



CRC Memorandum



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Improving the Efficiency of Michigan's Highway Revenue Sharing Formula

The use of Michigan's highway system has undergone significant changes over the past 50 years. However, local road agencies in Michigan remain responsible for nearly all the same roadways over which they had jurisdiction in the 1950s. Similarly, these entities remain heavily reliant on state-raised highway revenues to support construction and maintenance services on local roads, in much the same way they did 50 years ago. As a consequence, there have been very few substantive modifications to the allocation of state-raised resources for highways, despite major changes in transportation needs across the state over time.

A problem with the current intergovernmental fiscal relationship is that the apportionments of state revenues to local governments do not reflect the relative needs of different areas across the state. Current law makes it nearly impossible to address the funding needs of heavily-traveled, local roads without significantly increasing the allocation of revenues to those counties and cities/villages with less-traveled roads. Furthermore, Public Act 51 of 1951, as amended (commonly called PA 51), fails to recognize the fiscal burden that municipalities face in maintaining older roadways and does not recognize important highway management differences between urban and rural areas. These shortcomings in the highway revenue shar-

ing program, taken together, result in a distribution of nearly \$1 billion annually to local road agencies that could be more efficient.

Recently, highway funding needs in Michigan have received substantial attention with the primary focus on additional revenues that a tax increase would provide. Around the state, metrics of both current road condition as well as congestion levels point to a lack of sufficient funding for highway construction and maintenance. Further evidence suggests that, prospectively, certain facets of the system will experience significant deterioration over the next 10 years given the current funding model and projected resource availability.

While a defensible case can be made to support the call for more revenue, it is unclear whether all aspects of the system exhibit the same needs. Further, today's revenue sharing program does not provide the motorist with any guarantee that additional transportation revenues will be as efficiently spent under the current distribution formulas as they might be. In addition to the policy debate surrounding the need for additional highway funds, a discussion of how best to allocate the limited state resources available each year among road agencies responsible for highway services would be useful.

Michigan's Current and Future Highway Needs

It is quite clear from recent highway condition reports, media accounts, and public opinion surveys that Michigan's highway infrastructure is in need of additional investment. Additional public funds could be put to productive use for increased highway maintenance and preservation, road reconstruction, and system expansion. Should public policymakers embrace the current realities and future estimates of Michigan's highway system and decide to address them by in-

creasing investment in the system, the first question to be asked is "What are the 'needs' of Michigan highways, both today and in the future?" Such an inquiry provides a basis for determining the extent and allocation of any revenue increase.

Recent efforts to gauge Michigan's highway needs exhibit a lack of uniformity in measuring the appropriate level of investment. This problem is exacerbated by



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the tendency of each effort to focus on specific aspects of Michigan's system (e.g., legal jurisdiction, geographic) rather than taking a comprehensive look at the entire system. While such an undertaking would represent a significant investment of time and resources, it is a critical step in assessing the total level of need and translating it into the appropriate level of additional resources required to meet such needs.

The lack of a comprehensive inventory of Michigan's highway infrastructure needs prompted a statewide study group to recom-

mend, in 2000, that the State employ a long-term, asset-based approach to manage its transportation system. The State of Michigan began implementing an asset management approach to help guide its future highway investment decisions in 2002. As defined by state law, asset management is "an ongoing process of maintaining, upgrading and operating physical assets cost effectively, based on a continuous, physical inventory and condition assessment." The key difference between this approach and traditional highway management is its focus on preventive and strategic

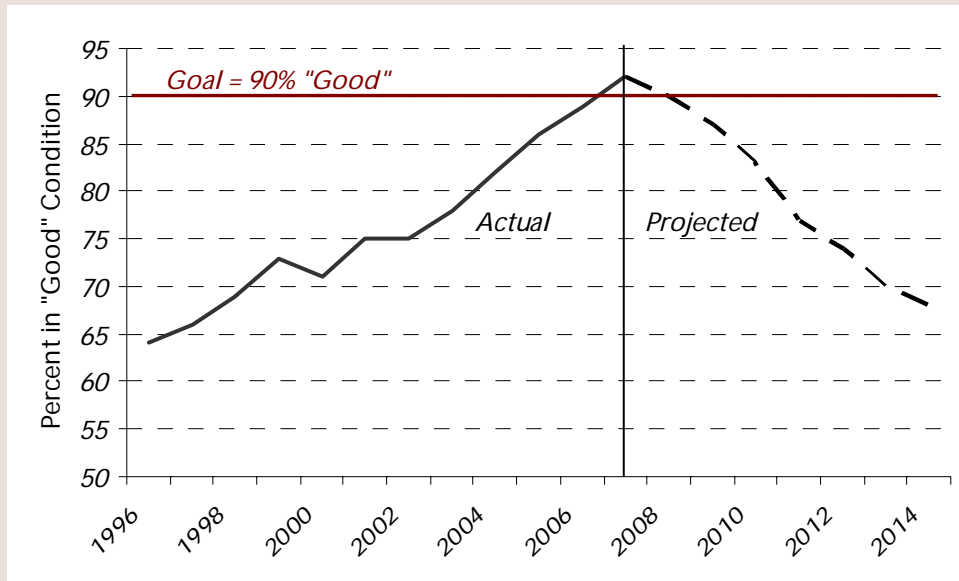
investment decisions, as opposed to reactive decisions focusing principally on the most severe and immediate infrastructure needs. Michigan's on-going efforts to adopt asset management principles will contribute greatly towards a comprehensive statewide needs assessment, as it will provide the uniformity that is lacking to determine the extent of Michigan's highway investment deficit.

It may be some time before the asset management approach is appropriately positioned to provide policymakers with the data needed to settle on the required

State Needs Versus Local Needs

While a statewide highway condition assessment is unavailable, the Michigan Department of Transportation is able to provide policymakers with a picture of what current investment levels on the state-administered system will yield in the future in terms of pavement conditions. The Department annually tracks its progress towards stated goals for freeway and non-freeway conditions and projects what will occur absent a change in the size or mix of transportation dollars flowing to the State. This can be seen in *Chart 1*. At this time, a similar projection of future local highway conditions has not been developed.

Chart 1
State Trunkline Combined (Freeway and Non-Freeway) Pavement Condition



Source: Michigan Department of Transportation.

level of additional highway resources. In the interim, additional dollars will be required to avoid widespread pavement condition

deterioration and to address congestion on Michigan highways. Regardless of the level ultimately decided upon, consideration has

to be given to whether the current system used to allocate that funding will result in the most efficient expenditure of public dollars.

Highway Jurisdiction in Michigan

In discussing the distribution of state-generated highway dollars, it is appropriate to address road responsibilities. Michigan is not unlike other states wherein responsibility for highway construction and maintenance belongs to a number of different levels of government. In the case of Michigan, State government, county road commissions, and municipal governments (cities and villages) provide highway services. Whereas PA 51 determines the allocation of state-shared revenues between and among road agencies, it does not directly address jurisdictional issues. Instead, road jurisdiction in Michigan is the product, by and large, of the level of government that originally built the road, as

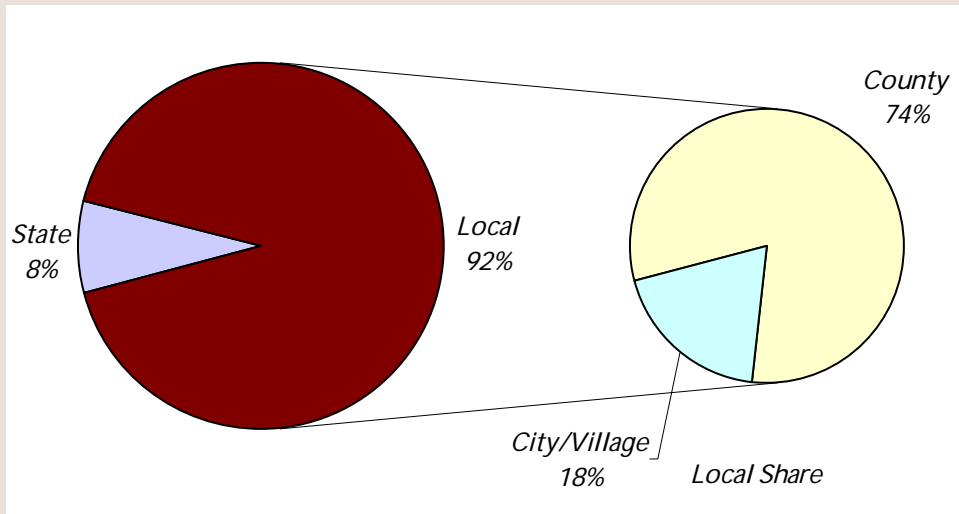
opposed to the current function of the highway. Factors that affect a road's function over time, e.g., travel patterns, population shifts, economic development, rarely result in a change of jurisdictional control. As a result, road jurisdiction today resembles that of nearly 60 years ago, rather than being based on the current role a highway plays in the state's transportation network.

