# Ramping Up Mississippi's Economy Through Transportation

An MEC Blueprint Mississippi Report
December 2015



Pathway to Progress



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### Mississippi's Competitiveness is Dependent on Safe, Reliable Transportation System

In 1955, President Dwight Eisenhower submitted the Clay Committee's report to Congress. The Clay Committee, led by Ike's friend Gen. Lucius Clay, had been charged to develop a plan of action for nationwide highway improvement. The report outlined what we know today as the Eisenhower Interstate Highway System, and concluded its analysis by saying:

"...America continues to grow. Our highway plant must similarly grow if we are to maintain and increase our standard of living... In fact, we face a challenge today and America has ever evidenced its readiness to meet a challenge head on with practical bold measures..."

In 2015, Mississippi's highway infrastructure faces challenges. MEC's Blueprint Mississippi Transportation Infrastructure Task Force has spent the last year and a half meeting those challenges head on. This has allowed us to gain a true picture of what is happening, how we got there and, most importantly, what it is going to take to address this vitally important need.

Every citizen in Mississippi is impacted. Whether it's going to work or school, having goods delivered or making sure we are safe, a strong network of roads and bridges is the backbone of our well-being.



**David Gates** President, Mississippi Division Atmos Energy Mississippi Economic Council 2015 - 2016 Chair

Our state has met this challenge before. The 1987 AHEAD program built an extensive system of four-lane highways and moved Mississippi to the forefront nationally of state-owned highways. Today we face a grave problem because the cost of maintaining our system far exceeds the revenue that is dedicated to transportation. It is costing our state economically.

As president of Atmos Energy Mississippi I see this from a variety of perspectives. Our company is in the gas transportation business and we know how important it is to have a safe, well maintained and efficient system to move natural gas. We also have employees that utilize the roadways and bridges in all parts of Mississippi on a daily basis. Good roadways are important for both their safety and for our customers who depend on us. The same can be said for thousands of other Mississippi businesses as well.

MEC's mission is to build a statewide business community, and there is no better way to make sure this happens than making a strong investment in preserving our transportation system.

I want to thank Joe Sanderson, Jr., Chairman and CEO of Sanderson Farms, for the tireless work he has done as chair of this Task Force. Thanks also to those that served on the Task Force for their work to solve this issue. Mississippi is at a crossroads, but working together we can once again be a leader nationally in providing a safe and reliable transportation infrastructure to all of our citizens.

# Investment to Preserve State's Transportation Infrastructure Will Provide Future Dividends

In 1987 business leaders throughout Mississippi worked together with state elected leaders to set in motion the process of building one of the best four-lane highway systems in America. This system not only connected Mississippians to all parts of the state, it gave Mississippi an edge when it came to economic development and growth.

However, all you have to do is drive across Mississippi to understand we are on the verge of losing our edge. Even worse, the massive investment that was made in our state will be lost. Mississippi is facing billions of dollars of needs in order to preserve the transportation system so many fought so hard to build.

As chair of the Mississippi Economic Council's Blueprint Mississippi Transportation Infrastructure Task Force, I have been able to gain a better understanding of how large this problem truly is and how much greater the cost is going to be for our citizens if we fail to act. Roads across our state are beginning to crumble. Bridges aren't safe. This isn't just a problem we have with our stateowned system – it also impacts our local roads as well.

In June of 2014, the Blueprint Task Force began to take a serious look at this problem. Business leaders from across the state, as well as leaders

Joe Sanderson, Jr.
Chairman and CEO
Sanderson Farms
Blueprint Mississippi Transportation
Infrastructure Task Force Chair

from community and business organizations, volunteered their time to provide guidance and input into the process. I want to thank the members of the Task Force for their dedication and also the MEC staff for their work on this project.

With the help of research teams from the University of Southern Mississippi and Mississippi State University, as well as private consultants, we were able to look closely at what has caused this issue and we were able to determine with certainty the need that exists. The researchers also provided viable solutions to help us move forward.

Today, the cost of preserving our transportation infrastructure far exceeds the revenue that is dedicated to it. In fact, if we fail to act, all we will be able to do is manage the decline of our transportation system. We must make a commitment today. It will be far less expensive for our generation to preserve our roads and bridges now than placing this burden on our children and grandchildren.

At Sanderson Farms, we understand the importance of protecting our investment, and as a result we spend millions annually in order to ensure our facilities are just as efficient today as they were the day they were built. If we fail to do that we will lose our investment.

We must work together to find a solution in order to preserve our transportation infrastructure, and to ensure an economically secure Mississippi for future generations.

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Joe

# Why Well Maintained Roads & Bridges are Vital to Mississippi



#### **They Create Jobs**

Allow businesses to deliver products less expensively

Reduce cost of goods & services

**Encourage growth of manufacturing** 

Easier for tourists to travel to destination sites

Key factor in business site selection

#### **They Enhance Rural Mississippi**

Easier for people to commute from homes to jobs

Facilitate location of business in rural areas

Ensure people have access to health care, schools & fire protection by preserving the most direct and safest routes

Facilitate farm-to-market commerce

Reduce cost of seed, fertilizers & other agricultural products

#### **They Increase Our Safety**

Reduce frequency of accidents

Create most direct route for school buses, ambulances and other first responders

Cut down on commuting time

Provide most direct evacuation routes during emergencies

#### **They Save Money & Protect Our Investment**

Reduce our cost of operating motor vehicles by conserving fuel consumption, wear and tear, tires

Failure to address the issue now will lead to greater costs in the future

Protect our property values

## **Executive Summary**

Through extensive research, the Mississippi Economic Council's Blueprint Mississippi Transportation Infrastructure Task Force has determined it is vital that Mississippi increase its investment in state and local transportation infrastructure. The Task Force understands that an investment in transportation is needed for the following reasons: increased vehicle fuel efficiency and inflation are shrinking the purchasing power of our current revenue; an expanding number of highways, roads, and bridges in poor or deficient condition is risking the safety of our drivers and handicapping businesses with a deteriorating system of receiving and delivering goods and products; and ignoring the problem now will only lead to exponentially greater costs for maintenance and rehabilitation in the future.

Just as important, Mississippi motorists will be adversely affected by lack of action through higher costs for vehicle wear and tear, longer commuting times, and greater likelihood for accidents. Taking action now to preserve our transportation



infrastructure will generate long-term benefits for all Mississippians. As a rural state, transportation is vital to securing the economic health of our small towns and farms. Moreover, a well maintained transportation system improves safety and health, encourages growth, reduces the costs of goods and services for all businesses, though especially for our manufacturing and agricultural industries, and creates additional opportunities for tourism and leisure activities.

An investment today will pay huge dividends in the years to come by protecting our existing employment base, creating new jobs, broadening educational opportunities, and building a stable workforce. The economic development spurred by the 1987 Four-Lane Program is a prime example of the importance of making a commitment to transportation. Twenty-eight years later, though, nearly a third of the state bridges and almost half of the local bridges are in need of significant rehabilitation, with many of them unable to carry the weight they were designed to carry and potentially dangerous. In addition, 90 percent of the state highway system and 82 percent of the highways and roads owned by counties and municipalities need maintenance to keep from slipping into a critical condition.

Current funding levels are not adequate to maintain today's conditions – in fact, state and local governments cannot even maintain our roads and bridges at their current ratings, but rather they are merely managing the decline of our existing system and doing their best to slow the deterioration of our vital transportation network.

This 10-year plan outlined by the Task Force will not address all needs, but will accelerate the current plan and put Mississippi on a solid foundation for preserving our transportation infrastructure and provide meaningful long-term results.

