

Tracker

MEASURES OF DEPARTMENTAL PERFORMANCE



MoDOT Missouri Department of Transportation



Roberta Broeker, CPA **MoDOT Interim Director**

Mission

Our mission is to provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri.

Greetings from MoDOT

Last guarter, the Missouri Department of Transportation celebrated its commitment to quality by recognizing the 10th anniversary of this very document. For 10 years, Tracker has served as our record of the tangible results that guide our work and our efforts to achieve them.

A decade ago, MoDOT tracked more than 100 performance measures for 18 tangible results. Over the years, we've narrowed our focus to just seven tangible results and 59 performance measures that cover MoDOT's core functions.

A number of measures have been tracked for the entire 10 years. Two of them are particularly meaningful: customer satisfaction and percentage of roads in good condition. In 2005, 67 percent of Mo-DOT's customers were satisfied with the department. That number has climbed to 85 percent, a record high. Road conditions have improved too. Major roads have gone from 60 percent in good condition in 2005 to 89 percent in good condition now.

Those are just two examples that demonstrate the value of Tracker. It is the way we hold ourselves accountable to Missourians and each other. It demonstrates our commitment to being fully transparent and accountable in the department's business of preserving and managing the state's transportation system.

While we will hold to that commitment in the future, we also face insufficient transportation funding that will affect MoDOT's ability to deliver what Missourians expect from their transportation system. Without additional funding, by 2017 MoDOT will be able to maintain only 8,000 miles of Missouri highways in their current condition. The remaining 26,000 miles will see only limited routine maintenance and will deteriorate.

If that happens, it won't be long before Missourians begin to see their transportation options wither as we do less and less to promote commerce, economic stability, job growth and safety. Tracker will remain important, but meeting our customers' expectations will become ever more challenging as Missouri's transportation funding drops.

Tracker is published quarterly to ensure MoDOT's accountability and to allow you to see how we measure up. It is available in print and on our website, at www.modot.org. Please take some time to look it over and let us know how we are doing.

Sincerely,

Roberto Brocker Missouri Department of Transportation

TANGIBLE RESULTS

- Keep Customers and Ourselves Safe
- Keep Roads and Bridges in Good Condition
- Provide Outstanding Customer Service
- Deliver Transportation Solutions of Great Value
- Operate a Reliable and Convenient

Transportation System

- Use Resources Wisely
- Advance Economic Development

VALUE STATEMENTS

Live MoDOT Values -

- Be Safe,
- Be Accountable,
- Be Respectful,
- Be Inclusive,
- Be Bold,
- Be Better, and
- Be One Team

So we can be a great organization.

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KEEP CUSTOMERS AND OURSELVES SAFE Eileen Rackers, State Traffic and Highway Safety Engineer

MEASURES OF DEPARTMENTAL PERFORMANCE

Safety is a daily commitment for all MoDOT employees. From design and construction to operations and maintenance of the state transportation system, the safety of our customers, partners, and employees is our top priority. We work with our safety partners to promote safe behavior for all users and modes of transportation so everyone goes home safe every day.

Eileen Rackers, State Traffic and Highway Safety Engineer

MEASUREMENT DRIVER:

Bill Whitfield, Highway Safety Director

PURPOSE OF THE MEASURE:

The fatal and serious injury number measures track quarterly, annual and fiveyear average trends resulting from traffic crashes on all Missouri roadways. The rate of fatal and serious injury charts display annual and five-year average fatality and injury rates per 100 million vehicle miles traveled for these same crashes. In addition, the fatality rate chart includes the national average.

MEASUREMENT AND DATA COLLECTION:

Missouri law enforcement agencies submit a vehicle accident report form to the Missouri State Highway Patrol to enter them into a statewide traffic crash database. The database automatically updates MoDOT's crash database system, which is part of the Transportation Management System.

KEEP CUSTOMERS AND OURSELVES SAFE

Keeping travelers safe is one of MoDOT's highest priorities. Fatalities and serious injuries have experienced a significant decline of 40 percent since 2005. The decrease is due to safety improvements on Missouri roadways, focused enforcement efforts and educational campaigns that have kept these issues in front of motorists. When compared to the previous year, the 2014 traffic fatality count increased by 1.20 percent to a total of 767.

Percent unbuckled – 2010 (68 percent); 2011 (69 percent); 2012 (71 percent); 2013 (64 percent); 2014 (67 percent) year to date.

The 2013 fatality rate per 100 million miles traveled fell to the lowest rate on record to 1.09. In 2013, the national fatality rate per 100 million miles traveled was 1.10. Serious injury data for 2014 reflects a continued downward trend for both the number and five-year average of serious injuries for the ninth straight year.

As funding levels decline, MoDOT will be challenged to deliver system-wide safety improvements.

MAP-21

*YTD 2015 – First quarter fatalities were derived from MSHP radio reports.

The rate of fatalities' chart displays annual and five-year average fatality rates per 100 million vehicle miles traveled for crashes. In addition, the fatality rate chart includes the national average.

*2014 - Due to a backlog of crash reports into STARS, the serious injury measure will only illustrate data derived from TMS. First quarter 2015 data is unavailable through the MSHP radio reports.

The rate of serious injuries' chart displays annual and five-year average injury rates per 100 million vehicle miles traveled for these same crashes.

Eileen Rackers, State Traffic and Highway Safety Engineer

MEASUREMENT DRIVER:

Bill Whitfield, Highway Safety Director

PURPOSE OF THE MEASURE:

The vulnerable roadway user measure tracks annual trends in fatalities and serious injuries of motorcyclists, pedestrians and bicyclists. These roadway users are most at risk for death or serious injury when involved in a motor-vehicle-related crash.

MEASUREMENT AND DATA COLLECTION:

Data is collected by law enforcement and entered into the State Traffic Accident Record System managed by the Missouri State Highway Patrol. The record system automatically updates MoDOT's Traffic Management System.

KEEP CUSTOMERS AND OURSELVES SAFE

Number of vulnerable roadway user fatalities and serious injuries-1b

In 2013, vulnerable roadway users were 20 percent of the total number of fatalities. Motorcycle, pedestrian, and bicycle fatalities all decreased in 2013 by 29 percent, 13 percent, and 33 percent respectively. Motorcycle fatalities in 2013 were the lowest since 2004.

Serious injury data for 2014 are still incomplete. Motorcycle and bicycle serious injuries are showing a downward trend while pedestrian serious injuries appear to have increased from 2012 to 2013.

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Eileen Rackers, State Traffic and Highway Safety Engineer

MEASUREMENT DRIVER:

Mike Curtit, Traffic Liaison Engineer

PURPOSE OF THE MEASURE:

This measure tracks annual trends in motor vehicle related fatal and serious injuries resulting from some of the most common contributing factors or highway features. This data represents six of the top focus areas presented in Missouri's Blueprint to Save More Lives.

MEASUREMENT AND DATA COLLECTION:

Missouri law enforcement agencies submit a vehicle crash report form to the Missouri State Highway Patrol to enter them into a statewide traffic crash database. MoDOT staff query and analyze this data to determine the number of unrestrained occupants in crashes, how often aggressive driving, alcohol and other drugs contribute to crashes, and whether or not the vehicles ran off the road, or the crash occurred at an intersection or within a curve.

KEEP CUSTOMERS AND OURSELVES SAFE

Number of fatalities and serious injuries resulting from the most frequent crash causes-1c

Recording and monitoring crash data is an important part of improving safety for Missouri drivers. But without looking at the causes of these incidents, the data is nothing but numbers. Looking for the reasons why an incident occurs is MoDOT's best approach to address the problem. With that approach, the department finds the most frequent causes continue to be a mix of engineering and behavioral issues.