Route Mileage. Chart 2 provides an illustration of how Michigan's 119,832 route miles are distributed among the three levels of government responsible for highway services. County roads represent nearly three-quarters of all mileage in the state. Local roads con-

stitute over 9 of every 10 miles of Michigan highways.

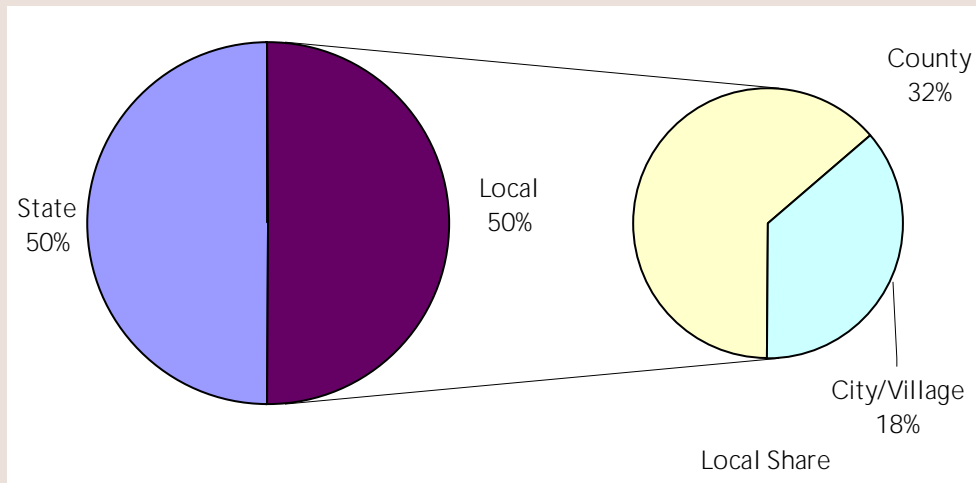
Highway Use. Looking at the Michigan highway system through another lens reveals a markedly different picture. Using annual vehicle miles traveled (AVMT) data to show the breakdown of the system between levels of government provides a sense of highway utilization in Michigan. Under this metric, the State's share of total AVMT is equal to the entire local share (county and cities/villages) (See Chart 3). This illustrates that roads under State government jurisdiction are more heavily traveled than local roads in the aggregate. A utilization factor such as

Chart 2
Highway Mileage by Ownership, 2006
Total Miles = 119,832



Source: Michigan Department of Transportation, 2007.

Chart 3
Annual Vehicle Miles Traveled by Ownership, 2006
Total AVMT = 104 billion



Source: Michigan Department of Transportation, 2007.

AVMT is lacking in the current PA 51 distribution formula.

In 2006, Michigan highways experienced a total of 104 billion miles of travel, an increase of 22 percent from the level in 1994. Growth across road jurisdictions was not uniform, however, as the local system experienced considerably more miles of travel. Whereas, the State system had an average annual growth rate of just over 1 percent during this 12-year period, the local system experienced an average annual growth rate of 2.3 percent.

Looking at a more recent period of time, 2000 to 2006, shows that travel on local roads grew at a much higher rate than travel on State roads. The annual growth rate on the local system over this 6-year period was just under 3 percent, whereas the annual growth rate on State roads was only 0.25 percent. Projections for the period 2007 through 2009 show travel on State roads declining very slightly before rising minimally in 2010.

Whereas the number of miles traveled on Michigan roadways increased

substantially from 1994 to 2006, the total route mileage in the State increased only 1.9 percent, from 117,655 miles in 1994 to 119,832 in 2006. The use of highway utilization data to distribute at least a portion of state-raised revenue would reflect changes in commuting patterns and result in additional dollars provided to those locals that experience increased travel demands over time. With little growth in mileage over time, the current formulas do not provide heavily-traveled roads with more state funds, even when travel demand increases year over year.

The Case for Sharing State-Raised Highway Revenues

Changes in Funding Responsibility. The practice of sharing state-raised revenues for local highway services in Michigan dates back to the earliest years of the last century and predates the State's direct involvement in constructing and maintaining roads. State-raised revenues were shared with local

governments as a means to establish a state trunkline system, based on uniform standards. Until the Great Depression, the amount of state assistance provided to local governments was small relative to total local highway expenditures as local property taxes accounted for the largest portion of resources

available. However, changes in the highway revenue sharing program following the Great Depression increased the role of state assistance in local road budgets, as the local property tax was replaced by state-levied user charges. By 1940, state assistance as a percentage of local road expenditures reached

more than 90 percent, up from 10 percent just 10 years earlier. Today, state revenues are not as significant as they were 60 years ago; however, they still represent the single largest source supporting local road spending, about 57 percent for counties and municipalities in total.

User Fees. Sharing state-raised revenues with locals for highway purposes makes sense for two reasons. First, a basic principle of public finance is that, to the extent possible, users of government services that directly benefit from the provision of such services should pay for the privilege of doing so. A related tenet of public finance is that the level of government responsible for the expenditure of tax dollars and the provision of public services/goods should shoulder the responsibility for raising the requisite resources.

Michigan's system of funding highways follows the first principle in that motor vehicle operators pay for the privilege of using the roads, primarily through user charges, e.g., fuel taxes and vehicle registration taxes. Although not a perfect measure of highway use, historically, these two taxes are considered the best surrogate measures of highway use. (Note: A more accurate system of user charges would be based on service consumption, such as miles traveled. Oregon, for example, is piloting such a system using on-board global position system technology.)

While Michigan's system meets the first principle, it does not, entirely, comply with the second. Local revenues constitute a portion of local road budgets; how-

ever, the majority of local road expenditures are financed with state resources. Although local-option gas and vehicle registration taxes are used to fund local road projects in other states, state governments are generally the best suited to administer these types of user charges. First, state governments are capable of levying user charges uniformly and, second, it can take advantage of administrative economies of scale, unavailable to local governments for collecting highway taxes. Further, differing local tax rates (e.g., fuel taxes levied at the county level) can distort consumer spending behavior in areas of the state where a unit of government levying a local-option tax borders a unit that does not levy such a tax. Such a scenario provides businesses in a non-taxing unit with a competitive advantage over those in a taxing jurisdiction.

Equity Issues. A second justification for sharing state revenues is that of ensuring that local governments are not left on their own to raise all the resources necessary to fund highways within their jurisdiction. In the absence of state assistance, road conditions across the state would vary widely, much more than is the case currently. The redistribution of state-raised highway resources from one area of the state to another reflects the reality that roads benefit citizens living outside of the local unit responsible for the road. This view holds that roads serve a larger public purpose than just the traveling needs of local residents, such as facilitating commerce, economic development, and tourism, all of which benefit a larger region or the state. Without the benefit of state rev-

enues, some local jurisdictions would not be able to provide sufficient highway services to meet these other purposes.

In addition to collecting state highway user charges, State government has the responsibility to ensure that the distribution of such resources is done in a manner that recognizes highway needs. This responsibility exists whether dividing dollars between the State and local governments, or whether the allocation is among individual road agencies, e.g. county road commissions, and cities and villages. Ensuring that the revenue sharing system is based on needs, however this term is defined, provides a greater degree of public accountability with respect to the appropriate use of state tax receipts.