Mississippi currently has 24,591 lane miles of state-owned highways in need of preventative maintenance, minor rehabilitation, or major rehabilitation. The estimated cost of this work is \$2.23 billion. As of June 2015, the state owns 936 bridges that are in some state of disrepair, of which 191 are posted, meaning they can no longer handle the weight and traffic they were designed to carry. The estimated amount to repair these bridges is

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### **Executive Summary** (continued)

\$2.63 billion. At the county and municipal level, the cost to repair just the 13,192 locally-owned roads and highways that are in very poor condition is \$607 million. Finally, there are 2,989 local substandard bridges, including 2,200 posted bridges that cannot carry the weight they were designed to handle. The current cost to replace these bridges is \$1.14 billion.

The recommendation of the Task Force is to focus on replacing all of the state bridges that can't carry the weight and traffic they were built to accommodate, as well as addressing the most vital pavement needs through rehabilitation and maintenance. This will allow us to catch up over the next 10 years, and develop a stable program for future needs. Meanwhile, this will enable local officials to address their most pressing transportation needs.

To help us navigate through all the data, the Task Force retained four consulting organizations with specialties in transportation: the Center for Logistics, Trade & Transportation at the University of Southern Mississippi, the Stennis Institute of Government at Mississippi State University, Cambridge Systematics in Atlanta, and the Industrial

and Systems Engineering Department and Center for Advanced Vehicular Systems at Mississippi State University.

The research teams, working closely with the Task Force Research Subcommittee, examined current needs, developed estimates of future demands on the system over the next ten years, and assessed existing revenues and current spending by MDOT and local governing authorities. Using the analysis provided by these consultants, which is outlined in the Facts & Findings section of this report, the MEC Blueprint Mississippi Transportation Infrastructure Task Force determined that \$375 million in new revenue - \$300 million for state needs and \$75 million for local needs - is required each year to respond to our immediate transportation needs.

Improving Mississippi's Transportation Infrastructure will provide economic benefits, provide savings for motorists and prevent even greater costs that would accrue to future taxpayers. For these reasons, the Blueprint Task Force believes increased funding for transportation is one of the most important investments the state could make for its citizens.



# Creating a 21st Century Infrastructure Why Mississippi Needs a Plan

In the middle of an election year in 1987, the Mississippi Legislature adopted the most farreaching transportation plan in our state's history by approving a five cents gas & diesel tax increase that ultimately helped to pay for more than 1,077 miles of four-lane highways. While today it may be hard to imagine, the only four-lane highways in the state prior to 1987 (out-side of the interstate system) were Highway 49 from Yazoo City to Gulfport, Highway 90 along the Coast, and small sections of Highway 82.

Twenty-eight years later, Mississippi can proudly point to a highway system that provides four-lane access to all parts of the state, creating new and expanded economic development opportunities and largely fueling the 259 percent increase in our state's export business over the last decade. But 28 years later, those four-lane highways, along with tens of thousands of two-lane roads and thousands of bridges are in desperate need of preventative maintenance and rehabilitation.

We have this need because of basic economics.

First is inflation. Mississippi's 18-cent gas & diesel tax has not been increased since 1987. Only five states - Alaska, New Jersey, South Carolina, Oklahoma and Missouri - have a gas & diesel tax lower than Mississippi. During that same time frame, inflation has grown by 108 percent and the cost of construction has

risen by 217 percent.

Second is demand. The number of gallons of fuel that are taxed has remained virtually the same over the last decade and a half. In 1999, there were 1.65 billion gallons of gas consumed

#### **SINCE 1987**

108% - Increase in Inflation

217% - Rise in Construction Costs

#### 1.6% - Growth in Gas Tax Revenue

in the state. Sixteen years later, that figure is only 1.2 percent higher, even though Mississippi's growth in annual miles traveled per capita exceeds the national average and has increased more than 90 percent since 1987. This phenomenon is mostly due to improvements in mileage that cars and trucks get from a gallon of fuel. In fact, the federal government will be requiring even more robust fuel mileage gains for vehicles in the years ahead. Selling more gallons of gas and diesel to generate more revenue is not in Mississippi's future.



# Creating a 21st Century Infrastructure Why Mississippi Needs a Plan (continued)

Unless we all take responsibility, and do so soon, what is in Mississippi's future is a crumbling transportation infrastructure system.

Four other circumstances compound the challenges we face in Mississippi.



First is the federal highway funding. Congress has provided stability through the Fixing America's Surface Transportation Act. Mississippi's Congressional

delegation worked to ensure a stable stream of funding for infrastructure repair. While this long-term plan provides certainty, there is no substantial increase in funding for Mississippi.



Two, even for the federal appropriation Mississippi receives, only 17 percent of the 52,000 miles of county roads and only 21 percent of the 11,000 miles of

municipal roads are eligible for federal funding. Protecting our huge network of local roads and bridges largely rests with the state and local governments.



Three, the U.S. Department of Transportation projects that Mississippi will see a 45 percent increase in freight traffic over the next two decades. Consequent-

ly, the wear and tear that large trucks impose on our highway system will only get worse. MDOT data show that 12.4 percent of all freight traffic in the country flows through Mississippi.



Four, other states are moving forward to address the need for infrastructure repair, particularly in our region. The longer Mississippi waits, the more behind

we get compared to other states, and thus less competitive.

#### What We Learned

The Mississippi Economic Council's Blueprint Mississippi Transportation Infrastructure Task Force supports a comprehensive long-term commitment to maintain our road & highway infrastructure and repair and upgrade our bridges because, quite simply, it is critical to the economic health of Mississippi. MEC's 1,200 business members have companies all over the state and the vast majority of them depend on the state's transportation system to participate in state, regional, national, and international markets. Those businesses employ tens of thousands of Mississippians, who travel to work over the same transportation system. Safety, commute times, and wear and tear on vehicles all affect their ability to retain employees and recruit new ones.

#### TOP INFRASTRUCTURE PRIORITY

80% Roadways and Bridges

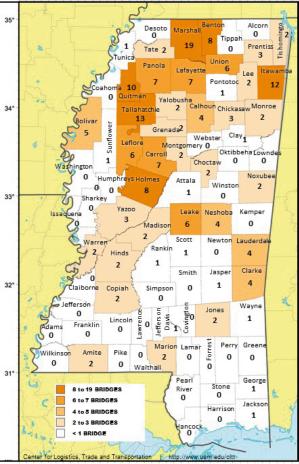
#### **MOST PRESSING CONCERN**

83% Maintenance of Existing Roadways & Bridge Repair and Replacement

\*Results from January 2015 Blueprint Mississippi Transportation Infrastructure Stakeholders Poll

Over 65 percent of the stakeholders who were surveyed as part of this MEC project believed our roads and bridges were not adequately maintained. Close to 80 percent agreed that it is extremely important to make long term investments in our infrastructure. The critical nature of the connection between the business success of our members and the transportation system was made clear when we asked them to choose among a variety of reasons to support additional investments in the state's roads and bridges. More than 75 percent of them chose "a better system for delivering

goods" as their first or second reason for supporting change. This report focuses on maintaining our existing infrastructure and repairing and upgrading our bridges because the overwhelming majority of the stakeholders we polled viewed those initiatives as the most important. In addition, MDOT data demonstrates that Mississippi's available roadway capacity is twice that of the national average.



Number of State-Owned Posted Bridges by County. A posted bridge is defined as a bridge that can no longer carry the weight or traffic it was originally designed to carry.