The general trend for both fatalities and serious injuries has declined for the last five years. Comparing the number of fatalities in 2012 to 2013 shows the following results: 16 percent reduction in unrestrained occupants, 9 percent reduction in run-off-road, 8 percent reduction in aggressive driving, 2 percent reduction in alcohol and/or other drugs, 6 percent reduction in curve related, and 26 percent reduction in intersection related. Comparing the number of serious injuries in 2012 to 2013 shows the following results: 14 percent reduction in unrestrained occupants, 13 percent reduction in run-off-road, 8 percent reduction in aggressive driving, 14 percent reduction in alcohol and/or other drugs, 16 percent reduction in curve related, and 4 percent reduction in intersection related. The safety improvements included in the Smooth Roads Initiative and Better Roads, Brighter Future programs began the downward trends in fatalities and serious injuries. With both of these programs complete and without additional resources to invest in additional system-wide safety measures, the downward trends for each of these causes will be difficult to maintain. Significant improvements to increase safety will not be possible with diminishing funding levels predicted in the next few years. The primary current initiatives include adding shoulders and rumble strips to minor roads and striping all major roads prior to Memorial Day. While driver behavior is difficult to correct, MoDOT continues to focus on using funds to target locations and behaviors based on crash data analysis.

Eileen Rackers, State Traffic and Highway Safety Engineer

MEASUREMENT DRIVER:

Julie Stotlemeyer, Traffic Liaison Engineer

PURPOSE OF THE MEASURE:

An important factor in evaluating the safety of Missouri's transportation system includes the safety of work zones on the state's roadway system. This measure tracks the number of traffic-related and non-traffic related fatalities, injuries and overall crashes occurring in work zones on state-owned roadways.

MEASUREMENT AND DATA COLLECTION:

Missouri law enforcement agencies submit a vehicle accident report form to the Missouri State Highway Patrol to enter them into a statewide traffic crash database. MoDOT staff query and analyze this data to identify work zone related crash statistics. MSHP prioritizes entry of the crash reports by fatality, serious injury, minor injury and then property damage only. Currently MSHP is entering minor injury and property damage only crash reports for September 2014. Therefore, the numbers for these types of crashes will continue to change for calendar years 2014 and 2015.

KEEP CUSTOMERS AND OURSELVES SAFE

Number of fatalities and serious injuries in work zones-1d

Work zone safety is at the center of MoDOT's safety culture. It is a driving force in all maintenance and construction work. Just as MoDOT expects its crews to be safe and visible, it also expects contractors and uility companies to provide safe work zones and visible workers. This is demonstrated by the partnership MoDOT has with contractors and utility companies using the same personal protection equipment it uses. Staying safe in work zones is also a partnership the department shares with the driving public. MoDOT wants everyone to get home safely. While MoDOT makes every effort to work safely, we are counting on motorists to pay attention, buckle up and drive without distractions.

For crash reports entered to date for calendar year 2014, seven people were killed in Missouri work zones and never made it home to their families. Three of those killed were not buckled. Forty-two people have been seriously injured, more than the previous year. More serious injuries occurred every time a lane was closed in 2014 than 2013. From information currently available for first quarter calendar year 2015, zero fatalities have occurred in Missouri work zones.

*YTD 2015 – First quarter fatalities derived from MSHP radio reports.

*2014 – Due to a backlog of crash reports into STARS, the serious, minor injury and work zone crash measures will only illustrate data derived from TMS. First quarter 2015 data is unavailable through the MSHP radio reports.

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Eileen Rackers, State Traffic and Highway Safety Engineer

MEASUREMENT DRIVER:

Bill Whitfield, Highway Safety Director

PURPOSE OF THE MEASURE:

This measure tracks annual trends in safety belt use in passenger vehicles. This data drives the development and focus of the Missouri Highway Safety Plan, which is required annually by the National Highway Traffic Safety Administration. In addition, this data supports Missouri's Blueprint to Save More Lives that identifies the statewide initiatives with a goal of reducing fatalities to 700 or fewer by 2016.

MEASUREMENT AND DATA COLLECTION:

Each June, a statewide survey is conducted at 560 pre-selected locations in 28 counties. The data collected is calculated into a safety belt usage rate using a formula approved by the National Highway Traffic Safety Administration. The safety belt usage survey collects data from locations representing 85 percent of the state's vehicle occupant fatalities. The data collection plan is the same each year for consistency and compliance with National Highway Traffic Safety Administration guidelines.

KEEP CUSTOMERS AND OURSELVES SAFE

Percent of safety belt/passenger vehicle restraint use-1e

Safety belts save lives. But getting people to use them – even to protect their own lives – is a challenge. Public education is one way to keep the issue in front of motorists. Legislation is another. MoDOT supports both approaches, attacking the problem with focused marketing campaigns and reinforcing it with hard facts to back legislative efforts. Several municipalities across the state are taking matters into their own hands enacting primary ordinances within city limits. Missouri currently has 44 communities with a primary safety belt ordinance representing 21.6 percent of the state's population.

Safety belt use in Missouri for 2014 was 79 percent. The national average for safety belt use in 2013 was 87 percent. Missouri's national ranking is currently 41st. Only nine states rank lower in safety belt use than Missouri.

Missouri's safety belt use has plateaued. The number of states with a primary safety belt use law, result in a higher rate of use for those states. States that have a secondary law continue to fall down the list in the national rankings.

Eileen Rackers, State Traffic and Highway Safety Engineer

MEASUREMENT DRIVER:

Mark Biesemeyer, Motor Carrier Services Program Manager

PURPOSE OF THE MEASURE:

This measure tracks the number of Commercial Motor Vehicles involved in fatal and serious injury crashes each year. MoDOT uses the information to target educational, enforcement and improvement of safety feature efforts.

MEASUREMENT AND DATA COLLECTION:

Missouri law enforcement agencies submit a vehicle accident report form to the Missouri State Highway Patrol to enter them into a statewide traffic crash database. The measure reports the number of CMVs involved in crashes in which one or more people are seriously injured or die as a result of the crash. Preliminary results for the current year are reported quarterly.

KEEP CUSTOMERS AND OURSELVES SAFE

Number of commercial motor vehicle crashes resulting in fatalities and serious injuries-1f

Commercial Motor Vehicles are the lifeblood of our economy. They transport the goods and materials that keep the nation moving. Partnering with the Missouri State Highway Patrol and St. Louis and Kansas City police departments, MoDOT does everything in its power to keep CMV drivers safe and their vehicles on the road. By tracking the number of CMV crashes resulting in fatalities and serious injuries, the department can target educational and enforcement efforts, and also improve safety features such as highway signs, reflective pavement markings, guard cables, rumble strips and incident management alert signs.

These efforts are making a difference in the number of fatality and serious injury crashes. Between 2011 and 2014, fatal crashes involving a CMV decreased by 7.4 percent. However, the number of fatal crashes reported for 2014 is 99, which is 17 more than reported for 2013, or a 20.7 percent increase.

Between 2011 and 2014, CMV serious injury crashes decreased by 21.9 percent. The number of serious injury crashes reported for 2014 is 271, which is 44 less than reported for 2013, or a decrease of 13.9 percent. However, diminished funding may hamper the department's ability to make significant safety improvements in the future.

*2014 - Due to a backlog of crash reports into STARS, the fatality and serious injury measures for the fourth quarter of 2014 will only illustrate data derived from TMS.