Michigan's present distribution formulas use a far from perfect measure of highway need to allocate funds, namely road mileage. Further, the distribution of state highway funds does not consider infrastructure condition across road jurisdiction levels or among individual units of government. Finally, the current revenue sharing program does not take into account highway utilization factors. Instead, the system views mileage in all jurisdictions across the state in the same light regardless of how heavily or lightly traveled a road is. It treats a two-lane road the same as a multiple-lane road, which has been the case for nearly 60 years. The failure of the current formulas to take into account highway system condition, capacity, or utilization results in a far from efficient use of limited state resources each year.

State Highway User Tax Allocations: Funding to Local Road Agencies

Current Formulas. The Michigan Transportation Fund (MTF) receives all state highway user taxes and its use is restricted to transportation purposes only. In Fiscal Year 2007 (FY2007), the MTF received almost \$2 billion from these sources. The distribution of state highway funding among State and local road agencies is based on fixed percentages contained in PA 51. After certain administrative and collection expenses have been paid and funds distributed to specific transportation-related accounts, the balance of MTF dollars are allocated in the following way: 39.1 percent to the state highway system; 39.1 percent to the county road system; and 21.8 percent to the municipal street system (*Diagram 1*). These percentages have been in effect since 1984.¹

After this initial MTF distribution, internal formulas in PA 51 further divide the local shares among individual road agencies. The county allocation is divided among 83 road agencies (82 road commissions and Wayne County). After four “off the top” distributions (i.e., snow removal, county engineer, local roads, and “urban” roads), the remaining county MTF dollars are distributed for use on primary roads (75 percent) and local roads (25 percent). Funds for primary roads are distributed to each

county mainly on the basis of the proportion of vehicle registration taxes collected in a county, and, to a lesser extent, the amount of primary mileage in a county. In addition, 15 percent of the county primary road funds are distributed to each county on an equal basis. Local road dollars are divided among the counties based primarily on mileage and remainder on a per capita basis. In total, 56 percent of the county road funds are distributed on the basis of vehicle registration taxes, 24 percent on mileage, 11 percent in equal shares, and 9 percent per capita.

State highway funds are divided among the 533 cities and villages based on three factors: first, the relative share of population in each city/village compared to all cities and villages; second, the amount of “major” road miles in each city/village compared to all cities and villages; and third, the amount of “local” road miles in each city and village compared to all cities and villages. Of the total distribution among municipalities, 60 percent is based on population and 40 percent on road mileage. Neither factor is a true measure of highway use at the local level.

Current Distributions Among Counties. *Tables 1* and *2* (on page 8 and 9) show the total amount of MTF received by local road agencies (county road commissions and cities/villages) by county in FY2006. This comparison combines the county and municipal allocations to better represent the total level of state-shared resources provided to lo-

cal roads in each county via formula. The tables include rankings based on population and vehicle miles traveled.

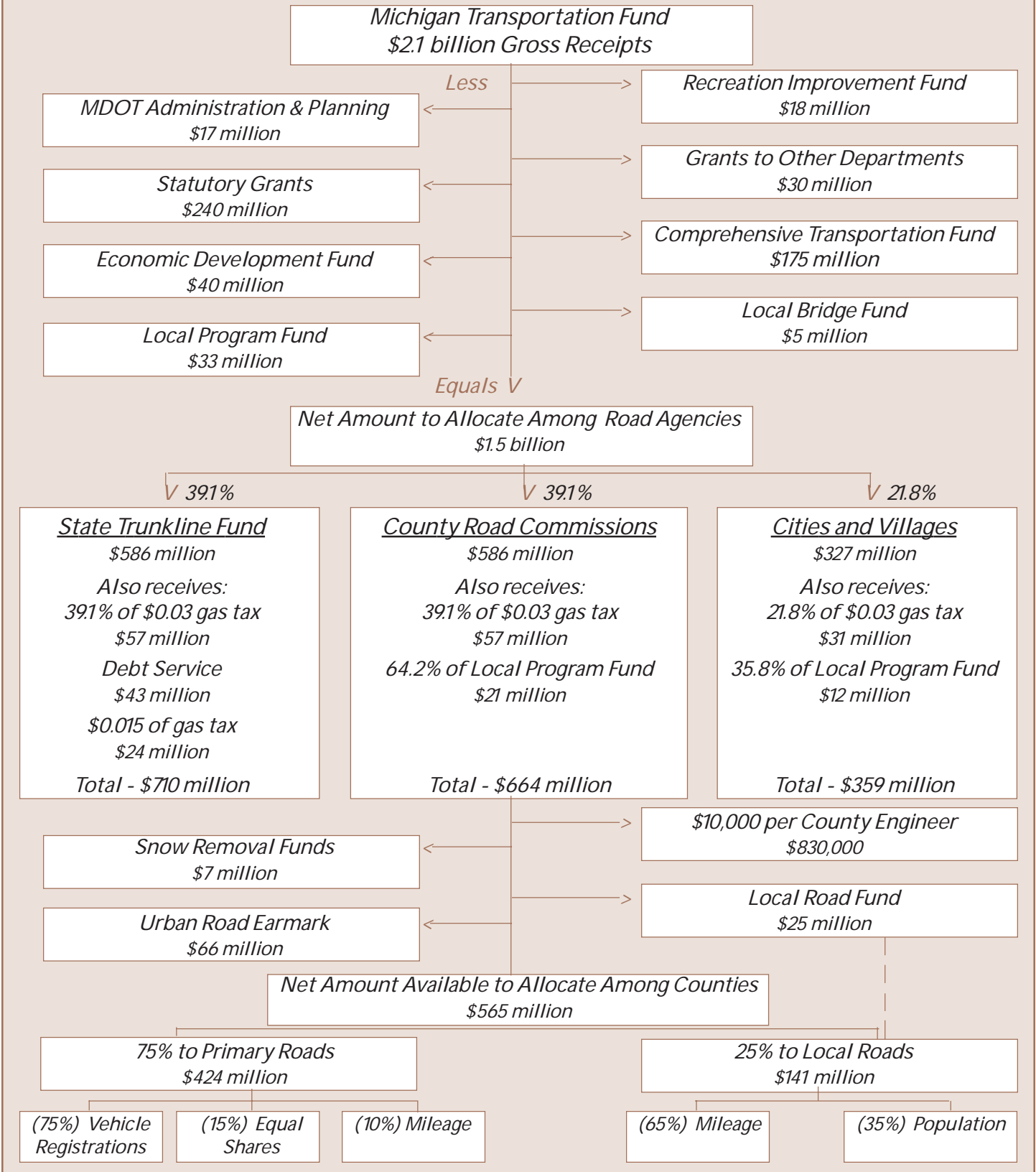
Because route mileage is a major component of the distribution formula, the large urban counties are the lowest on a per capita basis and a utilization basis. This problem is exacerbated by the fact that PA 51 treats each mile of road equally, regardless of the number of lanes. Urban roads that contain more than two lanes to accommodate travel demands are given the same weight as rural two-lane roads with considerably less vehicle traffic.

Clearly, the costs of reconstructing or maintaining a heavily-used, multiple lane road will exceed the costs associated with a two-lane road; however, PA 51 attempts to deal with this difference only through a small set aside of the annual county allocation solely designated for “urban” counties. The PA 51 formula earmarks a portion (10 percent or about \$63 million annually) of the counties’ MTF allocation to be shared among “urban” counties based upon their proportion of urban mileage in the state. The effectiveness of this funding to account for the urban/rural differences has been reduced over the years as the number of counties and miles eligible has increased while the earmark percentage has remained at 10 percent. In 1994, 52 counties qualified for this funding to address a little over 10,000 miles of urban roads or about 12 percent of the total county road system. In 2006, 58 counties received this

¹ Initially, the breakout was 44 percent to the state, 37 percent to counties, and 19 percent cities and villages, but these percentages were incrementally adjusted between 1951 and 1984, when they were set at their current levels.