This report examined the more than 74,000 miles of state and local roads and highways and over 16,000 state and local bridges. We found that nearly a third of the state bridges and almost half of the local bridges were in

need of significant rehabilitation, with many of them posted and potentially dangerous. And we found that nearly 90 percent of the state highway system and 82 percent of the highways and roads owned by counties and municipalities needed either preventative maintenance or some level of rehabilitation work. Mississippi taxpayers have invested billions of dollars in building a transportation infrastructure that meets the needs of our business community. What the state must do is make an investment in keeping it in good shape. Our members recognize the value of investing now to protect the life of this vitally important capital asset, rather than let it deteriorate to the point of having to spend a significantly greater amount of money to either rehabilitate it or, even worse, to replace it. For example, preventative maintenance on a state-owned road costs about \$61,000 per lane mile while major rehabilitation costs about \$247,000 per lane mile. Most of the state highways requiring major rehab have failed to receive preventative maintenance treatments over the last decade.

The information presented in this report outlines the importance of protecting the long-term health of one of our state's most important capital assets. Moreover, it will support the work of thousands of businesses, improve the safety of hundreds of thousands of travelers, and investing now will save millions of dollars over time for taxpayers and for drivers.



# The Value of Our Transportation System How Infrastructure Maintenance Protects Rural Mississippi

Of all the states, Mississippi has the third largest number of people living in rural geographical areas. Close to 51 percent of our population lives in parts of the state classified by the U.S. Census Bureau as rural. If Mississippians are to preserve our rural areas for families and businesses, not to mention for outdoor recreation and tourism opportunities, the roads and bridges that serve this rural expanse must be maintained and protected.

Over 86 percent of the roads and 68 percent of the bridges in Mississippi are owned and maintained by local governments. Only five other states have more roads that are county owned than Mississippi. This infrastructure is the backbone of Mississippi's rural way of life. Moreover, this infrastructure connects to the Mississippi Department of Transportation (MDOT) system and moves people and goods in and out of our rural areas. Counties and municipalities no longer have the tax base to support the massive investment needed to protect this transportation system.



For people who want to enjoy a rural lifestyle, but commute to work, they have no choice but to depend on a safe and well maintained road and highway system.

Public transportation does not serve rural Mississippi, nor does for the most part rail or air or waterways. Trucks form the backbone of viable commerce in our rural areas. Bridges must be structurally sound to facilitate truck deliveries. For people who want to enjoy a rural lifestyle, but commute to work, they have no choice but to depend on a safe and well maintained road and highway system to provide them access to jobs, to transport their children to school and

back, to allow first responders to get to their houses in emergencies, and to ensure the most direct route to a clinic or hospital.



Furthermore, preserving roads and bridges in rural Mississippi ensures our agricultural economy has the ability to thrive. Whether the focus is on row crops, cattle, forest products, chicken, or catfish, the men and women in these businesses must have a well maintained and safe transportation infrastructure in order to compete regionally, nationally, and internationally. The challenges are not only getting products to markets but in providing the most cost efficient way to bring seed, fertilizer, equipment, and other raw materials to farms and businesses.

For all these reasons, Mississippi must increase its efforts to maintain local roads and bridges if the state wants to protect its rural areas and make them a priority.

## How Infrastructure Maintenance Creates Jobs

While rail, air, and waterways are important components of Mississippi's transportation infrastructure, the vast amount of raw goods and finished products that fuel our business sector move on our state and local highways and over our state and local bridges. We know from countless research questionnaires sent to business executives all over the country by any number of think tanks that the location of a business is deeply dependent on the quality of the transportation network serving that location. Of the top ten site selection factors identified by Area Development Magazine, "highway accessibility" was number two, right behind "availability of skilled labor." And in our largely rural state, good highways have much to do with providing a business with a supply of skilled labor. If a certain location doesn't afford a business a direct, and thus cost efficient, way of getting goods into the marketplace, then that business will look to locate elsewhere. If over time, the transportation system becomes degraded, then most likely a business will consider moving. In addition, if the state wants to grow small businesses in rural areas, it must provide those potential business owners with a reliable and efficient transportation network to move goods and services.

#### **TOP SITE SELECTION FACTORS**

- 1. Availability of Skilled Labor
- 2. Highway Accessibility
- 3. Labor Costs
- 4. Occupancy/Labor Construction Costs
- 5. Advanced ICT (Information and Communications Technology)

Area Development Magazine Q4/2014

To the extent that Mississippi wants to create a business climate conducive to manufacturing, it must provide those companies with safe and efficient highways on which employees can come to work, raw materials can be delivered to factories, and finished products can be transported into the marketplace.

In addition, Mississippi is jam-packed with opportunities for tourists to experience: one-of-akind hunting and fishing areas; music, civil



rights, and architectural historical sites; scenic rivers; and other destination locations. The only way to travel to these places is over our roads, highways, and bridges. For this sector of our economy to thrive, for our cultural and recreational economy to grow as job producers, these entrepreneurs must have access to a well maintained and safe transportation infrastructure.

Finally, given an annual new investment of \$375 million in bridge and pavement work, the MSU Stennis Institute of Government projects this program would generate close to 4,000 new direct and indirect jobs in the construction industry, an additional local and state tax revenue of \$15 million annually, and an overall economic benefit of more than \$440 million annually.

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## The Value of Our Transportation System (continued)

Furthermore, the Task Force asked Cambridge Systematics, the firm that conducted much of the financial and econometric calculations for this report, to estimate the impact this investment would have on Mississippi's overall economy. Their research forecasts a net growth of over 7,600 jobs in all sectors of our economy each year, and over the entire ten-year period an increase of \$7 billion in personal income and a \$5.4 billion rise in our Gross State Product. In other words, this project alone would boost our Gross State Product by more than five percent.

#### **Cost of Failing to Act**

ECONOMIC IMPACT	
Total Employment (average annual jobs)	-10,161
Gross State Product (in millions of 2014\$)	-\$7,040
Personal Income (in millions of 2014\$)	-\$10,848

#### Impact of Investment

ECONOMIC IMPACT	
Total Employment (average annual jobs)	7,673
Gross State Product (in millions of 2014\$)	\$5,404
Personal Income (in millions of 2014\$)	\$7,083

# How Infrastructure Maintenance Improves Safety

Without preventative maintenance on our roads and highways, potholes multiply, the roadbed becomes less stable, and the road surface begins to deteriorate. All of these conditions lead to more dangerous situations for the average driver. In bad weather, these kinds of challenging road conditions only intensify. Hitting a pothole or a crumbling span of roadway in the

pouring rain dramatically increases the chance of an accident. Likewise, a decaying road surface affords little traction on sharp curves or in the case of sudden braking situations.



As bridge structures weaken, roads are shut off and detours are created. This increases the response time for ambulances, fire trucks, and law enforcement personnel, not to mention depriving people of the most direct routes during times of evacuation. Detours also present challenges for school bus drivers trying to reduce the time students have to ride on buses. Today, more than 20 percent of all local bridges are posted, meaning they can no longer carry the weight they were designed to carry. The longer we wait, the easier it is for the forces of nature to wreak havoc on our bridge system and thus our way of life.

A deteriorating transportation infrastructure presents critical safety concerns not only for individual drivers on the road but also for the huge network of school district, law enforcement, fire protection, and health care workers who serve our citizens 365 days a year. It is important the state provide for them a well maintained system of highways and bridges so they can do their jobs.