Eileen Rackers, State Traffic and Highway Safety Engineer

MEASUREMENT DRIVER:

Roberta Jacobson, Claims Administration Manager

PURPOSE OF THE MEASURE:

This measure tracks the actual number of days employees cannot work due to work-related injuries.

MEASUREMENT AND DATA COLLECTION:

The data is collected from Riskmaster, the department's risk management claims administration software.

KEEP CUSTOMERS AND OURSELVES SAFE

Number of lost workdays-1g

The impact of work-related injuries cannot be underestimated. Employees injured at work not only affect the department, but can disrupt the personal lives of MoDOT employees and their families. Measuring lost workdays shows more than a number on a chart. These are people whose lives can be changed by a split second of inattention or poor preparation. Watching this number fall over the years, shows that something is going right.

For the first quarter of 2015, the total number of lost workdays decreased 33 percent from the same time period in 2014. There were three incidents in which employees were lifting MoDOT equipment or materials, accounting for 40 percent of the lost workdays. Another 11 percent of the lost workdays were attributable to two incidents involving slips, trips or falls, half of which were due to snow or ice conditions. One incident involving a third party accounted for 10 percent of the lost workdays, and 7 percent of the lost work-days were due to weed or brush cutting activities.

Employees are paying attention. They are wearing proper safety gear and taking proper precautions before engaging in a safety-sensitive task. The drop in this number is more than a statistic. It means more people are going home safe.

Missouri Department of Transportation 1g

Eileen Rackers, State Traffic and Highway Safety Engineer

MEASUREMENT DRIVER:

Jeff Padgett, Risk and Benefits Management Director

PURPOSE OF THE MEASURE:

This measure tracks the number of recordable injuries, in total and as a rate of injuries per 100 workers.

MEASUREMENT AND DATA COLLECTION:

The calculation for incidence rate is the number of recordables times 200,000 divided by the number of hours worked. The 200,000 used in the calculation is the base for 100 full-time workers (working 40 hours per week, 50 weeks per year). MoDOT defines a recordable incident as a workrelated injury or illness that results in death, days away from work or medical treatment resulting in cost to the department. The injury data is collected from Riskmaster, the department's risk management claims administration software. The number of hours worked is taken from MoDOT's payroll data.

KEEP CUSTOMERS AND OURSELVES SAFE

Total and rate of MoDOT recordable incidents-1h

MoDOT is dedicated to employee safety. Getting home safely is a responsibility every employee shares. To reinforce this value, the "Safety Begins with Me" program was launched in 2013 to remind all employees that safety is a personal responsibility.

Both the number of recordable incidents and the rate of recordable incidents have decreased for the first quarter of 2015 compared to the same time period in 2014. Leading causes of incidents during this reporting period were: slips, trips and falls at 25 percent; struck or injured at 15 percent; motor vehicle and cut/puncture at 13 percent each. When looking at the work activity the employee was doing at the time of the incident, 29 percent of these injuries were equipment related. Another 16 percent were snow/ice related, and 16 percent were related to brush cutting activities.

*Private Industry Construction category data, from the OSHA website, are not yet available for 2014.

Eileen Rackers, State Traffic and Highway Safety Engineer

MEASUREMENT DRIVER:

Steve Patterson, Safety and Claims Manager

PURPOSE OF THE MEASURE:

This measure tracks the number of general liability claims filed and amount paid.

MEASUREMENT AND DATA COLLECTION:

General liability claims arise from allegations of injuries/damages caused by the dangerous condition of MoDOT property and the injury/damage that directly resulted from the dangerous condition. In addition, an employee must be negligent and create the dangerous condition or MoDOT must have actual or constructive notice of the dangerous condition in sufficient time prior to the injury/damage to have taken measures to protect the public against the dangerous condition. Claims data is collected from Riskmaster, the department's risk management claims administration software.

KEEP CUSTOMERS AND OURSELVES SAFE

General liability claims and costs-1i

Keeping ourselves and the public safe is MoDOT's top priority. Controlling damage to vehicles and reducing personal injury in work zones, right of way and other areas under department control helps MoDOT accomplish this goal. Compared to the first quarter 2014, there was a decrease of 11 percent in the number of claims. The majority of first quarter 2015 claims were attributed to pavement defects. During the same timeframe, payment was made on 104 claims against the department totaling \$2,340,723.80 – a decrease of 1 percent from this quarter a year ago. Four claims accounted for 62 percent of this quarter's payments.

An arbitration panel found the department 20 percent at fault based on a significant edge drop-off. The incident occurred in 2008, where the driver and one of the six passengers (on a school bus) endured substantial injuries. Based on the 20 percent findings, the school district filed suit against the department to recuperate its losses. The claim was settled out of court. The combined cost to the department was roughly \$378,000.

The department settled a claim occurring in 2010 for \$375,000, based on the dangerous condition of a minor route where a box culvert system failed, resulting in a fatality. There was piping/voiding of the substructure (depth and width) on both sides of the culvert system from rain events before and during this incident.

The department settled a claim occurring in 2010 for \$360,000, based on the dangerous condition in the median, where a multidirectional breakaway base should have been used versus a two directional breakaway base. The direction of impact did not allow the sign to break away, but snapped down crushing the driver's side roof, causing serious, permanent injuries to the driver.

The department settled a claim occurring in 2012 for \$325,000, based on the dangerous condition of the right of way, resulting in a fatality. There was a jagged outcrop, steep slope and absence of guardrail within the established 30-foot clear zone.

KEEP ROADS AND BRIDGES IN GOOD CONDITION

Dennis Heckman, State Bridge Engineer

MEASURES OF DEPARTMENTAL PERFORMANCE

Missourians have said they want MoDOT to keep roads and bridges in good condition. Customers are looking for smooth pavements and bridges that can safely handle growing traffic demands. With 33,891 miles of highway and 10,376 bridges on the state system, the challenges are great; however, we are focused on using our limited resources to keep Missouri's roads and bridges in good condition.

MEASUREMENT DRIVER:

Brian Reagan, Transportation System Analysis Engineer

PURPOSE OF THE MEASURE:

This measure tracks the condition of Missouri's major highways.

MEASUREMENT AND DATA COLLECTION:

Missouri's major highway system contains the state's busiest highways, including interstates and most U.S. routes. It also includes busy routes in urban areas, particularly where vehicles travel between business districts and residential areas. There are 5,530 total miles on the major highway system, and the condition of these roadways is determined using a variety of measures. While it can be difficult to compare one state's roadways to another's, MoDOT uses Georgia as a comparable system because it has a similar amount of major highways and also bases its evaluation on the smoothness of the roadways. Missouri measures the condition of its roadways using smoothness as one factor, but also considers physical distresses such as cracking.

KEEP ROADS AND BRIDGES IN GOOD CONDITION

Percent of major highways in good condition-2a

MAP-21

MoDOT started a major road improvement program in 2004 called the Smooth Roads Initiative. Over the next two years, the program improved 2,200 miles of Missouri's major routes, bringing them from 47 percent in good condition up to 74 percent. The Better Roads, Brighter Future program in 2007 further improved the system, increasing Missouri's major routes in good condition to 85 percent.

Currently more than 89 percent of major highways are rated in good condition. However, with contractor awards dropping from more than \$700 million per year to \$325 million per year beginning in 2017, it will be increasingly difficult to maintain this condition level.

KEEP ROADS AND BRIDGES IN GOOD CONDITION

*Source data for Georgia comes from FHWA highway statistics. Full data sets are collected every 2 years. The data set for 2013 is not a full data set. Georgia data is based only on pavement smoothness (IRI) submitted as part of the Highway Performance Monitoring System.