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Diagram 1
Michigan Transportation Fund Revenue Allocation: Distribution to Counties
FY2006-07 Appropriations



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Table 1
Michigan Transportation Fund Distributions Per Capita by County: Fiscal Year 2006

<u>County</u>	<u>Total</u>	<u>Total Per Capita</u>	<u>County</u>	<u>Total</u>	<u>Total Per Capita</u>
Keweenaw	\$1,244,110	\$569.91	Newaygo	6,325,101	126.91
Ontonagon	2,505,641	347.91	Branch	5,499,184	119.87
Luce	1,959,103	293.10	Hillsdale	5,584,556	118.30
Baraga	2,365,585	270.60	Tuscola	6,758,715	116.78
Iron	3,150,020	254.51	Mecosta	4,778,010	113.08
Oscoda	2,323,892	254.26	Midland	9,435,240	112.60
Schoolcraft	2,211,885	252.96	Calhoun	14,874,663	107.79
Lake	2,955,664	250.63	Montcalm	6,819,254	106.59
Alger	2,378,359	246.08	St. Joseph	6,658,775	106.07
Mackinac	2,620,719	237.17	Isabella	6,914,738	105.06
Gogebic	3,700,704	223.96	Cass	5,348,978	104.21
Montmorency	2,341,537	223.47	Clinton	7,234,641	103.49
Alcona	2,598,224	220.96	Shiawassee	7,411,381	101.65
Presque Isle	3,114,332	220.19	Bay	10,856,417	100.16
Missaukee	3,072,443	202.17	Lenawee	10,127,417	99.10
Kalkaska	3,488,232	201.28	Ionia	6,414,850	98.96
Manistee	4,486,572	178.98	Van Buren	7,783,615	98.50
Menominee	4,342,674	175.85	Grand Traverse	8,171,196	96.19
Crawford	2,617,359	175.33	Kalamazoo	22,490,863	93.43
Huron	5,871,374	171.96	Barry	5,584,851	93.24
Benzie	3,013,346	170.71	Muskegon	16,294,647	92.99
Osceola	3,939,893	167.06	Kent	55,358,966	92.34
Otsego	4,124,830	166.92	Saginaw	18,888,426	91.56
Arenac	2,834,851	166.52	Eaton	9,734,772	90.78
Houghton	5,775,037	163.44	Ingham	24,968,914	90.17
Antrim	3,981,237	162.75	Oakland	109,265,387	89.99
Oceana	4,638,909	161.98	Berrien	14,489,624	89.61
Cheboygan	4,269,284	156.49	Wayne	175,245,882	88.87
Mason	4,529,023	155.93	Lapeer	8,306,594	88.59
Chippewa	5,924,481	153.19	Allegan	9,948,123	87.65
Dickinson	4,200,251	153.03	St. Clair	14,994,131	87.31
Iosco	4,096,585	152.68	Genesee	37,297,575	84.39
Wexford	4,881,963	152.59	Jackson	13,798,465	84.21
Ogemaw	3,296,175	152.14	Ottawa	21,025,526	81.60
Charlevoix	4,014,489	151.94	Monroe	12,371,290	79.80
Roscommon	3,949,397	151.53	Macomb	65,456,852	78.59
Sanilac	6,487,005	145.95	Washtenaw	26,916,774	78.24
Emmet	4,692,075	139.62	Livingston	13,538,675	73.38
Delta	5,311,690	139.21			
Leelanau	3,013,113	136.27	Total	985,309,492	97.60
Gratiot	5,718,088	135.80			
Alpena	4,041,237	134.41			
Clare	4,181,540	133.57			
Marquette	8,569,048	132.49			
Gladwin	3,504,444	129.76			

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Table 2

Michigan Transportation Fund Distributions Per Vehicle Mile Traveled by County: Fiscal Year 2006

<u>County</u>	<u>Total</u>	<u>Total Per Mile Traveled</u>	<u>County</u>	<u>Total</u>	<u>Total Per Mile Traveled</u>
Keweenaw	\$1,244,110	\$0.1398	Alcona	2,598,224	0.0287
Baraga	2,365,585	0.1093	Isabella	6,914,738	0.0285
Houghton	5,775,037	0.0923	Leelanau	3,013,113	0.0263
Alger	2,378,359	0.0892	Hillsdale	5,584,556	0.0259
Luce	1,959,103	0.0848	Gratiot	5,718,088	0.0250
Missaukee	3,072,443	0.0681	Barry	5,584,851	0.0247
Wexford	4,881,963	0.0679	Alpena	4,041,237	0.0246
Schoolcraft	2,211,885	0.0671	St. Joseph	6,658,775	0.0245
Cheboygan	4,269,284	0.0638	Eaton	9,734,772	0.0242
Charlevoix	4,014,489	0.0604	Cass	5,348,978	0.0241
Ontonagon	2,505,641	0.0600	Antrim	3,981,237	0.0236
Kalkaska	3,488,232	0.0559	Shiawassee	7,411,381	0.0221
Montmorency	2,341,537	0.0551	Calhoun	14,874,663	0.0219
Dickinson	4,200,251	0.0530	Tuscola	6,758,715	0.0217
Oscoda	2,323,892	0.0526	Lenawee	10,127,417	0.0212
Gladwin	3,504,444	0.0490	Midland	9,435,240	0.0207
Crawford	2,617,359	0.0484	Grand Traverse	8,171,196	0.0203
Iron	3,150,020	0.0480	Bay	10,856,417	0.0192
Manistee	4,486,572	0.0477	Jackson	13,798,465	0.0192
Emmet	4,692,075	0.0474	Ingham	24,968,914	0.0189
Menominee	4,342,674	0.0474	Clinton	7,234,641	0.0188
Gogebic	3,700,704	0.0472	Livingston	13,538,675	0.0187
Mason	4,529,023	0.0465	Van Buren	7,783,615	0.0183
Arenac	2,834,851	0.0457	Lapeer	8,306,594	0.0176
Sanilac	6,487,005	0.0446	Saginaw	18,888,426	0.0175
Oceana	4,638,909	0.0418	Allegan	9,948,123	0.0170
Mecosta	4,778,010	0.0415	Muskegon	16,294,647	0.0170
Lake	2,955,664	0.0414	Berrien	14,489,624	0.0168
Otsego	4,124,830	0.0414	Ottawa	21,025,526	0.0168
Benzie	3,013,346	0.0408	Wayne	175,245,882	0.0166
Huron	5,871,374	0.0394	Kent	55,358,966	0.0165
Clare	4,181,540	0.0388	Macomb	65,456,852	0.0163
Mackinac	2,620,719	0.0382	St. Clair	14,994,131	0.0154
Iosco	4,096,585	0.0372	Kalamazoo	22,490,863	0.0148
Newaygo	6,325,101	0.0371	Genesee	37,297,575	0.0146
Chippewa	5,924,481	0.0368	Oakland	109,265,387	0.0144
Delta	5,311,690	0.0352	Washtenaw	26,916,774	0.0143
Osceola	3,939,893	0.0347	Monroe	12,371,290	0.0131
Roscommon	3,949,397	0.0337			
Marquette	8,569,048	0.0320	Total	985,309,492	0.0189
Branch	5,499,184	0.0310			
Ogemaw	3,296,175	0.0310			
Montcalm	6,819,254	0.0302			
Presque Isle	3,114,332	0.0302			
Ionia	6,414,850	0.0293			

funding to put towards 15,000 miles of urban roadways across the state (16.5 percent of all county roads). Further, the spending of these limited dollars is not as efficient as it could be because the distribution is based on mileage, and not use factors.

Including the earmarked funds for urban counties, Wayne, Oakland, and Macomb (the three largest counties in terms of population) are ranked 73rd, 71th, and 81st, respectively, on a per capita basis. Rural counties tend to do better than the more-populated urban counties on a per capita measure. Statewide, the average per capita MTF distribution for local roads in FY2006 was \$97.60, with the highest at \$569.91 per capita (Keweenaw) and the lowest at \$73.38 per capita (Livingston).