# How Infrastructure Maintenance Saves Money

Taxpayers Save – without regular maintenance, Mississippi's highway and bridge infrastructure will deteriorate. There is no way of avoiding the inevitable. The constant pounding of hundreds of thousands of vehicles, the ravages of the weather, and the daily stress caused by 80,000 pound trucks will grind down the pavement, weaken the roadbed, and reduce the structural integrity of bridges. As with any physical asset,



It is cheaper to perform routine and preventative maintenance rather than wait and have to overhaul and rehabilitate the asset when it is close to failing.

it is cheaper to perform routine and preventative maintenance rather than wait and have to overhaul and rehabilitate the asset when it is close to failing. Spending \$61,000 per lane mile on state roads for preventative maintenance now, rather than \$247,000 per lane mile on major rehabilitation in a few years is one of the best bargains the state can offer Mississippi taxpayers. Unless we simply opt to allow the road and bridge system to slowly fall into disrepair, preventing that from happening will cost the current generation much less than what it will cost our future generations.

Vehicle Owners Save – rough roads impose a cost on the average driver in terms of wear and tear on vehicles and tires, the increased likelihood of accidents, and greater commuter times. The MEC Task Force retained Cambridge Systematics, an Atlanta-based research firm, to review the status of Mississippi highways and bridges and calculate the cost to vehicle owners if the system continued to deteriorate. If nothing is done to address the problem, they found that as pavement conditions worsen, the cost to the average driver would approach an additional \$640 per year over what they are paying today. On the other hand, making the investment now in our infrastructure could save Mississippi drivers an average of \$534 a year over the next ten years.

#### IF NOTHING IS DONE

The cost to the average driver would approach an additional \$640 per year

#### MAKING THE INVESTMENT NOW

Could save Mississippi drivers an average of \$534 a year over the next ten years

Property Owners Save – ultimately all of our roads and bridges allow property owners to get from point A to point B. Facilitating that access protects and enhances the value of private property. Failing to maintain the public road and bridge infrastructure will undermine the value of a person's private property.



## **Beyond Highways, Roads and Bridges**

While the focus of this report is on surface transportation, we asked a special team at Mississippi State University to survey the state's air, rail and water transport assets. The research found that comprehensive planning and far more cooperation among state and local agencies who have a stake in growing our air, rail, and water transportation system is the key to building a strong multimodal system in the state.

Mississippi is home to 11 major airports, 16 water ports, 870 miles of waterway, and more than 2,400 miles of rail served by 21 carriers. The four waterways used for commercial traffic are the Mississippi River, Tennessee-Tombigbee Waterway, Gulf of Mexico, and the Yazoo River; the rail lines are privately owned by 21 separate companies; and the major commercial airports are Jackson, Gulfport, Tupelo, Meridian, and Hattiesburg. The balance of the major airports is on military facilities. Some 5,000 trucking companies have operations in the state, ranging from one-truck owner/operators to companies with over 1,400 trucks.

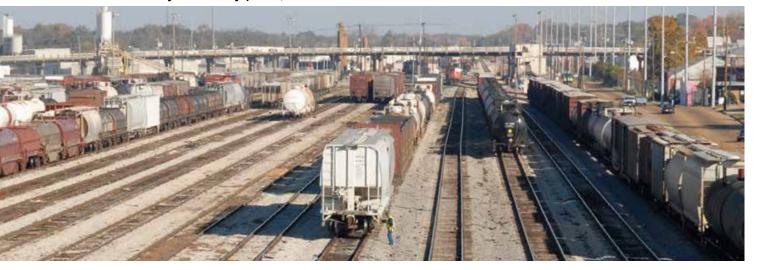
More and more, we are seeing states making strategic plans to link their highway infrastructure to key waterway ports, rail lines and



More and more states are making strategic plans to link their highway infrastructure to key waterway ports, rail lines and airports.

airports. Creating intermodal facilities that connect transportation hubs to move goods is fast becoming a major economic development initiative. The MSU report described how Virginia was capitalizing on its port and highway assets to significantly improve its position in that market.

By focusing on improvements at the state's ports, such as widening and deepening the channel at the Port of Gulfport and improving rail and roadway access, ports will be able to leverage their strengths and broaden their cargo mix. Other short-term goals should be to expand rail spur lines to the load carrying level of Class I lines in order to provide better access to intermodal facilities and ports in all areas of the state. Moreover, this would lead to greater utilization of the state's rail and waterway systems.





Intermodal transportation creates jobs in several ways. One is in the building and maintaining of the infrastructure, whether in the form of road, rail, water, and air facility construction and maintenance, including warehouse facilities and transloading facilities. The operation of these facilities creates jobs. The use of these facilities by truck, rail, water and air carriers generates local business and activities, which, in turn, generates second tiers of business activity (e.g., restaurants, convenience stores, mechanical repair shops, and fueling facilities) and labor trades (e.g., carpenters, electricians, plumbers, and roofers). Moreover, this kind of activity lifts property values.

The U.S. Department of Transportation has projected that freight traffic in Mississippi will increase by 45 percent over the next twenty years. Our state is already well positioned to take advantage of intermodal economic development opportunities because of the major waterways on three of our borders, our access to significant ports, and our location along major interstate routes. There is no reason why Mississippi should not move ahead to take advantage of the expansion of freight traffic, conduct a comprehensive plan, and devote resources to creating hubs that make connec-

tions favorable to business and industry.

As part of its report, the MSU team conducted a geospatial analysis of the state, taking into account factors such as proximity to transportation assets, population density, traffic volume, and proximity to importers and exporters. They identified several areas that should be explored as sites for future intermodal operations.



#### **Poised for Economic Development**

While there are future opportunities to increase multimodal transportation in Mississippi, existing facilities in nearby states provide an opportunity for economic development in Mississippi today. One prime example of this is in Marshall County, which is two miles south of the recently opened Norfolk Southern Intermodal Facility. Trucks carrying intermodal containers must enter the facility through Mississippi off U.S. Highway 72. The above photo shows an abundance of land for development in Mississippi, which would place distribution at the doorstep of the facility. In addition BNSF has modernized its intermodal facility in Memphis - which carries goods to and from the West Coast.

## **Putting the State on a Solid Foundation**

The MEC Blueprint Task Force has determined that in order to accelerate the process of maintaining our state's roads and bridges an investment must be made now. An additional \$375 million is needed annually to address Mississippi's most vital needs and chart a course for continued long-term preservation of our state and local transportation systems. Under this plan, 80 percent of new revenue, or \$300 million, would be focused on addressing the needs of the state-owned roadways. The other 20 percent would be split between counties and municipalities, providing an additional \$37.5 million to each annually.

Dedicating this new revenue to state and local bridge replacement and roadway maintenance

will stabilize the state's transportation system. Also by creating a system to index revenue to an inflationary measure, this plan will build the foundation necessary for the program to



Dedicating new revenue to state and local bridge replacement and roadway maintenance will stabilize the state's transportation system

continue its effectiveness long after the initial 10 years. Inflation is a cost increase for every American and it cannot be avoided. We must establish a system to readily address our future highway needs, so we will not be faced with the same shortfall once the improvements outlined in the program are complete.

# What it Means for the State-Owned System

Making this investment will protect our state's transportation system, by focusing first on the state-owned bridges in the worst condition. Under this plan, over the next decade all bridges that can no longer carry the weight they were designed to carry will be replaced, along with other vital important bridges that are deficient. Altogether, more than 60 percent of all state bridges currently listed as needing attention will be replaced or repaired during the next 10 years.

This additional investment also preserves Mississippi's state highways through preventive maintenance and tackles the 25 percent of state roadways in need of minor and major rehabilitation.

The volume of traffic our state roads handle shows the importance of making sure these highways and bridges are maintained at the highest possible level. More than 60 percent of all traffic in Mississippi is on the state-owned system, while 90 percent of all commercial traffic utilizes the state system. These are the roads that connect our rural communities to the state and the nation.