MEASUREMENT DRIVER:

Brian Reagan, Transportation System Analysis Engineer

PURPOSE OF THE MEASURE:

This measure tracks the condition of Missouri's minor highways.

MEASUREMENT AND DATA COLLECTION:

Missouri's minor highway system consists of its lesstraveled state highways, including those routes that mainly serve local transportation needs. The minor highway system includes most lettered routes. There are 28,361 miles of minor highways in Missouri. The condition of these routes is determined using a variety of measures.

While it can be difficult to compare one state's roadways to another's, MoDOT uses Illinois as a comparable system because it has a similar number of minor highways and has the highest percentage of routes in good condition. Missouri measures the condition of its roadways using smoothness as one factor, but also considers physical distresses such as cracking.

KEEP ROADS AND BRIDGES IN GOOD CONDITION

Percent of minor highways in good condition-2b

MoDOT began an initiative in 2004 that focused on improving major highways. As a result, less time and funding were spent on minor roads and the percentage of minor roads in good condition fell from 71 percent in 2005 to 60 percent in 2009. After MoDOT made headway improving major highways, it targeted its focus on minor routes and brought 71 percent back to good condition.

Currently, 78 percent of Missouri's minor roads are in good condition, which is level from 2013. With contractor awards dropping from over \$700 million per year to \$325 million per year beginning in 2017, the expectation is that the condition of the minor roads will decline.

*Source data for Illinois comes from FHWA highway statistics. Data for 2014 is not available at the time of publication. Data is based on a combination of pavement condition and smoothness as submitted as part of the Highway Performance Monitoring System.

RESULT DRIVER: Dennis Heckman, State Bridge Engineer

MEASUREMENT DRIVER:

David Koenig, Bridge Management Engineer

PURPOSE OF THE MEASURE:

This measure tracks progress toward improving the condition of Missouri's bridges.

MEASUREMENT AND DATA COLLECTION:

This measure is updated in April based on MoDOT inspections conducted the prior year. Data is presented for all state bridges and major bridges. Major bridges are typically those that cross large rivers and lakes and are longer than 1,000 feet. Of the 10,376 bridges on state highways, 209 are major. Bridges are categorized as being in good, fair or poor condition. Good means no significant condition-related problems exist. Fair indicates moderate problems that may require minor rehabilitation or maintenance to return the structure to good condition. Poor indicates a structure that is deficient, requiring either replacement or a major rehabilitation.

KEEP ROADS AND BRIDGES IN GOOD CONDITION

Condition of state bridges-2c

The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. Currently, 1,914 (48 major) structures are in poor condition, 4,873 (99 major) structures are in fair condition and 3,589 (62 major) structures are in good condition.

Statewide, the number of structures in poor condition has dramatically decreased over the last five years, but the rate of decline is slowing down. The number of structures in good condition moderately improved through 2011 but has started to decline over the last two years. Improvements in these numbers were heavily impacted by the Safe and Sound Bridge Improvement Program that was completed in 2012, and by the increased construction program that resulted from the passage of Amendment 3 in 2004. The recent decline in good bridges can be attributed to MoDOT's reduced construction program as the result of funding constraints. It should be noted that while the number of poor-condition bridges dropped by 572 over this five-year period, the number in good condition has only decreased by 44. The number in fair condition has significantly increased by 587 over this period which is reflective of MoDOT's aging bridge population with many structures at the point where they need minor maintenance or rehabilitation. With the decrease in funds available for the construction program, continued improvements in the number of structures in poor condition is very unlikely.

For major bridges, the number of structures in the poor category has generally been dropping over the last five years because of an aggressive focus on these structures in the STIP, but despite a significant investment in major bridges, the number of structures in good condition generally dropped over the five-year period while the number in fair condition significantly increased. Work on major bridges is very expensive with rehabilitations costing \$10 to \$20 million and replacements ranging from \$20 million to \$200 million. With a greatly reduced construction program and the inability to fully match federal funds in 2017, significant future improvements in the condition of major bridges are very unlikely.

KEEP ROADS AND BRIDGES IN GOOD CONDITION

Missouri Department of Transportation 2c2

RESULT DRIVER: Dennis Heckman, State Bridge Engineer

MEASUREMENT DRIVER:

David Koenig, Bridge Management Engineer

PURPOSE OF THE MEASURE:

This measure tracks the percent of structurally deficient deck area for bridges that are part of the National Highway System. Moving Ahead for Progress in the 21st Century, the federal surface transportation act, requires states to track the Structurally Deficient deck area with a national performance goal of it being less than 10 percent.

MEASUREMENT AND DATA COLLECTION:

The NHS is defined by federal law and consists of all roadways functionally classified as principal arterials as well as some routes that serve as major connections to multimodal freight type facilities and some locally owned roadways. Historically, SD consists of bridges that are in bad condition or have insufficient load capacity when compared to modern design standards. With MAP-21, there are some proposed adjustments in how SD is determined and this measure has been created based on these proposed adjustments.

KEEP ROADS AND BRIDGES IN GOOD CONDITION

Percent of structurally deficient deck area on National Highway System-2d

The public has indicated keeping Missouri's existing roads and bridges in good condition should be one of the state's highest priorities. MAP-21 set a national performance goal to have the SD deck area of NHS bridges be less than 10 percent. The local system has 84 NHS structures (two SD) and the MoDOT system has 3,600 NHS structures (145 SD). MoDOT currently meets the national performance goal with the total at 7.2 percent, which is attributable to aggressive efforts undertaken with construction on major bridges over the last 10 years, as well as other accelerated construction from MoDOT's bonding program. The ability to continue to meet this goal will become more difficult with a reduced construction program. Additionally, the potential inability for MoDOT to fully match available federal funds in 2017 could have a severe impact on this measure. This measure is also heavily influenced by major bridges because one structure has the ability to impact this measure +/-0.5 percent. The majority of the change from 2013 to 2014 is attributable to the addition of two major bridges and the removal of one major bridge from the SD category. Additionally, on the local system there was a significant reduction in the number of NHS structures as the result of functional class changes on roadways across the state, with the majority of these changes happening in the Kansas City district. Both of the local system structures that are currently SD are in St. Louis, with a replacement project for one of them scheduled to start in 2015. Since many major bridges are part of the NHS, any reduction in funding available for the construction program will limit MoDOT's ability to keep up with the replacement/rehabilitation needs on major bridges.

PROVIDE OUTSTANDING CUSTOMER SERVICE

Dan Niec, District Engineer

MEASURES OF DEPARTMENTAL PERFORMANCE

Every MoDOT employee is responsible for delivering outstanding customer service. We strive to be respectful, responsive, and clear in all our communication. We want to build strong relationships with our transportation partners, our customers and each other.
Tammy Wallace, Senior Communications Specialist

PURPOSE OF THE MEASURE:

This measure tracks MoDOT's progress toward the mission of delighting its customers.

MEASUREMENT AND DATA COLLECTION:

Data is collected through an annual telephone survey of approximately 3,500 randomly selected Missourians. Data compiled by the American Customer Satisfaction Index in 2013 shows Mercedes-Benz having the highest customer satisfaction rate – 88 percent – out of the hundreds of companies and government agencies the ACSI scores.

PROVIDE OUTSTANDING CUSTOMER SERVICE

Percent of overall customer satisfaction-3a

Over the past few years customer satisfaction has remained high. In 2013, 85 percent of Missourians surveyed said they were satisfied with the job MoDOT is doing, which tied a record high. We also saw an increase in the number of very satisfied customers.