The larger, urban counties also do not fare very well when the counties are ranked on a per mile traveled basis. The top three counties

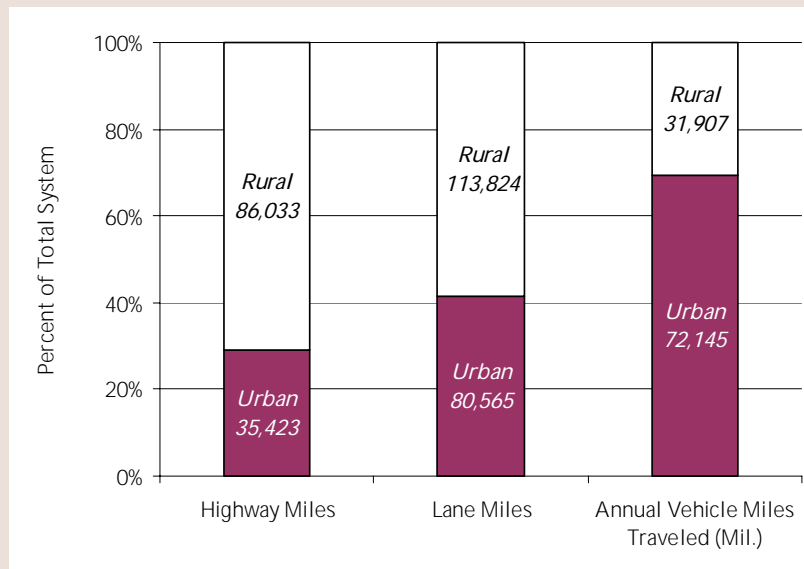
in this ordering were Keweenaw, Baraga, and Houghton. Keweenaw received more than seven times the statewide average and Baraga more than five times the statewide average of \$0.0189 per vehicle mile traveled. Again, the weighting of mileage to split up annual MTF revenues advantages sparsely populated counties with relatively less-traveled highways compared to more populated, urban counties where roads experience more use. For example, local roads in Kent, Macomb, Oakland, and Wayne Counties constitute 16.8 percent of the total local mileage (all county and municipal roads) in Michigan, but account for nearly 50 percent of the total local vehicle miles traveled in the state. On the per mile traveled ranking, these counties' MTF allocations come in at 76th, 77th, 81st, and 75th, respectively.

Chart 4 displays the split between urban and rural highways in Michigan in terms of route miles, lane

miles, and vehicle miles traveled. Nearly 70 percent of the total route miles in Michigan are located in rural areas; however, only 30 percent of the vehicle miles are in these areas. Urban areas of the state dominate in terms of the number of vehicle miles.

Donor versus Donee. Some level of subsidization will have to occur in order to facilitate uniformity across the state in terms of highway design/construction and to make travel possible in less-populated, rural areas. Such subsidization occurs when transportation dollars collected in one county are used for transportation services in another county. The current degree of subsidization in the collection and distribution of state-collected highway funds is significant. In FY2006, the largest four "donor" counties (Wayne, Oakland, Macomb, and Kent) accounted for 46 percent of the total vehicle registration taxes collected in the state; however, these counties re-

Chart 4
Michigan Highway Characteristics: Urban/Rural 2005



Source: Federal Highway Administration.

ceived 31 percent of the total MTF formula allocation to counties.² In total, the 13 “donor” counties in FY2006 accounted for 65 percent of the total vehicle registration re-

ceipts in the state, but received in return 49 percent of the total county MTF allocation. Wayne County had the largest percentage point spread between the amount

collected and amount returned as it accounted for 16.8 percent of the registration taxes collected but only received 10.3 percent of the county funds available.

Toward More Efficient Allocation of State Highway Funds

Utilization as a Factor. Injecting highway use measures into the PA 51 formulas would significantly alter the distribution of state highway revenues between the State government and local government and among individual local road agencies themselves. To date, such measures have not been used to allocate any portion of state-collected highway revenues whether the distribution is between levels of government or among individual units of local government.

State government is responsible for assuring the motoring public, as well as all Michigan citizens, that almost \$1 billion in state-generated highway tax dollars each year are being put to the best possible use at the local level. The division of state highway dollars between MDOT and local road agencies bears little resemblance to highway use at the various levels of government. Instead, the allocation percentages are more a remnant of the characteristics of Michigan’s highway system of

nearly 60 years ago. While it may have been the case that the availability of highway use data posed an obstacle to employing such metrics into the formula, today, these data are available for most road classifications.

As for the distribution of MTF dollars among individual counties and municipalities, the PA 51 formulas make it nearly impossible to address the funding needs of heavily-traveled, local roads across the state without significantly increasing the allocation of state revenues to those counties and cities/villages with less-traveled roads. Under the current formula, any increase in highway resources will result in the same percentage increase in funding for each unit of local government. Without highway use metrics in the allocation formula, public dollars will continue to be distributed in a less efficient manner.

To illustrate the distributional effects associated with injecting highway use measures into the current PA 51 formula, the Citizens Research Council of Michigan created a hypothetical allocation formula by substituting annual vehicle miles traveled (AVMT) for route mileage for both primary and local roads on the county system. All other PA 51 formula factors and weightings (e.g., vehicle registration tax collections, popula-

tion) remained the same in this simulation. **Table 3** shows the results associated with distributing county MTF funds in this manner compared to allocation via the current formula. (See **Appendix A** to review the individual county results associated with the exercise.)

While the Research Council is not recommending this specific approach, this example shows the significant fiscal effects that would accompany a wholesale substitution of miles traveled for mileage length. In total, about \$60 million would be redistributed among the 83 counties, or about 9.1 percent of the roughly \$657 million in MTF revenue available in FY2007. While this aggregate figure is relatively small compared to the total, the impacts at the individual local level would be substantial as reflected in the table.

Using Additional State Revenues to Effect Changes. Almost any change to a state revenue sharing program formula, e.g., transportation, general unrestricted, schools, etc., will result in winners and losers relative to the status quo. As noted previously, a wholesale substitution of miles traveled for route miles would be fiscally debilitating for some locals. Further, changing the distribution factors in this manner will affect the State’s ability to ensure a level of subsidization of lesser-traveled roads

² In this case, vehicle registrations are used as a surrogate measure of total MTF revenue collections by county, including fuel tax receipts and other revenue. This data is available from the Department of State, whereas fuel tax collection information is not available on a county-by-county basis.

Table 3
Effects Associated With Changing PA 51 Allocation Factors:
Miles Traveled Substituted for Route Mileage
Estimated Michigan Transportation Fund* Distributions to Counties for FY2007

	<u>“Winners”</u>	<u>“Losers”</u>
Number of counties	18	65
2006 population (within counties)	7,450,799	2,644,844
Miles traveled (within counties) - billions	24.9	8.3
Range of percentage (loss)/gain	1.4% to 26.4%	-0.9% to -46.4%
Average percentage (loss)/gain	11.7%	-25.7%

* Does not include distribution of county funds for snow removal, mileage transfers, or county engineers.

necessary to meet regional and statewide transportation needs. It is possible, however, that such changes to Michigan’s transportation revenue sharing program could be implemented in tandem with an increase in state highway user fees, and thus avoid or mitigate the revenue losses at the local level.

An increase in highway funding would provide the opportunity to effect changes in the revenue sharing program to incorporate highway use and/or need factors. One method might involve using these factors to distribute only the additional resources among local road agencies. Under this scenario

individual units would be shielded from the adverse distributional effects associated with a wholesale change of a formula factor and each unit would be ensured some portion of the new revenues. The increase provided to each county would vary based on the amount of new revenue generated and the relative utilization or need in each jurisdiction compared to all units combined. Those with more usage or greater needs would receive proportionately more of the new funding.

A recent proposal to raise the gasoline tax (9 cents per gallon over three years) and the diesel tax (13 cents per gallon over three

years), would generate an additional \$500 million each year for Michigan’s highway system after being fully phased in. Of this total, about \$195 million annually would be provided to county road commissions under the allocation formula to the State, county, and municipalities. Using the current method to distribute additional funds, each county would receive the same percentage increase (about 30 percent compared to estimated FY2007 levels). **Table 4** summarizes how county distributions would be affected by replacing mileage with miles traveled on the county road system to allocate the entire amount (\$195 million) of the new revenue among individual

Table 4
Distribution of New State–Raised Transportation Revenue:
Annual Vehicles Miles Traveled versus Route Mileage Factors
Estimated Distributions to Counties

	<u>Using Mileage</u>	<u>Using AVMT</u>
New revenue to distribute	\$195 million	\$195 million
Total re-distributed (AVMT vs. mileage)	\$0	\$18 million
Percent of total re-distributed	0%	9.3%
Average Increase (above FY2007 amount)	29.7%	24.5%
Minimum Increase	29.7%	15.9%
Maximum Increase	29.7%	37.6%
Number of counties under 29.7%		65
2006 population (within counties)		2,644,844

counties, while holding all other formula factors constant. (See **Appendix B** to view the county-by-county distributions.)