# What it Means for the Local System

This investment for the local governments will have a tremendous impact and put the state on a path toward addressing needs for local roads and bridges. While the Task Force recognizes this will not address all of the needs at the local level, it will more than double the money currently dedicated to local needs through the extremely vital programs operated by the Office of State Aid Road Construction and the Local System Bridge Program.

The projects under this new funding would be determined by officials at the local level, and the effectiveness of the program will be monitored by a strong accountability system. The infusion of new revenue, and the continuation of the State Aid program and the Local System Bridge Program would enable county and municipal leaders to address the roads and bridges that are in the worst condition.

The additional influx of dollars will prime the pump for local resources to be further targeted to address the needs at the local level as identified by county and municipal officials.

Information outlined in the facts and figures section to follow details the current needs the state, as well as counties and municipalities, are facing.



# Facts & Findings Overview

Research by the University of Southern Mississippi's Center for Logistics, Trade and Transportation determined that \$4.86 billion is required to address current and existing state-owned road and bridge needs and \$1.14 billion to address current and existing locally-owned bridge repairs. The MEC Blueprint Task Force research subcommittee worked with county and municipal officials to determine pavement needs. The analysis of data found that \$607 million is needed to repair or rebuild just the roads that are currently classified in very poor condition. Together these needs total \$6.6 billion

Today, there are 4,000 state and local bridges in need of repair or replacement. Of those, 2,400 are posted, meaning they can no longer carry the legal weight limit it was originally designed to carry, creating detours for commerce, school buses and first responders. Roadways across Mississippi are also in disrepair, as 90 percent of all state-owned roads require some type of preventive maintenance, minor rehabilitation or major rehabilitation, while 25 percent of all local roadways are in very poor condition.



The MEC Blueprint Mississippi Taskforce recommends increasing transportation revenue \$375 million annually to address state and local needs.

In addition to identifying and assessing the current infrastructure needs presented above, USM was asked as part of its charge to develop a method of examining the needs associated with state-owned roads and bridges that would allow MDOT to focus its resources on the most pressing requirements of preserving

the current transportation system into the next decade. Cambridge Systematics was asked to review USM's analysis.

The USM analysis estimated an additional \$299 million is needed annually for maintaining Mississippi's state-owned road and bridge infrastructure over a ten-year period.

USM found that for the past ten years, MDOT had spent an average annual amount of \$234 million on pavement and bridge maintenance. USM's estimated total annual cost for a 10 year plan of preventative maintenance is \$533 million, yielding the corresponding funding need of \$299 million per year.

While this increase would not fully fund all of the needs outlined in the recently released Mississippi Department of Transportation long-range plan, it would allow the process to be accelerated in the short-term and as revenue is indexed to an inflationary measure, additional resources would come available to help meet the goals of the MDOT plan.



# State-Owned Bridges & Roads by the Numbers

When Blueprint research was conducted in the summer of 2015, there were 936 deficient state bridges which would require an investment of \$2.63 billion for repair or replacement. Accounting for the direct costs and inflation, it will take an additional \$124 million annually to assure that 562 bridges that are in the poorest condition will be repaired and replaced within 10 years to meet the capacity in weight and traffic for which they were designed. The long-range goal is to assure that 98 percent of state bridges meet weight and traffic capacities within 25 years.

Deficient State Bridges	
936 Bridges*	\$2.63 Billion
*Ac of lune 001 F	

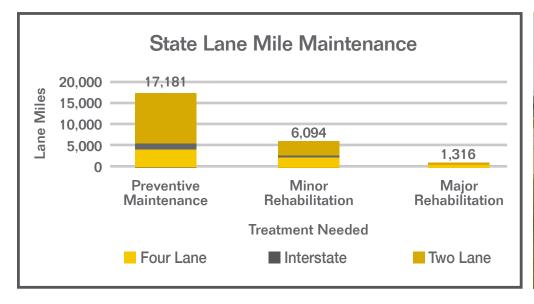
\*As of June 2015

There are also 10,889 miles of stateowned highways. Today, 90 percent of the lane miles on these highways are deficient and require work for a total estimated



cost of \$2.23 billion. Accounting for the direct costs and inflation, it will take an additional \$175 million per year to meet MDOT's goal of bringing 75 percent of these roads to good condition over 10 years.

Blueprint's funding recommendation of \$300 million for state roads and bridges achieves these goals.





## Facts & Findings (continued)

#### **County & Municipal Bridges & Roads By The Numbers**

There are 2,989 locally-owned bridges that are currently deficient and in need of repair or replacement at an estimated cost of \$1.14 billion.

#### **Deficient County Bridges**

2,716 Bridges\*

\$954.2 Million

\*As of June 2015

13,192 miles of local roads are in very poor condition and will require an estimated \$607 million for repair.

Blueprint's recommendation of an additional \$75 million a year will provide a necessary infusion of capital for helping county and municipal governments focus on these greatest needs.

But with 63,149 miles of roads and 10,833 bridges to maintain, county and munic-

ipal governments must also continue to receive the support of \$52 million from State Aid Program and \$20 million from the Local System Bridge Program.



#### **Deficient Municipal Bridges**

273 Bridges\*

\$189.6 Million

\*As of June 2015



2,814
Municipal Road Miles in Very Poor Condition

\$129.4 Million

10,378

County Road Miles in Very Poor Condition

\$477.8 Million

## **Snapshot of State and Local Pavement**

#### State Lane Mile Maintenance Need In Dollars

	Interstate	Four Lane	Two Lane	Total
Preventive Maintenance	\$75.3	\$249.7	\$733.5	\$1,058.5
Minor Rehabilitation	\$57.7	\$325.5	\$458.5	\$841.7
Major Rehabilitation	\$44.2	\$71.3	\$209.4	\$324.9
Total	\$177.2	\$646.5	\$1,401.4	\$2,225.1

There were \$2.23 billion of pavement needs on 24,591 state-owned land miles across Mississippi, as of June 2015.

In Millions of Dollars

76 percent of county roads in Mississippi were in need of some type of pavement maintenance, as of October 2015.

County Road Miles			51,891
Percentage of Total Miles			
Fair Condition	Likely to need preventative maintenance	30%	15,567
Poor Condition	Likely to need minor rehabilitation	26%	13,491
Very Poor Condition	Likely to need major rehabilitation	20%	10,378

Municipal Road Miles			11,258
Percentage of Total Miles			
Fair Condition	Likely to need preventative maintenance	24%	2,701
Poor Condition	Likely to need minor rehabilitation	27%	3.040
Very Poor Condition	Likely to need major rehabilitation	25%	2.814

76 percent of municipal roads in Mississippi were in need of some type of pavement maintenance, as of October 2015.

## **Ensuring Accountability**

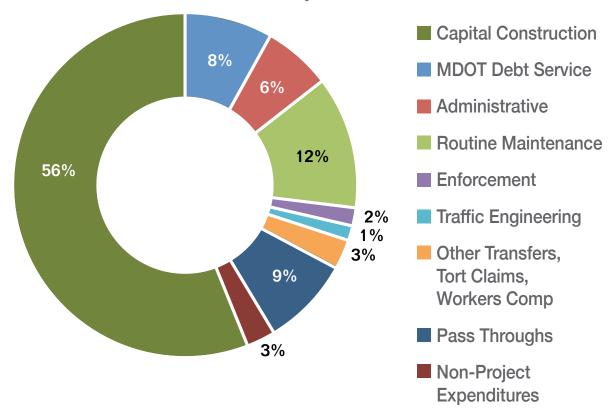
To protect the investment Mississippi taxpayers are being asked to fund through this report, a robust system of accountability becomes a vital part of ensuring the success of this long-range transportation plan.