The condition of our roads and bridges and customer satisfaction are closely tied together. In the 2013 Report Card from Missourians, customers told MoDOT the condition of roads and bridges were the most important transportation service to them. MoDOT staff has been diligent in providing outstanding customer service, and temporary funding has allowed us to keep our system maintained at a level customers expect. However, over the next few years as MoDOT's funding is anticipated to drop below what is required to even maintain the state system, customer satisfaction levels are likely to be impacted.



Holly Dentner, Communications Manager

PURPOSE OF THE MEASURE:

This measure tracks the percent of customers who view MoDOT as a leader and expert in transportation issues. The measure shows how effectively MoDOT conveys its expertise to the traveling public.

MEASUREMENT AND DATA COLLECTION:

Data is collected through an annual telephone survey of approximately 3,500 randomly selected Missourians.

PROVIDE OUTSTANDING CUSTOMER SERVICE

Percent of customers who view MoDOT as Missouri's transportation expert-3b

As the agency responsible for transportation in Missouri, MoDOT must hold its lead as an expert in the field. The department should serve as the frontrunner – representing the best transportation options for Missouri and partnering with state and national organizations and others to deliver a strong transportation system.

The 2013 survey shows an overwhelming majority of customers perceive the department as Missouri's transportation expert. Ninety-two percent of those surveyed agreed MoDOT serves this role, a percentage the department has consistently maintained since 2009. Of the 92 percent, 58 percent of respondents "strongly agreed" and 34 percent "somewhat agreed" MoDOT serves as the state's transportation expert.

The department continues to work on improving partnerships with all Missourians, including local government, legislators and other elected officials, and transportation-related groups and organizations. With the suspension of the cost share program and the anticipated drop in MoDOT's funding, these relationships may face challenges.



Melissa Black, Communications Manager

PURPOSE OF THE MEASURE:

This measure tracks the percent of customers who trust MoDOT to keep its commitments. Public trust is an important component in building support for transportation issues.

MEASUREMENT AND DATA COLLECTION:

Data is collected through an annual telephone survey of approximately 3,500 randomly selected Missourians, being most recently updated for the October 2013 Tracker. Until 2013, this measure was a yes/no question. In 2013, customers responded to a satisfaction scale. The sum of the positive responses – Somewhat Agree and Strongly Agree– provide the comparative data.

PROVIDE OUTSTANDING CUSTOMER SERVICE

Percent of customers who trust MoDOT to keep its commitments to the public-3c

Gaining and keeping the public's trust is key to MoDOT's overall success. The best way MoDOT can accomplish this is to deliver on the commitments it makes. In the 2013 survey, 87 percent of Missouri residents said they trusted MoDOT to keep its commitments compared to 88 percent in 2012. While the 1 percent difference is within the statistical margin of error, it is part of a four-year downward trend from 92 percent in 2010.

The department's annual construction program, which is estimated to be just over \$700 million for 2015, will drop to \$600 million in 2016 and then just more than \$300 million each year in 2017 through 2019. Missourians tell MoDOT they want more from their transportation system, but the reality is they are going to get less – and what they have will get worse. Because of the current financial forecast, the Missouri Highways and Transportation Commission decided no new projects will be added to the 2015-2019 STIP. The Commission also suspended the cost share program, which allowed local governments to partner with MoDOT to deliver state highway and bridge projects that enhance economic development in the state.

As fewer projects are completed and the system deteriorates, it is likely the public's trust in the department to keep its commitments will continue to decline.



Marie Elliott, Communications Manager

PURPOSE OF THE MEASURE:

This measure tracks whether customers feel MoDOT provides timely, accurate and understandable information about road projects, highway conditions and work zones they need and use.

MEASUREMENT AND DATA COLLECTION:

Data is collected through an annual telephone survey of approximately 3,500 randomly selected Missourians.

PROVIDE OUTSTANDING CUSTOMER SERVICE

Percent of customers who feel MoDOT provides timely, accurate and understandable information-3d

Just like well-maintained roads and bridges, MoDOT delivers information. The citizens of Missouri expect timely, accurate and understandable information from their department of transportation. Whether it's a press release, e-update, text alert or a notice of a public meeting, MoDOT makes every effort to get the word out as quickly and as clearly as possible. The results of this effort are public trust and respect. With numbers consistently topping 90 percent agreement for the past four years, this measure shows that the department meets our customers' high expectations.



PROVIDE OUTSTANDING CUSTOMER SERVICE







Missouri Department of Transportation 3d2

Nicole Hood, Assistant State Design Engineer

PURPOSE OF THE MEASURE:

This measure provides information regarding the public's perception of MoDOT's performance in providing the right transportation solutions.

MEASUREMENT AND DATA COLLECTION:

Data for this measure is collected through an annual survey sent to users of projects completed and opened to traffic within the previous year. The districts identify 21 projects – three per district - in three categories: large, medium and small. Large projects are defined as those involving a major route or one that is funded through major project dollars. Medium projects are of district-wide importance. Small projects have only local significance. A sample of residents is drawn from zip code areas adjoining the recently completed project. The samples include 500 addresses per project area.

PROVIDE OUTSTANDING CUSTOMER SERVICE

Percent of customers who believe completed projects are the right transportation solutions-3e

One of the most prominent products MoDOT delivers to its customers is a highway construction project. While the department tries to involve local residents in planning and designing local projects, the real impact of the project isn't known until people actually use the results of the project. The 2014 survey results continue to show most Missourians are very satisfied with local projects and believe that MoDOT provides the right transportation solution.

The majority of respondents thought that the project made the roadway:

- safer (88.2 percent),
- more convenient (88.1 percent),
- less congested (81.9 percent),
- easier to travel (88.6 percent),
- better marked (85.2 percent), and
- 89.6 percent considered the project the right transportation solution.

As part of the questionnaire, each respondent has the opportunity to provide comments about why the local project was – or was not – the right transportation solution. Each comment is shared with the local district for evaluation and to guide future projects.

MoDOT expects the funding available for the annual construction program to drop until it reaches \$325 million in fiscal year 2017. At that level, the department will not be able to keep the highway and bridge system in the shape it is in today and undertaking projects that solve transportation problems will be out of the question. Because of this, the results of this measure are likely to decline in the near future.



Missouri Department of Transportation 3e

Melissa Black, Communications Manager

PURPOSE OF THE MEASURE:

This measure shows how satisfied customers who contact MoDOT are with the politeness, clarity and responsiveness they receive.

MEASUREMENT AND DATA COLLECTION:

The data for this measure is obtained from a monthly telephone and e-mail survey of 200 customers who contacted a MoDOT customer service center in the previous month. The customer contacts come from call reports logged into the customer service database. Survey participants are asked to respond on a Strongly Agree to Strongly Disagree scale regarding representative politeness and how quickly and clearly MoDOT responded to and answered questions or concerns. A fourth question asks for a rating of overall satisfaction. This measure also includes the average time to complete requests logged into the customer service database. Requests that require more than 30 days to complete are removed to prevent skewing overall results.

PROVIDE OUTSTANDING CUSTOMER SERVICE

Percent of customers satisfied with MoDOT's customer service – 3f

MoDOT actively seeks feedback from the people it serves. In 2012, MoDOT created a statewide call system and enhanced its online call report system that enables customer service representatives to work across seven district boundaries in a one-team approach. Since implementation, customer perceptions of MoDOT's politeness, responsiveness and clarity increased, resulting in an overall improved customer satisfaction.