Another option involves making changes to the allocation formula to affect the distribution of both existing transportation funding as well as any new resources (\$657 million + \$195 million = \$852 million). Under this scenario, the adverse local fiscal effects associated with a wholesale substitution

of one factor (i.e., route miles) for another (i.e., miles traveled) are mitigated because of the additional funding available to allocate among counties. **Table 5** provides a summary of the results of county MTF distributions using this method (compared to FY2007 distributions of existing revenues only). (See **Appendix C** to view the county-by-county distributions.)

Minimum Funding Floor. State highway funds returned to urban

and suburban counties matched neither the volume of tax revenues generated in those counties nor their levels of transportation need, when miles traveled is used to gauge need. At the federal level, the funding inequity between “donor” and “donee” states has been a subject of significant debate during enactment of the last two federal highway bills. The current federal law (SAFTEA-LU) passed in 2005, guarantees each state a return of at least 92 percent

Table 5
Distribution of State–Raised Transportation Revenue:
Miles Traveled Substituted for Route Mileage
Estimated MTF* Distributions to Counties for FY2007

	<u>“Winners”</u>	<u>“Losers”</u>
Number of counties	41	42
2006 population (within counties)	8,835,560	1,260,083
Miles traveled (within counties) - billions	30.0	3.2
Range of percentage (loss)/gain	1.3% to 64.4%	-0.3% to -30.5%
Average percentage (loss)/gain	27.7%	-13.4%

* Does not include distribution of county funds for snow removal, mileage transfer or engineers.

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of its contribution to the Highway Trust Fund. Public Act 51, unlike federal law, does not provide a guarantee as to the minimum amount of tax dollars (either fuel taxes or vehicle registration taxes) that are collected and subsequently returned to each county. Future adjustments to Michigan's highway revenue sharing program could include the concept of a "minimum" funding floor to each local unit of government, which might continue some degree of subsidization, but not to the degree that exists today.

Future Considerations. Michigan's current model for allocating state highway funds does not directly consider measures of

need or utilization. Instead, State government relies on proxies, such as mileage, population, and vehicle registrations, to address these factors. These proxies may be sufficient for allocating resources to address preservation and routine maintenance activities when roads are receiving the proper level of upkeep; however, they fail to take into account road condition, lifespan, or travel volumes. Until highway need and use factors are incorporated into the PA 51 formulas, nearly \$1 billion of state-raised revenues will be distributed to local units of government less efficiently than they might be.

Consideration should be given to di-

recting at least a portion of new resources to areas of the state where road needs are the greatest and utilization is higher. The optimal time to effect changes in Michigan's highway revenue sharing program to incorporate these considerations would be when additional revenues are available for distribution. Implementing changes at such a time would mitigate the negative fiscal effects that would result to individual road agencies if formula changes were to occur absent new revenues. Such changes to the current formula would allow state-raised revenues to be directed to those roads across the state that experience more use without having to distribute significant additional amounts of limited resources to lesser-traveled roads.

Improving the Efficiency of Michigan's Highway Revenue Sharing Formula

Appendix A

*Effects Associated With Changing PA 51 Allocation Formulas: Estimated FY2007 Michigan Transportation Fund Distributions to Counties Substituting Miles Traveled for Route Miles
Sorted by Percent Change*

	<u>(1)</u> <u>Distribution</u> <u>Using Mileage</u>	<u>(2)</u> <u>Distribution Using</u> <u>Miles Traveled</u>	<u>(2) - (1) = (3)</u> <u>Amount of</u> <u>Change</u>	<u>(3)/(1)</u> <u>Percent</u> <u>Change</u>
Genesee	\$23,928,718	\$30,325,782	\$6,397,064	26.7%
Oakland	67,025,165	84,933,697	17,908,531	26.7%
Monroe	11,032,289	13,305,514	2,273,225	20.6%
Macomb	40,981,157	49,230,021	8,248,864	20.1%
Kent	28,701,146	34,003,180	5,302,034	18.5%
Saginaw	13,683,560	16,161,776	2,478,216	18.1%
Wayne	65,324,564	74,814,332	9,489,767	14.5%
Ottawa	16,611,589	18,882,973	2,271,385	13.7%
St. Clair	11,310,988	12,664,255	1,353,267	12.0%
Kalamazoo	13,811,369	15,000,913	1,189,544	8.6%
Livingston	13,012,562	14,128,832	1,116,270	8.6%
Berrien	11,736,818	12,554,223	817,405	7.0%
Ingham	14,404,037	14,993,921	589,884	4.1%
Washtenaw	18,811,939	19,362,261	550,322	2.9%
Muskegon	9,902,988	10,171,721	268,734	2.7%
Bay	8,199,458	8,348,279	148,821	1.8%
Eaton	8,139,897	8,280,361	140,464	1.7%
Jackson	11,478,795	11,640,485	161,690	1.4%
Grand Traverse	7,292,933	7,227,492	(65,440)	-0.9%
Van Buren	6,594,499	6,472,468	(122,031)	-1.9%
Clinton	6,470,326	6,243,335	(226,991)	-3.5%
Cass	4,798,026	4,614,694	(183,332)	-3.8%
Calhoun	8,787,325	8,310,753	(476,572)	-5.4%
Leelanau	2,882,345	2,720,544	(161,801)	-5.6%
Lapeer	7,287,537	6,821,110	(466,427)	-6.4%
Shiawassee	5,781,831	5,406,640	(375,191)	-6.5%
Midland	6,177,489	5,765,013	(412,475)	-6.7%
St. Joseph	5,193,022	4,791,699	(401,323)	-7.7%
Lenawee	7,874,837	7,211,410	(663,427)	-8.4%
Alpena	3,417,208	3,001,419	(415,790)	-12.2%
Tuscola	6,044,810	5,180,126	(864,684)	-14.3%
Gladwin	3,465,004	2,967,409	(497,595)	-14.4%
Allegan	8,913,173	7,620,494	(1,292,679)	-14.5%
Barry	5,220,689	4,342,392	(878,298)	-16.8%
Roscommon	4,162,401	3,426,526	(735,875)	-17.7%
Hillsdale	4,741,115	3,888,987	(852,127)	-18.0%
Keweenaw	1,150,738	906,809	(243,929)	-21.2%
Marquette	5,816,913	4,571,910	(1,245,004)	-21.4%

CRC Memorandum

Appendix A (continued)