At the state level, the Mississippi Department of Transportation currently manages a budget of almost \$950 million. Of this amount, 56 percent is dedicated to its capital construction program, which covers more than roadway preventative maintenance and bridge replacement and repair (for example, new capacity construction, intelligent transportation systems, intermodal, safety features, public transit, and bike/pedestrian expenditures).

The remaining 44 percent of the budget includes spending for debt service, routine maintenance, law enforcement, traffic engineering, state-aid road and other pass throughs and administration. A breakdown of that spending is detailed in the chart below.

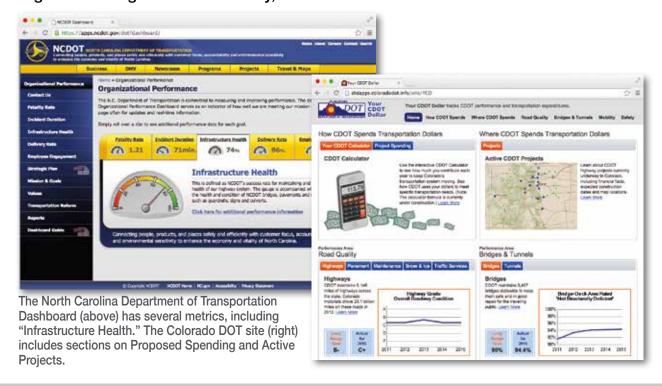
Since 2008 MDOT's administrative costs have fallen about 1.5 percent, while building and equipment costs have been reduced by almost 3 percent, according to Cambridge Systematics. Also, the most recent Reason Foundation report on the Performance of State Highway Systems ranks Mississippi 8th nationally for its efficient use of resources.

#### How are MDOT Dollars Spent?



Going forward, the Task Force believes it is vital to create an accountability system to verify that all of the new revenue, both at the state level and the local level, is being specifically dedicated to road and bridge maintenance and repair.

One option would be for MDOT to create a method of reporting selected performance measures that fall into the following broad categories: Road Safety. System Capacity, System Condition,
Department Stewardship and Environment Impact. While we anticipate that the
federal government will ultimately require
state transportation agencies to report on
performance measures, Cambridge Systematics recommends that MDOT proactively implement its own reporting system
using an online "dashboard" approach.
Below are two "dashboard" examples
used in other states.



#### **Local Accountability**

As for the local level, while projects will be selected by local officials, any new revenue allocated to county and municipal governments to fund transportation projects should be limited solely to maintenance of pavement and bridge repair or replacement and should be subject to regular audits and reporting available to the Legislature, and the general public. The reporting provided by the counties and municipalities should include a description, the total cost and the time required for completion of all projects. For pavement maintenance, the cost per mile should also be included. These metrics will allow for a comparison of the cost of preservation maintenance at the local level throughout the state.

## **Setting Goals & Priorities**

Over the last several years, leaders across Mississippi have recognized our transportation infrastructure needed attention and the current funding streams for the Mississippi Department of Transportation, our counties and our municipalities were not sufficient to adequately address the problem.

The "Facts & Findings" section of this report outlines the condition of our transportation infrastructure. This report provides an independent look at where the needs are throughout Mississippi. After consulting with our researchers, the Blueprint Task Force determined that Mississippi must increase funding for transportation by a minimum of \$375 million per year in order to preserve the major investment that has been made in Mississippi over the past 28 years.

The Blueprint Task Force recommends 80 percent of all new funding be allocated to MDOT, while the counties and munic-

ipalities would receive 10 percent each. The split was based on data that showed the state system of highways and bridges carried 60 percent of vehicular traffic and 90 percent of truck traffic, even though it constitutes only 18 percent of the state's total surface transportation system. Another key factor in our analysis was that almost 84 percent of Mississippians utilize state roads and bridges to commute to work, compared to 76 percent of workers across the country. Costs also played a factor in the recommendation. Because of the wide variety of road surfaces that can be used at the local level, the average cost for repairing local roads is less than the cost of maintenance at the state level.

The new revenue must be dedicated to preserving our transportation system. At the state level, there has to be a focus on both bridge repair and replacement. The Mississippi Department of Transportation has identified 562 bridges across the state that should be the first to be re-



# Performance Targets for State-Owned System

#### **Pavement Targets**

Interstates – 75% Good or better (Pavement condition rating of 82) Non-Interstates – 75% Fair or better (Pavement condition rating of 72)

#### **Bridge Targets**

98% not Structurally Deficient and
All posted bridges replaced

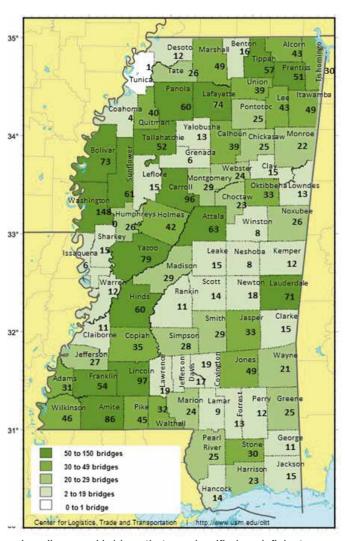
Source: Cambridge Sytematics

placed. The department has also outlined a list of pavement maintenance projects across the state, as well as projects that would be added with new revenue. As with the bridge replacement program, an increase in revenue would impact all parts of Mississippi with improved state-owned roads. With the new revenue available for maintenance the department would be able to maintain current spending for its other obligations.

On the following pages, MDOT has provided an example of the impact that a long-term transportation infrastructure plan would have. Figure 1 outlines pavement needs across the state and what could be accomplished with increased revenue. Figure 2 provides the location of bridges which could be scheduled for replacement. Figure 3 shows the new capacity plans. Figure 4 shows local deficient bridges. Figure 5 shows all state and local deficient bridges

Each of these maps was produced to provide an example of what could be accomplished with additional funding. However, the Blueprint Task Force understands that conditions beyond the control of MDOT





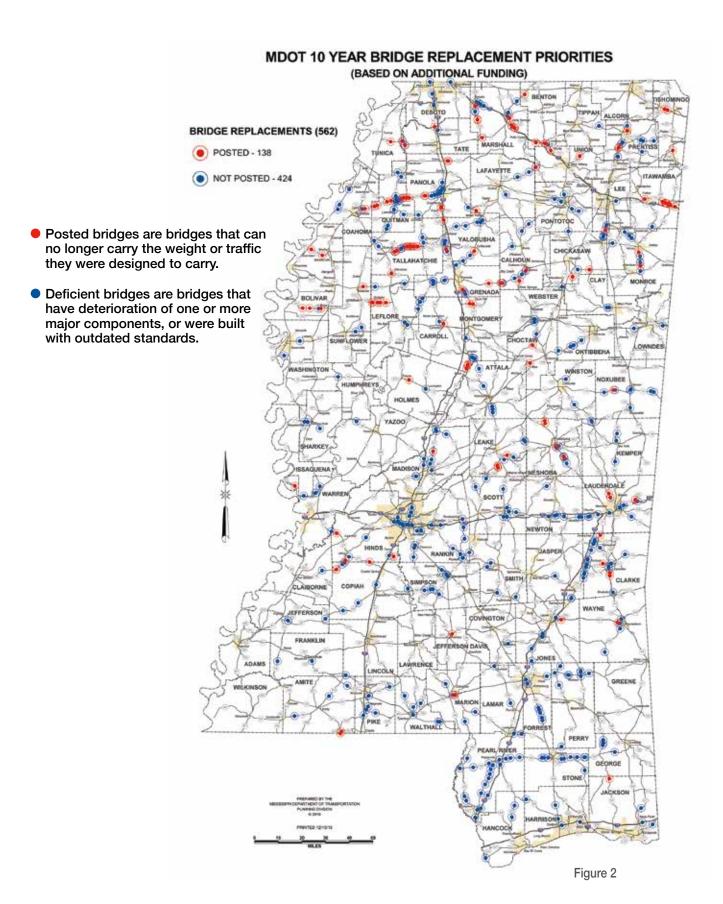
Locally-owned bridges that are classified as deficient.

