOT Bureau of Transportation Planning

Trends

Federal Transportation

Federal funding for highways in the past 10 years to the state of Michigan has been up and down. Apportioned program funding to Michigan first exceeded $1 billion in 2004. Eleven years later, in 2016, apportioned program funding to Michigan still barely exceeds $1 billion. The FAST Act is expected to break this trend of level funding by providing a modest increase through FY 2020. These increases are assumed to continue through FY 2025, as the plan assumes a 2 percent growth rate through this period. Beyond FY 2025, the annual growth rate is estimated to be 2.4 percent.

Federal funding for public transportation programs has grown over time, but current levels will not be sustainable without structural changes to federal transportation funding. The FAST Act only provides small increases to transit programs. Although the FAST Act reinstates a competitive program for grants to states, and transit agencies for bus and bus facility projects, there is no guarantee that Michigan will be a beneficiary of this program. Similarly, the Fixed Guideway Capital Investment Grants Program is a discretionary program. This program is being utilized in Michigan for a bus rapid transit (BRT) project, and will likely be sought for several additional BRT projects.

Although MDOT has been successful in recent years in receiving competitive federal grants for passenger rail, it is not possible to forecast federal revenue for rail since funds are awarded exclusively through competitive programs.

State Transportation

Act 51 established the MTF as the means of collecting and distributing state transportation revenues. For many years, the main sources of MTF funding were motor fuel taxes and vehicle registration fees. State transportation funding in the coming years is shifting from two sources to three sources. In 2019, funds from the Michigan General Fund will transfer into the MTF to augment the funding available for transportation within the state.

State Fuel Tax Trends

Due to the economic downturn in 2008, high gas prices and the continued improvement of automobile miles per gallon, Michigan's fuel tax revenues have been flat or declining since 2005. Gasoline revenues collected declined to their lowest point since 1997 in 2012. In 2013 and 2014, gallons sold remained flat, but in 2015 gasoline revenues increased by about 5 percent. Some of this increase can be attributed to the decrease in fuel prices, and an uptick in economic activity. Long-term state fuel tax revenues are still forecast to decline as mile per gallon increases continue across the vehicle fleet.

State Vehicle Registration Tax Trends

The majority of the vehicle registration tax in the state is based on "ad valorum" vehicles. These vehicles include the model year 1983 and newer. Their tax is calculated on the "base price" of the vehicle; therefore, as long as the price of vehicles are increasing steadily, and Michigan drivers are purchasing new cars, the registration taxes will reflect growth. Vehicle registration taxes have been increasing in Michigan annually. The last time they reflected declines was in 2008 and 2009 due to the economic downturn in the state and nationally.

New Source of MTF Revenue: Michigan General Fund

Beginning in FY 2019, $150 million will be appropriated from the Michigan General Fund into the MTF for distribution through the Act 51 formula for state funding (39.1 percent to MDOT, 39.1 percent to counties, and 21.8 percent to cities and villages). Dedicated General Fund revenue will increase to $600 million per fiscal year beginning in FY 2021. These funds will be deposited into the MTF, after "off the top" deductions have been made.

Comprehensive Transportation Funding Trends

While the revenues within the CTF have grown over the years overall, they have been inconsistent from year to year due to fluctuations in the MTF and state sales tax, and revenue being redirected from the CTF to the Michigan General Fund and STF. The reductions have had an impact on programs that rely on CTF funding, such as the Transit Capital, Intercity Bus, and Rail programs. Michigan General Fund money was appropriated for the Public Transportation Program in FY 2013 through FY 2016 to help offset the CTF revenue shortfall. The CTF will begin receiving additional funds from the MTF in FY 2017. However, the CTF will not receive any of the Michigan General Fund revenue that will be transferred to the MTF starting in FY 2019.

In addition to the MTF revenue trends, the trend for the state sales tax on automotive-related items also affects the CTF. Revenue from state sales tax on automotive-related items peaked in FY 2013 and FY 2014. This was primarily due to the increased price of fuel. When the cost of a gallon of fuel increases, the state sales tax on that gallon of fuel necessarily increases. When fuel prices decreased dramatically in FY 2015, the sales tax collected from fuel decreased by over

10 percent from the previous year. Fuel prices are expected to remain low in FY 2016, and then start to increase again. However, as mentioned above, the mile per gallon for vehicles is expected to continue to increase into the future. This would likely cause a decrease in the amount of fuel purchased, potentially reducing the sales tax collected.