	<u>(1)</u> <i>Distribution Using Mileage</i>	<u>(2)</u> <i>Distribution Using Miles Traveled</i>	<u>(2) - (1) = (3)</u> <i>Amount of Change</i>	<u>(3)/(1)</u> <i>Percent Change</i>
Osceola	\$3,328,459	\$ 2,614,588	\$ (713,872)	-21.4%
Isabella	5,241,085	4,101,442	(1,139,643)	-21.7%
Antrim	3,419,148	2,669,238	(749,909)	-21.9%
Ionia	5,010,176	3,852,735	(1,157,441)	-23.1%
Emmet	3,977,593	3,053,528	(924,065)	-23.2%
Dickinson	2,861,612	2,185,612	(676,000)	-23.6%
Otsego	3,675,371	2,790,737	(884,634)	-24.1%
Iosco	3,873,694	2,913,436	(960,257)	-24.8%
Mason	3,792,154	2,830,264	(961,889)	-25.4%
Presque Isle	2,781,891	2,073,645	(708,246)	-25.5%
Ogemaw	3,310,873	2,428,908	(881,965)	-26.6%
Delta	4,072,907	2,972,628	(1,100,279)	-27.0%
Branch	4,519,537	3,287,159	(1,232,377)	-27.3%
Benzie	2,650,403	1,927,167	(723,237)	-27.3%
Montcalm	5,832,284	4,231,233	(1,601,051)	-27.5%
Arenac	2,657,586	1,927,841	(729,745)	-27.5%
Gratiot	4,522,627	3,259,490	(1,263,137)	-27.9%
Mackinac	2,376,386	1,631,574	(744,811)	-31.3%
Mecosta	4,238,522	2,896,033	(1,342,489)	-31.7%
Gogebic	2,352,631	1,600,439	(752,192)	-32.0%
Charlevoix	3,203,937	2,172,504	(1,031,433)	-32.2%
Luce	1,689,665	1,142,141	(547,524)	-32.4%
Newaygo	5,447,580	3,672,366	(1,775,215)	-32.6%
Clare	3,799,174	2,553,597	(1,245,577)	-32.8%
Houghton	3,804,784	2,553,662	(1,251,122)	-32.9%
Chippewa	4,695,809	3,143,188	(1,552,622)	-33.1%
Alcona	2,637,734	1,757,657	(880,077)	-33.4%
Manistee	3,830,968	2,535,658	(1,295,311)	-33.8%
Schoolcraft	1,880,880	1,236,058	(644,823)	-34.3%
Wexford	3,950,367	2,545,351	(1,405,016)	-35.6%
Alger	2,010,770	1,287,688	(723,081)	-36.0%
Ontonagon	2,082,984	1,333,133	(749,851)	-36.0%
Oceana	3,809,971	2,362,563	(1,447,408)	-38.0%
Iron	2,315,668	1,427,838	(887,830)	-38.3%
Crawford	2,582,110	1,581,813	(1,000,297)	-38.7%
Montmorency	2,360,239	1,431,184	(929,055)	-39.4%
Kalkaska	3,043,394	1,818,797	(1,224,596)	-40.2%
Baraga	1,913,400	1,141,371	(772,028)	-40.3%
Huron	5,138,690	3,030,920	(2,107,770)	-41.0%
Oscoda	2,421,207	1,409,284	(1,011,922)	-41.8%
Missaukee	2,974,497	1,726,765	(1,247,732)	-41.9%
Sanilac	5,873,972	3,359,213	(2,514,759)	-42.8%
Cheboygan	3,889,374	2,213,422	(1,675,952)	-43.1%
Menominee	3,653,221	2,033,297	(1,619,924)	-44.3%
Lake	2,881,407	1,545,074	(1,336,333)	-46.4%

Improving the Efficiency of Michigan's Highway Revenue Sharing Formula

Appendix B

*Distribution of New (\$195 million) State-Raised Transportation Revenue: Estimated FY2007 Michigan Transportation Fund Distributions to Counties Substituting Miles Traveled for Route Mileage
Sorted by Percent Change*

	(1) <u>Existing Revenue Using Mileage</u>	(2) <u>New Revenue Using Mileage</u>	(2) / (1) <u>Change</u>	(3) <u>New Revenue Using Miles Traveled</u>	(3) / (1) <u>Change</u>
Genesee	\$23,928,718	\$7,106,934	29.7%	\$9,006,890	37.6%
Oakland	67,025,165	19,906,767	29.7%	25,225,679	37.6%
Monroe	11,032,289	3,276,638	29.7%	3,951,796	35.8%
Macomb	40,981,157	12,171,583	29.7%	14,621,531	35.7%
Kent	28,701,146	8,524,366	29.7%	10,099,093	35.2%
Saginaw	13,683,560	4,064,077	29.7%	4,800,118	35.1%
Wayne	65,324,564	19,401,681	29.7%	22,220,183	34.0%
Ottawa	16,611,589	4,933,714	29.7%	5,608,326	33.8%
St. Clair	11,310,988	3,359,413	29.7%	3,761,339	33.3%
Kalamazoo	13,811,369	4,102,037	29.7%	4,455,337	32.3%
Livingston	13,012,562	3,864,788	29.7%	4,196,325	32.2%
Berrien	11,736,818	3,485,886	29.7%	3,728,659	31.8%
Ingham	14,404,037	4,278,062	29.7%	4,453,260	30.9%
Washtenaw	18,811,939	5,587,228	29.7%	5,750,676	30.6%
Muskegon	9,902,988	2,941,231	29.7%	3,021,046	30.5%
Bay	8,199,458	2,435,275	29.7%	2,479,475	30.2%
Eaton	8,139,897	2,417,585	29.7%	2,459,303	30.2%
Jackson	11,478,795	3,409,252	29.7%	3,457,275	30.1%
Grand Traverse	7,292,933	2,166,033	29.7%	2,146,597	29.4%
Van Buren	6,594,499	1,958,595	29.7%	1,922,351	29.2%
Clinton	6,470,326	1,921,715	29.7%	1,854,298	28.7%
Cass	4,798,026	1,425,035	29.7%	1,370,584	28.6%
Calhoun	8,787,325	2,609,874	29.7%	2,468,330	28.1%
Leelanau	2,882,345	856,069	29.7%	808,014	28.0%
Lapeer	7,287,537	2,164,430	29.7%	2,025,899	27.8%
Shiawassee	5,781,831	1,717,229	29.7%	1,605,796	27.8%
Midland	6,177,489	1,834,741	29.7%	1,712,234	27.7%
St. Joseph	5,193,022	1,542,350	29.7%	1,423,156	27.4%
Lenawee	7,874,837	2,338,861	29.7%	2,141,820	27.2%
Alpena	3,417,208	1,014,926	29.7%	891,434	26.1%
Tuscola	6,044,810	1,795,335	29.7%	1,538,520	25.5%
Gladwin	3,465,004	1,029,121	29.7%	881,334	25.4%
Allegan	8,913,173	2,647,251	29.7%	2,263,320	25.4%
Barry	5,220,689	1,550,568	29.7%	1,289,709	24.7%
Roscommon	4,162,401	1,236,251	29.7%	1,017,693	24.4%
Hillsdale	4,741,115	1,408,132	29.7%	1,155,046	24.4%
Keweenaw	1,150,738	341,774	29.7%	269,326	23.4%
Marquette	5,816,913	1,727,649	29.7%	1,357,877	23.3%
Osceola	3,328,459	988,567	29.7%	776,544	23.3%
Isabella	5,241,085	1,556,625	29.7%	1,218,146	23.2%

CRC Memorandum

Appendix B (continued)

	(1) <i>Existing Revenue Using Mileage</i>	(2) <i>New Revenue Using Mileage</i>	(2) / (1) <i>Change</i>	(3) <i>New Revenue Using Miles Traveled</i>	(3) / (1) <i>Change</i>
Antrim	\$3,419,148	\$1,015,502	29.7%	\$ 792,775	23.2%
Ionia	5,010,176	1,488,044	29.7%	1,144,279	22.8%
Emmet	3,977,593	1,181,363	29.7%	906,911	22.8%
Dickinson	2,861,612	84,991	29.7%	649,136	22.7%
Otsego	3,675,371	1,091,601	29.7%	828,861	22.6%
Iosco	3,873,694	1,150,504	29.7%	865,303	22.3%
Mason	3,792,154	1,126,286	29.7%	840,601	22.2%
Presque Isle	2,781,891	826,234	29.7%	615,882	22.1%
Ogemaw	3,310,873	983,344	29.7%	721,396	21.8%
Delta	4,072,907	1,209,671	29.7%	882,884	21.7%
Branch	4,519,537	1,342,322	29.7%	976,301	21.6%
Benzie	2,650,403	787,181	29.7%	572,377	21.6%
Montcalm	5,832,284	1,732,214	29.7%	1,256,695	21.5%
Arenac	2,657,586	789,315	29.7%	572,577	21.5%
Gratiot	4,522,627	1,343,240	29.7%	968,083	21.4%
Mackinac	2,376,386	705,797	29.7%	484,585	20.4%
Mecosta	4,238,522	1,258,859	29.7%	860,134	20.3%
Gogebic	2,352,631	698,742	29.7%	475,337	20.2%
Charlevoix	3,203,937	951,583	29.7%	645,243	20.1%
Luce	1,689,665	501,838	29.7%	339,221	20.1%
Newaygo	5,447,580	1,617,955	29.7%	1,090,709	20.0%
Clare	3,799,174	1,128,371	29.7%	758,429	20.0%
Houghton	3,804,784	1,130,038	29.7%	758,449	19.9%
Chippewa	4,695,809	1,394,676	29.7%	933,540	19.9%
Alcona	2,637,734	783,418	29.7%	522,032	19.8%
Manistee	3,830,968	1,137,814	29.7%	753,101	19.7%
Schoolcraft	1,880,880	558,630	29.7%	367,115	19.5%
Wexford	3,950,367	1,173,276	29.7%	755,980	19.1%
Alger	2,010,770	597,207	29.7%	382,449	19.0%
Ontonagon	2,082,984	618,655	29.7%	395,946	19.0%
Oceana	3,809,971	1,131,578	29.7%	701,692	18.4%
Iron	2,315,668	687,764	29.7%	424,074	18.3%
Crawford	2,582,110	766,898	29.7%	469,805	18.2%
Montmorency	2,360,239	701,001	29.7%	425,068	18.0%
Kalkaska	3,043,394	903,901	29.7%	540,191	17.7%
Baraga	1,913,400	568,288	29.7%	338,992	17.7%
Huron	5,138,690	1,526,213	29.7%	900,197	17.5%
Oscoda	2,421,207	719,109	29.7%	418,564	17.3%
Missaukee	2,974,497	883,439	29.7%	512,857	17.2%
Sanilac	5,873,972	1,744,595	29.7%	997,701	17.0%
Cheboygan	3,889,374	1,155,161	29.7%	657,396	16.9%
Menominee	3,653,221	1,085,023	29.7%	603,898	16.5%
Lake	2,881,407	855,791	29.7%	458,894	15.9%
Total	\$656,556,000	\$195,000,000		\$195,000,000	