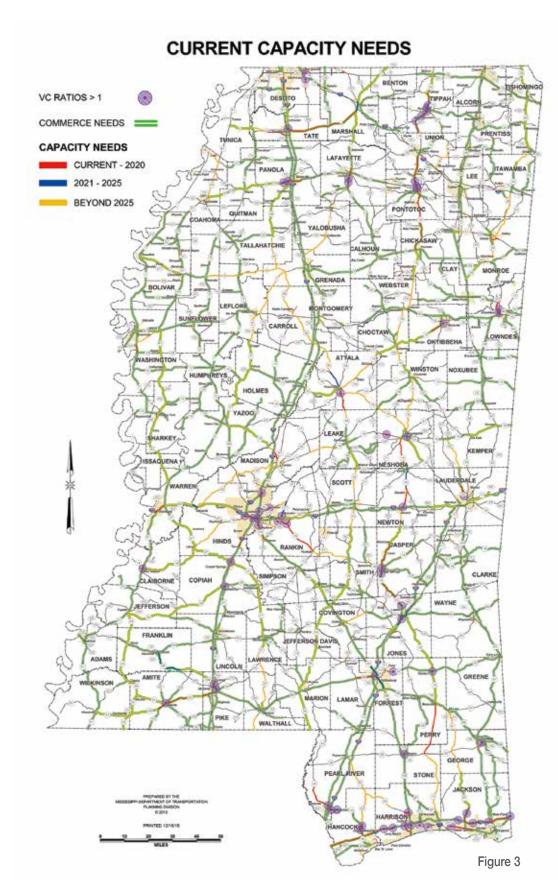
may cause some of these priorities to be adjusted over the life of the plan.

On the local level, the largest need is improving the safety of bridges. There are currently 2,716 county bridges and 273 municipal bridges that are deficient. In fact, more than 150 of those bridges are closed to traffic.

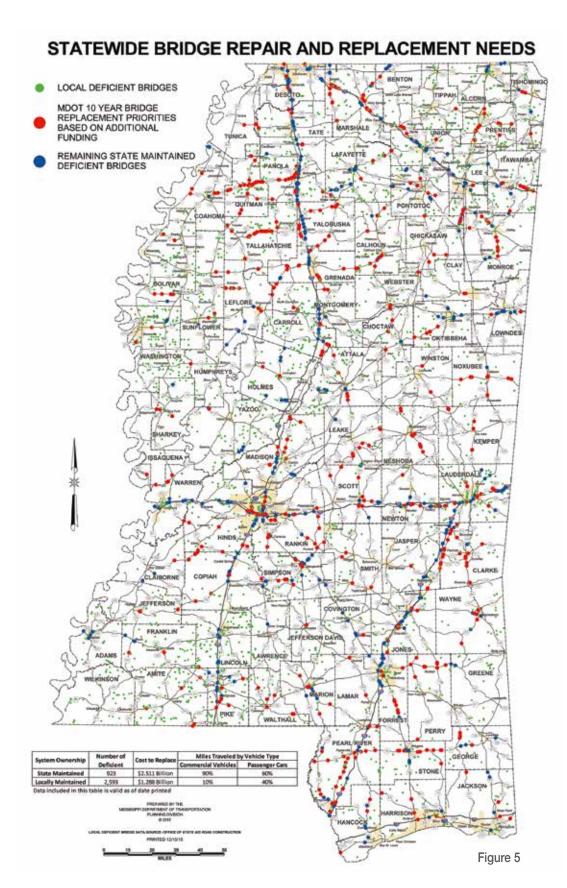
The priority for new revenue dedicated to the counties and municipalities should first focus on addressing deficient bridges.





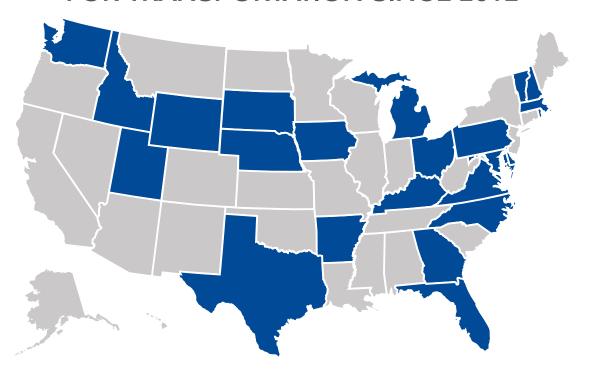


# LOCAL BRIDGE REPAIR AND REPLACEMENT NEEDS BENTON LOCAL DEFICIENT BRIDGES WEBSTER GREENE WALTHALL Cost to Replace Commercial Vehicles Miles Traveled by Vehicle Type System Ownership Deficient \$2.531 Billion \$1.288 Billion STONE State Maintained 923 Figure 4



### **Other States Taking Action**

# 23 STATES HAVE RAISED REVENUE FOR TRANSPORTATION SINCE 2012



Many states across the country are taking transportation seriously and spending the necessary money to upgrade their infrastructure and enhance their competitive status.

Since 2012, a total of 23 states – including the Blueprint states of Georgia, Kentucky, North Carolina, Texas, Florida and Arkansas – have increased a variety of taxes and fees to generate new money for bridge repair and highway maintenance. Tennessee, South Carolina, Louisiana and Alabama are other southern states actively developing new funding provisions for transportation. Recognizing that gas tax revenues have been eroded through the years by inflation and more fuel efficient vehicles, state legislatures are using a wide variety of revenue sources to fund

comprehensive highway and bridge repair and maintenance packages.

In 2015, a total of 10 state legislatures passed some type of new long-term revenue for transportation. Seven of those states increased the fuel excise, while five also increased license plate, registration or other fees.

Action by state Legislatures across the country to address transportation needs is recognition that providing repair and maintenance funding for highways and bridges is long overdue. It is important for Mississippi to make an investment in its transportation infrastructure now in order to continue to grow our state's economy, and provide safe highways and stronger bridges for our citizens.

# Revenue Options to Increase Transportation Funding

The MEC Blueprint Task Force that wrote and approved this report reviewed a full range of revenue options, developed by the MSU Stennis Institute of Government and reviewed by Cambridge Systematics.

It was the goal of the task force to put all possibilities on the table, consider the pros and cons of each and develop a consensus of the ones that would be options to raise the significant revenue necessary for addressing the short-fall that exists

today. We also recognize that others may weigh the advantages and disadvantages of these options differently, and that it is ultimately the prerogative of the Mississippi Legislature to determine which revenue options are best to tackle the vital issue of preserving Mississippi's transportation infrastructure.

Below is a list of the revenue sources that were considered, along with the amount of funds each option would generate.

#### **Increase Excise Tax on Gasoline and Diesel**

### \$21.7 Million\* for every 1 cent per gallon increase

\*In 2014 there were 1,662,377,157 taxable gallons of automotive gasoline, and 585,484,727 taxable gallons of on-highway diesel sold according to the Mississippi Department of Revenue.