Aeronautic Funding Trends

Revenues for aviation are largely from the federal government, through the Federal Aviation Administration. For FY 2016, Michigan is anticipating up to $79.0 million in federal funds for airport capital improvements and development. The State Aeronautics Fund is the state source of funds for aviation projects at Michigan airports. The aviation fuel excise tax generates the greatest share of revenue to the fund. At 3 cents per gallon, the tax has not been increased since its inception. Additional state funds may be made available (starting in 2017) from a 2 percent fuel sales tax redirection recently made law by the Michigan Legislature.

Forecasted Transportation Revenue

The following long-term growth rates have been established to forecast future transportation revenue. These growth rates are based on historical trends.

- Federal highway revenues are expected to increase at an annual rate of 2.4 percent.
- State highway revenues are expected to increase at an annual rate of 2.3 percent.
- The 2040 revenue forecast must also account for annual inflation. The annual inflation rate used is 2.0 percent, which is the average annual compounded increase of the Consumer Price Index - All Urban Consumers, Detroit, for the period covering 1995 - 2015 (U.S. Bureau of Labor Statistics).
- Federal transit and intercity bus revenues are expected to increase at an annual rate of 3.8 percent.
- State transit and intercity/freight revenues are expected to increase at an annual rate of 1.15 percent.

Table 2 summarizes the total state and federal forecasted transportation revenues, by mode, available through FY 2040.

Table 2: Forecasted Transportation Revenue in 2016 Dollars (in millions)

	FY 2016 – FY 2040 Estimate		
	Federal	**State**	**Total**
Highway Program	$20,093.2	$25,669.1	$45,762.2
Public Transportation Program	$975.3	$7,345.4	$8,320.7
Aeronautics Program	$2,392.2	$132.9	$2,525.1
Total MDOT Transportation Revenue Forecast	**$23,460.7**	**$33,147.4**	**$56,608.0**

Revenue is before capital and non-capital uses.
Numbers may not calculate exactly due to rounding.
Source: MDOT Bureau of Transportation Planning

Table 3 summarizes state and federal revenue forecast to be available (in 2016 dollars) for the Capital Highway program through FY 2040, after deducting dedicated revenues for routine maintenance, debt service, and other non-capital uses.

Table 3: Highway Revenue Forecast in 2016 Dollars (in millions)

	Long-Term Annual Growth Rate	FY 2016 – FY 2040
Federal Highway Revenue	2.4%	$20,093.20
State Highway Revenue	2.3%	$25,669.10
Less Non-Capital Uses*		($7,626.30)
Highway Revenue Available (Highway Capital Projects and Routine Maintenance)		$38,135.90
Less Routine Maintenance		($7,371.00)
STF Available (Highway and Bridge Capital Projects)		$30,764.90

*Administration, Debt Service, Buildings and Facilities, and Grants to other departments.
Numbers may not calculate exactly due to rounding.
Source: MDOT, Bureau of Transportation Planning.

Long-Range Transportation Revenue Issues

New Corporate Average Fuel Economy (CAFE) standards were established in 2012 by the National Highway Transportation Safety Administration, and Environmental Protection Agency for light-duty passenger and medium/heavy truck vehicles. Specifically, the standards for new domestically manufactured, light-duty passenger fleets are targeted to average 54.5 miles per gallon (mpg) in model year 2025, versus their current compliance estimate of around 35 mpg in model year 2016.

These new standards, combined with the rise in electric and hybrid vehicles, will result in long-term challenges to transportation funding derived from state and federal fuel taxes through 2040. Despite projected increases in vehicle miles traveled (VMT), higher fuel efficiency standards will likely more than offset any increases, resulting in a continued decline in fuel consumption and state and federal fuel tax revenues.

Federal and state revenues are subject to unforeseen changes in the economy, unforeseen changes in policy direction, and changes in technology. These unknowns are difficult to quantify, but certainly could affect the forecasts.

Even with the additional revenue generated by newly enacted legislation, revenues will be insufficient to meet the program needs. In addition, due to the competitive award basis for many of the federal Transit and Rail Grant programs, it will be difficult to estimate from year to year what federal revenue MDOT and transportation providers will receive.