In the first quarter of 2015, three out of the four areas increased when compared to the first quarter of 2014. Customers surveyed indicated 86 percent overall satisfaction with MoDOT's handling of their questions or concerns, which is the highest in all compared periods. Customers who were satisfied with politeness of responses increased to 98 percent. Clarity with our responses stayed at 89 percent. Satisfaction with responsiveness increased to 93 percent. The average time to complete customer requests during this quarter decreased to 1.6 days. The percent of very satisfied for all categories were at the highest when compared to the same quarter of previous years.



PROVIDE OUTSTANDING CUSTOMER SERVICE







Missouri Department of Transportation 3f2

Patrick Wood, Communications Specialist

PURPOSE OF THE MEASURE:

This measure tracks how MoDOT customers receive and exchange information with the agency.

MEASUREMENT AND DATA COLLECTION:

MoDOT gathers information for this measure from a variety of sources. These include Google Analytics to measure Web traffic and social media analytics.

PROVIDE OUTSTANDING CUSTOMER SERVICE

Percent of customer communication engagement-3g

Good organizations share information with the people they serve. The best, most trusted organizations engage customers in conversation. It is easier these days for MoDOT to interact with its customers through Internet-based social media networking websites and applications. However, as platforms for storytelling and accountability, print, television and radio continue to serve as a vital information-sharing service.

MoDOT's social media accounts continue to attract followers. When comparing 2015 year to date with 2014, there was a growth of 37,000 followers on Facebook statewide and 23,000 additional followers to Twitter statewide. During the third quarter, the post with the highest reach, or highest viewership, was an informational video on shoveling snow that reached 13,131,776 people, was liked 151,484 times and was shared 87,287 times.

During the last quarter, Facebook changed the way it looks at the number of people that like company pages. On March 12, Facebook deleted inactive users from a page's total number of likes. This resulted in the statewide page, Save MO Lives, Barrel Bob and the districts all losing hundreds of followers who were deemed inactive by Facebook from their total number of likes. This change resulted in a minimal increase in followers for all pages during winter weather, which previously has been MoDOT's peak time for gaining new followers.



PROVIDE OUTSTANDING CUSTOMER SERVICE





Kelly Backues, Senior Organizational Performance Analyst

PURPOSE OF THE MEASURE:

This measure tracks MoDOT's progress toward the goal of increasing the level of partner satisfaction with MoDOT in delivering transportation services.

MEASUREMENT AND DATA COLLECTION:

MoDOT, working with an independent research and survey firm, conducts the annual partner survey in January to collect satisfaction data from 11 MoDOT partner groups. The partner groups include business, highway safety, local public agencies, multimodal, transportation planning, design consultants, environmental agencies, highway bidding contractors, highway material suppliers, minority and women owned businesses and vendors. The January survey collects data from the previous calendar year and is updated annually in April.

PROVIDE OUTSTANDING CUSTOMER SERVICE

Percent of partner satisfaction-3h

MoDOT relies on a large number of partners to deliver transportation projects and services to Missourians statewide. Since 2010, partners have completed an online survey each year indicating their levels of satisfaction in working with MoDOT. The four-year period from 2010 to 2013 show very satisfied and satisfied rating of 94 percent or higher. This year's survey decreased slightly to 93 percent, but the very satisfied percentage still remains high at 64 percent. In addition to rating MoDOT's services, participants have the opportunity to offer written feedback. These comments are sent to all districts and applicable divisions by partner type. The information received is used to target specific areas MoDOT can improve.

With diminishing resources available for partner programs, services and products, it is anticipated satisfaction ratings may decline.



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David Silvester, District Engineer



MEASURES OF DEPARTMENTAL PERFORMANCE



MoDOT customers expect transportation solutions delivered on time and within budget. We manage our projects to get them completed quickly and at the best possible value. We work with our transportation partners to leverage innovation in improving our products and how we work. We pledge to honor our commitments and deliver the best, most cost-effective solutions.

RESULT DRIVER: David Silvester, District Engineer

DELIVER TRANSPORTATION SOLUTIONS OF GREAT VALUE

MEASUREMENT DRIVER:

Renate Wilkinson, Planning and Programming Engineer

PURPOSE OF THE MEASURE:

This measure determines how close total project completion costs are to the programmed costs. The programmed cost is considered the project budget.

MEASUREMENT AND DATA COLLECTION:

Completed project costs are reported during the fiscal year in which a project is completed. Road and bridge project costs include design, right-of-way purchases, utilities, construction, inspection and other miscellaneous costs. The programmed cost is based on the amount included in the most recently approved Statewide Transportation Improvement Program. Completed costs include actual expenditures. Multimodal and local public agency project costs typically reflect state and/or federal funds, but not local funding contributed toward such projects.

Percent of programmed project cost as compared to final project cost-4a

The focus on accurate program cost estimates has become increasingly important due to decreasing transportation funding and increasing costs. As of March 31, 2015, 284 road and bridge projects were completed in fiscal year 2015 at a cost of \$1.315 billion. This represents a deviation of -1.13 percent (or \$15 million) less than the programmed cost of \$1.330 billion. Of the 284 road and bridge projects completed, 65 percent were completed within or below budget. In comparison, 71 percent of projects were completed within



or below budget as of the same date a year ago. The largest component of project savings comes from engineering, at \$34 million. Miscellaneous savings (right of way, utilities and other costs) were \$13 million. Awards exceeded program values by \$19 million and construction-phase overruns were \$13 million.

In addition, 79 multimodal projects were completed for a cost of \$30.64 million, -11.26 percent or \$3.89 million less than the programmed cost of \$34.52 million. A total of 114 local public agency projects were completed for a cost of \$57.85 million, -19.84 percent or \$ 14.31 million less than the programmed cost of \$72.17 million.

MoDOT uses this historical data as a guide for programming future projects. In FY 2014, MoDOT added 10 percent of available funding for highway and bridge construction awards or \$68.5 million worth of projects in anticipation of award savings. However, awards for FY 2014 were one percent higher than programmed. Consequently, the 2015-2019 STIP was developed assuming no award savings. Awards for FY 2015 through March awards are -1.7 percent or \$9 million less than programmed values.



Positive numbers indicate the final (completed) cost was higher than the programmed cost. Comparative data is from Nebraska Department of Roads, one-year schedule of highway improvement projects.



Negative numbers indicate savings. Miscellaneous includes right of way, utilities and other costs.



Amounts include STIP road and bridge projects with two percent construction contingency applied.

Jay Bestgen, Assistant State Construction and Materials Engineer

PURPOSE OF THE MEASURE:

This measure tracks the percentage of projects completed by the commitment date established in the contract. This includes road, bridge, local public agency and multimodal projects – rail, aviation, waterway and transit.

MEASUREMENT AND DATA COLLECTION:

For road and bridge projects, the project manager collaborates with the project team to establish the project completion date, and the resident engineer uses the SiteManager system to track and document the work. Local public agencies and multimodal agencies use staff or consultant resources to set contract completion dates and track performance.

DELIVER TRANSPORTATION SOLUTIONS OF GREAT VALUE

Percent of projects completed on time-4b

MoDOT's customers expect transportation improvements to be completed quickly with minimal impact to their lives. Delivering projects by the contract completion date is the target for all projects and is considered a commitment to Missourians and users. Completing projects on time helps maintain credibility which is of utmost importance to maintaining Missourians' long-term support for times when more resources are needed to adequately maintain the transportation system. Completing projects on time minimizes user exposure to work zones and provides facilities in good condition that improve safety and reduce vehicle maintenance costs.