The current excise tax on fuel in Mississippi is 18 cents per gallon.

#### **Vehicle Registration Fees (License Plate)**

### \$27.5 Million\* for each \$10 increase

\*There were 2,749,315 vehicles registered in Mississippi, according to the Mississippi Department of Revenue Annual Report 2014.

#### **General Sales Tax Increase (Exemption on Groceries & Medicine)**

### \$177.8 Million\* for every .05% increase

\*Research shows that every .05% increase in the general sales tax with an exemption on groceries and medicine would generate between \$158.2 million and \$197.4 million.

Once specificity regarding items to be exempt is determined, a final estimate can be given that would provide more certainty.

#### **Sales Tax on Gasoline and Diesel**

### \$23.7 Million\* for every .05% added

\*Amount based on September 2015 price of gasoline at \$2.07 per gallon and price of diesel at \$2.35. The year-over-year revenue from a sales tax on gasoline and diesel would likely not be consistent due to the fluctuation in fuel prices. Currently Mississippi does not have a sales tax on fuel.

#### **Special Fees on Alternative Fuel Vehicles**

\$0-\$17,200\*

\*Study found only .05% of vehicles in Mississippi use alternative fuels and of those 85% are fueled by E85 (85 percent ethanol) that are taxed at an 18 cents equivalent. Therefore revenue from fees on alternative vehicles would be relatively insignificant. There are only 172 vehicles in the state (all of which are electric vehicles) which are not taxed at a rate equivalent to the fuel excise tax. If a \$100 fee (the average fee in other states) was placed on those vehicles it would only generate \$17,200 in revenue.

#### **Vehicle-Miles Traveled**

#### **Unknown**

While the concept of vehicle-miles traveled has generated interest in some parts of the country, there is no definitive system in place for collecting such a fee. Vehicle-miles traveled fees are typically a fixed number of cents per-mile based on the number of miles driven. Statewide VMT tends to vary with economic cycles but are generally reliable. The system of collection of the fees is substantially more expensive than fuel tax collections and would require substantial new technology.

#### **Rental Car Fees**

### \$2.5 Million\* per 2% Excise Tax Increase

\*The current 6 percent rental excise tax in Mississippi generates approximately \$7 million annually. Rental excise tax receipts can vary with economic conditions since the tax is heavily dependent on business and tourism travel.

# Revenue Options to Increase Transportation Funding (continued)

#### **Tolls (Public-Private Partnerships)**

\$0\*

\*While toll roads make up significant revenue in some states, there are no toll roads in Mississippi. State statute does allow MDOT, counties and municipalities to build toll roads and bridges and to use public-private partnerships to finance, construct, operate or maintain them.

#### **Other Revenue Options**

In addition to the options listed above, there were several other items that were explored, however none of those would raise significant revenue without increasing those fees by large amounts. Among those were state taxes on aviation fuel, drivers license fees, vehicle title fees, public transit fees, tire disposal tax, and vanity license plate fees.

#### **Indexing Excise Tax on Automotive Gasoline and Diesel**

Inflation has significantly eroded the purchasing power of revenues from Mississippi's 18-cent excise tax on fuel. Since 1987 there has been only a 1.6 percent increase in taxable gallons sold, while at the same time inflation has increased 108 percent and construction costs have risen 217 percent. Indexing fuel taxes to a key inflationary measure would provide a stable source of funding for the years ahead.

The majority of the options listed above focus on collecting the new revenue from the people who use our surface transportation system (including those from out-of-state). If this approach is selected the drivers who use the system the most would pay the most, and the average increase for all Mississippi drivers affected by this program would be 37 cents a day.

This amount is more than offset by the savings vehicle owners will reap through safer roads and bridges, less wear and tear, and shorter commute times. In fact, as we pointed out earlier in the report, Cambridge Systematics found that if nothing was done to address the prob-

lem, as pavement conditions worsened, the cost to the average driver would approach an additional \$640 per year more than they are paying today. On the other hand, making the investment over the next 10 years could save Mississippi drivers an average of \$534. In other words, making an investment of 37 cents per day now would yield savings of at least four times that amount in fewer travel delays and less wear and tear on vehicles.

And there are additional savings that we would all accrue by not postponing this work into the future, when the costs would become considerably more expensive.

## How the Study was Conducted

The MEC Blueprint Task Force was formed in June 2014 to study all aspects surrounding Mississippi's transportation infrastructure. Through a grant from the Robert M. Hearin Foundation, funding was provided for researchers at the University of Southern Mississippi's Center for Logistics, Trade and Transportation, Mississippi State University's Stennis Institute of Government, and MSU's Industrial & Systems Engineering Department and the Center for Advanced Vehicular Systems. Also a research sub-committee of the Blueprint Task Force was formed to oversee the research teams. Cambridge Systematics was brought in as an outside consultant to analyze all data provided from the research teams, as well as provide an analysis of the Mississippi Department of Transportation's 2040 Multiyear Plan. The source of the information provided in this report came from the following documents.

## Sources and References and Consultants

Investing in the Transportation Infrastructure that Mississippians Deserve and Critically Need to Create Better Educational and Job Opportunities

**Center for Logistics, Trade and Transportation** 

University of Southern Mississippi Hattiesburg, Mississippi

An Overview of Highway Transportation, Governance and Financing in Mississippi

Stennis Institute of Government Mississippi State University Starkville, Mississippi

Intermodal Transportation in Mississippi: A Needs and Priorities Assessment

Industrial & Systems
Engineering Department
Center for Advanced Vehicular Systems
Mississippi State University
Starkville, Mississippi

Closing the Gap on Mississippi's Highway Needs

Cambridge Systematics, Inc. Atlanta, Georgia

Local Roads and Bridges

MEC Blueprint Mississippi Transportation Infrastructure Task Force Research Sub-Committee

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Derrick Surrette, Executive Director, Mississippi Association of Supervisors

Shari Veazey, Executive Director, Mississippi Municipal League

Charlie Williams, Government Relations, Butler Snow, LLP, T1 Coalition

Blake Wilson, President/CEO, Mississippi Economic Council

The MEC Blueprint Task Force appreciates the input provided by Community Resource Members listed here, and notes that their participation does not necessarily represent their opinion or their organization's endorsement of the program.

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#### **About MEC**

The Mississippi Economic Council has been the voice of Mississippi business since 1949. MEC deals with broad business issues through advocacy, research, resources and leadership. MEC has more than 11,000 members from 1,200 member firms in 2,400 locations throughout Mississippi.

MEC still continues to follow its founding principles of:

MEC pulls together coalitions to make overall statewide progress.

MEC focuses on fairness and equality.

MEC is building a base of involvement to have a united business front.



#### **About Blueprint Mississippi**

Blueprint Mississippi is MEC's long-range economic development plan for Mississippi. The strategic action plan looks at how Mississippi compares with the 12 Blueprint States (Alabama, Arkansas, Florida, Georgia, Louisiana, Kentucky, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee and Texas) and how the state can better position itself for progress. It was updated in 2011, and is now being implemented across the state based on the Blueprint Goals.

The goals for Blueprint Mississippi are:

Improve Communication and Coordination among Public, Private and Non-profit Leaders Support Mississippi's Creative Economy

Cultivate Diversity, Community Cooperation and Racial Reconciliation

Strengthen and Expand Mississippi's Economy

Increase the Educational Achievement Level of Mississippians

Increase Availability of Financial Capital

Promote Health Care as an Economic Driver

Continually Develop the Infrastructure for a Competitive Economy and

Cultivate a More Robust Workforce in Mississippi

Second release: December 21, 2015

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