Improving the Efficiency of Michigan's Highway Revenue Sharing Formula

Appendix C

*Distribution of State-Raised Transportation Revenue: Estimated FY2007 Michigan Transportation Fund Distributions to Counties Substituting Miles Traveled for Route Mileage
Sorted by Percent Difference*

	(1) <u>Existing Revenue Using Mileage</u>	(2) <u>Existing and New Revenue Using Miles Traveled</u>	(2) - (1) = (3) <u>Amount of Difference</u>	(3)/(1) <u>Percent Difference</u>
Genesee	\$23,928,718	\$39,332,672	\$15,403,953	64.4%
Oakland	67,025,165	110,159,376	43,134,210	64.4%
Monroe	11,032,289	17,257,310	6,225,021	56.4%
Macomb	40,981,157	63,851,552	22,870,396	55.8%
Kent	28,701,146	44,102,274	15,401,127	53.7%
Saginaw	13,683,560	20,961,894	7,278,334	53.2%
Wayne	65,324,564	97,034,515	31,709,951	48.5%
Ottawa	16,611,589	24,491,299	7,879,710	47.4%
St. Clair	11,310,988	16,425,595	5,114,607	45.2%
Kalamazoo	13,811,369	19,456,249	5,644,881	40.9%
Livingston	13,012,562	18,325,157	5,312,595	40.8%
Berrien	11,736,818	16,282,882	4,546,064	38.7%
Ingham	14,404,037	19,447,181	5,043,145	35.0%
Washtenaw	18,811,939	25,112,938	6,300,999	33.5%
Muskegon	9,902,988	13,192,767	3,289,779	33.2%
Bay	8,199,458	10,827,755	2,628,296	32.1%
Eaton	8,139,897	10,739,664	2,599,767	31.9%
Jackson	11,478,795	15,097,760	3,618,965	31.5%
Grand Traverse	7,292,933	9,374,089	2,081,156	28.5%
Van Buren	6,594,499	8,394,819	1,800,320	27.3%
Clinton	6,470,326	8,097,633	1,627,307	25.2%
Cass	4,798,026	5,985,278	1,187,253	24.7%
Calhoun	8,787,325	10,779,082	1,991,758	22.7%
Leelanau	2,882,345	3,528,558	646,213	22.4%
Lapeer	7,287,537	8,847,009	1,559,472	21.4%
Shiawassee	5,781,831	7,012,436	1,230,604	21.3%
Midland	6,177,489	7,477,248	1,299,759	21.0%
St. Joseph	5,193,022	6,214,855	1,021,833	19.7%
Lenawee	7,874,837	9,353,231	1,478,394	18.8%
Alpena	3,417,208	3,892,853	475,645	13.9%
Tuscola	6,044,810	6,718,646	673,836	11.1%
Gladwin	3,465,004	3,848,743	383,739	11.1%
Allegan	8,913,173	9,883,814	970,641	10.9%
Barry	5,220,689	5,632,101	411,411	7.9%
Roscommon	4,162,401	4,444,219	281,818	6.8%
Hillsdale	4,741,115	5,044,034	302,919	6.4%
Keweenaw	1,150,738	1,176,135	25,397	2.2%
Marquette	5,816,913	5,929,787	112,874	1.9%
Osceola	3,328,459	3,391,132	62,672	1.9%
Isabella	5,241,085	5,319,589	78,504	1.5%
Antrim	3,419,148	3,462,013	42,866	1.3%

CRC Memorandum

Appendix C (continued)

	(1)	(2)	(2) - (1) = (3)	(3)/(1)
	<u>Existing Revenue Using Mileage</u>	<u>Existing and New Revenue Using Miles Traveled</u>	<u>Amount of Difference</u>	<u>Percent Difference</u>
Ionia	5,010,176	4,997,015	(13,162)	-0.3%
Emmet	3,977,593	3,960,439	(17,154)	-0.4%
Dickinson	2,861,612	2,834,748	(26,864)	-0.9%
Otsego	3,675,371	3,619,598	(55,773)	-1.5%
Iosco	3,873,694	3,778,739	(94,954)	-2.5%
Mason	3,792,154	3,670,865	(121,289)	-3.2%
Presque Isle	2,781,891	2,689,526	(92,365)	-3.3%
Ogemaw	3,310,873	3,150,304	(160,569)	-4.8%
Delta	4,072,907	3,855,512	(217,396)	-5.3%
Branch	4,519,537	4,263,460	(256,076)	-5.7%
Benzie	2,650,403	2,499,544	(150,860)	-5.7%
Montcalm	5,832,284	5,487,928	(344,356)	-5.9%
Arenac	2,657,586	2,500,418	(157,168)	-5.9%
Gratiot	4,522,627	4,227,573	(295,054)	-6.5%
Mackinac	2,376,386	2,116,159	(260,226)	-11.0%
Mecosta	4,238,522	3,756,167	(482,354)	-11.4%
Gogebic	2,352,631	2,075,776	(276,854)	-11.8%
Charlevoix	3,203,937	2,817,747	(386,190)	-12.1%
Luce	1,689,665	1,481,362	(208,304)	-12.3%
Newaygo	5,447,580	4,763,075	(684,506)	-12.6%
Clare	3,799,174	3,312,026	(487,147)	-12.8%
Houghton	3,804,784	3,312,111	(492,674)	-12.9%
Chippewa	4,695,809	4,076,728	(619,081)	-13.2%
Alcona	2,637,734	2,279,689	(358,045)	-13.6%
Manistee	3,830,968	3,288,759	(542,209)	-14.2%
Schoolcraft	1,880,880	1,603,172	(277,708)	-14.8%
Wexford	3,950,367	3,301,332	(649,035)	-16.4%
Alger	2,010,770	1,670,137	(340,632)	-16.9%
Ontonagon	2,082,984	1,729,079	(353,905)	-17.0%
Oceana	3,809,971	3,064,255	(745,716)	-19.6%
Iron	2,315,668	1,851,912	(463,756)	-20.0%
Crawford	2,582,110	2,051,618	(530,492)	-20.5%
Montmorency	2,360,239	1,856,251	(503,987)	-21.4%
Kalkaska	3,043,394	2,358,988	(684,405)	-22.5%
Baraga	1,913,400	1,480,364	(433,036)	-22.6%
Huron	5,138,690	3,931,117	(1,207,573)	-23.5%
Oscoda	2,421,207	1,827,848	(593,358)	-24.5%
Missaukee	2,974,497	2,239,622	(734,875)	-24.7%
Sanilac	5,873,972	4,356,914	(1,517,058)	-25.8%
Cheboygan	3,889,374	2,870,818	(1,018,556)	-26.2%
Menominee	3,653,221	2,637,196	(1,016,025)	-27.8%
Lake	2,881,407	2,003,968	(877,440)	-30.5%
Total	\$656,556,000	\$851,556,000	\$195,000,000	