Sometimes, unusual weather or additional contract work necessitates an extension of the completion date. There also are times when a contractor misses the project completion date. In the first three quarters of fiscal year 2015, 71 percent of the projects were completed on or ahead of schedule.

MoDOT works to meet the original completion date by:

- Preparing accurate plans and quantities,
- Setting aggressive, but reasonable completion dates,
- Setting liquidated damages that reinforce completion date without undue bid risks,
- Discussing potential completion times with industry before letting, and
- Negotiating with contractor to maintain schedule.









Missouri Department of Transportation 4b2

Jeremy Kampeter, Construction Management Systems Administrator

PURPOSE OF THE MEASURE:

This measure tracks the percentage difference of total construction payouts to the original contract award amounts. This indicates how many changes are made on projects after they are awarded to the contractor. This measure evaluates road, bridge, local public agency and multimodal projects – rail, aviation, waterway and transit.

MEASUREMENT AND DATA COLLECTION:

For road and bridge projects, contractor payments are generated through MoDOT's SiteManager database and processed in the financial management system for payment. Change orders document the underrun/overrun of the original contract cost. Local public agencies and multimodal agencies use staff or consultant resources to set contract completion dates and track performance.

DELIVER TRANSPORTATION SOLUTIONS OF GREAT VALUE

Percent of change for finalized contracts-4c

By limiting overruns on contracts, MoDOT can continue to keep its commitments. Decreasing transportation funding coupled with the increasing costs of products such as asphalt, concrete and steel has placed an even stronger emphasis on constructing projects within budget. This emphasis combined with the use of practical design and value engineering has contributed to limiting overruns on contracts. MoDOT's performance in the first three quarters of fiscal year 2015 was 0.9 percent (\$802 million worth of projects completed \$7.1 million over the award amount). Many factors can affect the ability to complete a project within two percent of the award amount.



David Simmons, Transportation Project Manager

PURPOSE OF THE MEASURE:

This measure tracks the use of innovative contracting methods on MoDOT projects including: A + B Contracts, Alternate Technical

- Concepts, and
- Design-Build Contracts

MEASUREMENT AND DATA COLLECTION:

MoDOT projects utilizing innovative contracting methods are reported during the fiscal year in which they are awarded. Contract award values are collected through MoDOT's bid opening summaries and project records.

DELIVER TRANSPORTATION SOLUTIONS OF GREAT VALUE

Innovative contracting methods-4d

With decreasing transportation funding and increasing costs, MoDOT looks to implement non-traditional methods and practices in contract procurements to improve efficiency, increase flexibility and maximize value for its customers. By promoting the use of innovative contracting tools, MoDOT is better able to mitigate declining resources and meet each project's unique challenges and to provide the best-value solution to the needs being addressed. MoDOT uses innovative contracting to ensure the public receives full value for every tax dollar invested in Missouri's transportation system. However, dwindling resources will result in a dramatic reduction in the number of large-scale, system-improvement projects MoDOT can afford. Even with innovative contracting techniques, MoDOT will be challenged to simply maintain the current system.

When selecting a project delivery method and innovative contracting options, MoDOT takes into account project characteristics (risks) such as project size (cost), type (preservation, rehabilitation or reconstruction) and complexity (urban or rural, significant traffic impact, number of project elements). Innovative contracts promote accelerated project completion or facilitate achievement of other performance objectives. MoDOT's A+B, ATC and Design-Build contracting methods change how projects are procured and delivered. The advantages of MoDOT's innovative contracting methods are as follows:

- Cost-plus-time bidding (A + B) aims to expedite project completion through competitive bidding on construction time (days).
- Alternate Technical Concepts (ATCs) give the contractor the opportunity to provide an alternate more-cost-effective design prior to the bid. ATC discussions are held in a confidential environment which maximizes competitive bidding. The low bid is awarded the contract.
- Design-Build (DB) contracts include design and construction under one contract, which is procured using a two-phased, contractor-selection process. MoDOT scores proposals using a best-value or "build-to-budget" scoring scenario. Nationally, Design-Build projects are completed 33 percent faster and 6 percent cheaper than conventional Design-Bid-Build projects.

In fiscal year 2014, MoDOT delivered three out of 302 projects using innovative contracting methods, with two being delivered as Design-Build and one being delivered as A + B. The three projects accounted for \$115 million of the \$687 million program.





*Reflects total number of projects for each innovative contract method

Llans Taylor, Innovations Engineer

PURPOSE OF THE MEASURE:

This measure tracks the use of value engineering during design and construction on traditional MoDOT projects including: Value analysis during the design phase, and Construction value engineering proposals during the construction phase. Implementation of best practice into our standards and policies.

MEASUREMENT AND DATA COLLECTION:

Information on value analysis during design is gathered from MoDOT's STIP information management system. Construction value engineering change proposal information is gathered from MoDOT's VECP database. Implementation of best practice progress is tracked by MoDOT staff.

DELIVER TRANSPORTATION SOLUTIONS OF GREAT VALUE

Value Engineering-4e

The goal of value engineering is to build the right project at the right time, meeting the project need with appropriate project scope. MoDOT uses the VE program to ensure the public receives great value for every tax dollar invested in Missouri's transportation system. Due to decreasing funding, Mo-DOT is increasingly focused on smaller, maintenance-type projects that are not traditionally targeted by the VE program. Still, MoDOT must be innovative in utilizing the VE process to search for solutions to reduce project costs and provide additional value.

MoDOT uses design-phase value analysis to remove unnecessary scope, reduce project costs and to improve project flexibility. Value analysis includes specific, targeted processes aimed to improve the project value, including the formal VE program studies. Tracking progress toward the goal of evaluating all projects for value allows MoDOT to accurately gauge its performance. For the first two quarters of FY 2015, 47 percent of projects underwent some form of value analysis during design. A significant portion of this progress was a direct result of programmatic value analysis studies associated with the level-course and chip-seal programs.

MoDOT partners with industry to find more cost-effective methods to accomplish proposed project work. During the construction phase, the VECP process encourages contractors to submit proposals to deliver improved projects. After award of a project, contractor proposals are considered. If accepted, contractors receive up to a maximum of 50 percent of the savings. For the first two quarters of FY 2015, 17 VE proposals were approved resulting in MoDOT savings of \$876,000. Although still low in comparison to a five-year average, this does compare favorably to the first two quarters of FY 2014 in which there were 17 approved VE proposals for a total savings of \$560,000. As an effort to ensure each submittal has the greatest opportunity for approval, MoDOT has adopted engineering policy changes to allow contractors a second review of any denied submittals.

A successful VECP program incorporates approved VECPs into future projects, so MoDOT can realize all of the affiliated savings. A multi-disciplinary team reviews approved VECPs in order to integrate the approved concepts into engineering policies, standards and specifications. In addition to previous reviews of fiscal years 2012 and 2013, the team has considered each approved VECP approved in fiscal year 2014 to determine if there was an opportunity to improve the way MoDOT does business. To date, 167 approved VECPs have been reviewed with two changes implemented and 24 potential revisions still being investigated. The team continues to meet to review approved VECPs for potential implementation and works to develop improved policies.







Missouri Department of Transportation 4e2

RESULT DRIVER: David Silvester, District Engineer

MEASUREMENT DRIVER:

Jason Vanderfeltz, Bidding and Contract Services Engineer

PURPOSE OF THE MEASURE:

This measure tracks the costs to construct a variety of common highway and bridge construction projects including the costs for equipment, labor and fringe benefits and materials to construct a project.

MEASUREMENT AND DATA COLLECTION:

Data is collected from MoDOT bid opening prices. Construction costs for 1992 are used for comparison because that was the year Missouri's fuel tax was increased to the current rate of 17 cents per gallon. Costs for chip seal and minor road one-inch asphalt resurfacing include the pavement, traffic control and temporary pavement marking. Costs for major highway and interstate asphalt resurfacing include the pavement, traffic control, permanent pavement marking, rumble strips, pavement repair, guardrail and signing. New two-lane and four-lane construction costs include grading, drainage, pavement, bridge and all incidental costs. The average cost per square-foot of bridge is tabulated and applied to the area of the average bridge on the state system to simplify comparison.

DELIVER TRANSPORTATION SOLUTIONS OF GREAT VALUE

Average highway lane-mile and bridge construction costs-4f

A great many factors affect the cost of road and bridge projects, some can be managed by MoDOT, and others are affected by the economy. For example, Missouri's highway system has long depended on fuel taxes, but consumers look for ways to decrease their personal transportation costs by driving less and turning to smaller, more fuel-efficient vehicles. Since these vehicles cost less, sales taxes are lower, resulting in lower transportation revenues. Meanwhile, inflation has increased the cost of projects, resulting in reduced purchasing power for MoDOT. Minor road asphalt resurfacing costs have increased in recent years due to a combination of fluctuating fuel and oil prices and increased material costs. Overall, the prices of asphalt, concrete and steel are double and triple what they were 20 years ago.

With MoDOT's construction program having dropped from \$1.3 billion in 2009 to \$720 million in fiscal year 2015, few complex two- and four-lane projects have been available for contractors to bid. For the larger, more robust projects, MoDOT continues to partner with industry to allow flexibility and encourage innovation while strategically scheduling bid openings to spread out the amount of work and financial obligation for the bidders. With decreasing revenue and increasing costs, MoDOT is challenged to make improvements to the existing system. MoDOT is being challenged just to maintain the system of roads and bridges Missourians enjoy today.















*** No four-lane projects bid in 2013 and 2014.





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Paula Gough, District Engineer



MEASURES OF DEPARTMENTAL PERFORMANCE



Missourians expect to get to their destinations on time, without delay regardless of their choice of travel mode. We coordinate and collaborate with our transportation partners throughout the state to keep people and goods moving freely and efficiently. We also maintain and operate the transportation system in a manner to minimize the impact to our customers and partners.

Jon Nelson, Traffic Management and Operations Engineer

PURPOSE OF THE MEASURE:

This measure tracks the mobility of significant state routes in St. Louis, Kansas City, Springfield and Columbia.

MEASUREMENT AND DATA COLLECTION:

Travel time data for most state routes is collected via roadside detectors and other technologies. For a few routes, travel times are collected manually by driving the route at least twice in each direction. To assess mobility, MoDOT compares travel times during rush hour to free-flow conditions where vehicles can travel at the posted speed limit. This measure also assesses reliability, an indicator of how variable those travel times are on a daily basis. The charts in this measure show the average travel time and the 95th percentile travel time, which is the time motorists should plan in order to reach their destinations on time 95 percent of the time. The maps display the mobility of specific sections of roadways during rush hour. The color of the arterial routes indicates how the average speeds compared to normal traffic flow on these signalized corridors.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM



Travel times and reliability on major routes-5a

The desired outcome for any route is safe traffic flow at the posted speed limit. From January to March 2015, the average 10-mile travel time in St. Louis was 10.84 minutes during the morning rush and 11.59 minutes during the evening rush. For Kansas City, the average travel time was 10.83 minutes during the morning rush and 11.19 minutes during the evening rush. All average travel times increased from last quarter, and all but the St. Louis morning average travel time increased from the first quarter of 2014.

Individual freeway segments within St. Louis and Kansas City experienced significantly longer travel times than the regional averages. In Kansas City, segments that experienced the most congestion in the morning included I-70 westbound between I-435 and I-470 and isolated segments of I-49 northbound, I-435 eastbound, and I-35 southbound. Speeds on these segments ranged from 30-40 mph during the morning rush. In the evening, the most heavily congested roadway was I-70 eastbound from downtown to just past I-435. Average speeds in this area reached as low as 20 mph during the evening rush. I-35 northbound also experienced areas of significantly reduced mobility. Like most quarters, I-270 northbound between I-55 and Route 100 had an above average travel time during the morning rush. Average speeds on this section ranged from 25 to 30 mph. Likewise, I-64 eastbound in Chesterfield and I-64 westbound near Forest Park experienced below average speeds in the morning peak. During the evening rush, areas of below average speeds are more common in the region. Portions of I-64, I-270, and I-170 all experienced longer than average travel times in both directions.

While the average travel times for roadways in the region remain fairly consistent, there are always days in which congestion is noticeably worse than normal. The extent at which conditions vary from average changes each quarter, but a good way for measuring this is by looking at the 95th percentile planning time. Average 10-mile planning times for the regions this quarter ranged from 13.73 minutes in Kansas City during the morning rush to 16.37 minutes in St. Louis during the evening rush. These planning times are fairly consistent with the average planning times from 2014, though the times in Kansas City are a little higher. When compared to first quarter 2014, the planning times are all higher with the exception of the planning time for the morning rush in St. Louis. Like travel times, planning times on individual segments can be longer than average planning times.





Missouri Department of Transportation 5a2





Jeanne Olubogun, District Traffic Engineer

PURPOSE OF THE MEASURE:

This measure tracks the annual cost and impact of traffic congestion to motorists in the areas of motorist delay, travel time, excess fuel consumed per auto commuter and congestion cost per auto commuter.

MEASUREMENT AND DATA COLLECTION:

A reporting tool available in the Regional Integrated Transportation Information System (RITIS) looks at user delay costs. This data, in combination with industry standard costs for passenger cars and trucks, reflects the overall costs of congestion. RITIS also includes historic data, so trend lines can be tracked and evaluated. The unit cost per passenger car is \$16.79 is obtained from the Texas A&M Transportation Institute. The unit cost per truck is \$65.29 is from the American Transportation Research Institute, which specializes in tracking freight mobility and provides the best source of data related to freight costs. For previous reporting, the department used data provided by the (TTI), which annually produces the Urban Mobility Report.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM

MAP-21

Cost and impact of traffic congestion-5b

Recurring congestion occurs at regular times, although the traffic jams are not necessarily consistent day-to-day. Nonrecurring congestion is an unexpected traffic crash or natural disaster that affects traffic flow. When either occurs, the time required for a given trip becomes unpredictable. This unreliability is costly for commuters and truck drivers moving goods, which results in higher prices to consumers.

While the desired trend for both costs is downward, challenges exist in Missouri's metropolitan regions to continue toward this desired outcome. A comprehensive look at congestion is needed, and looking beyond typical solutions of adding capacity is needed. As the department adapts to shrinking revenue streams, the capacity for adding projects will be scarce. Using smarter technology to help guide motorists is a must. Still, the desired outcome is lower congestion costs and an indication that traffic is moving more efficiently.




Randy Johnson, Traffic Center Manager

PURPOSE OF THE MEASURE:

This measure is used to determine the trends in incident clearance on the state highway system.

MEASUREMENT AND DATA COLLECTION:

Advanced transportation management systems are used by the Kansas City and St. Louis traffic management centers to record incident start time and the time when all lanes are declared cleared.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM

Average time to clear traffic incident-5c

A traffic incident is an unplanned event that blocks travel lanes and temporarily reduces the number of vehicles that can travel on the road. The speed of incident clearance is essential to the highway system returning back to normal conditions. Responding to and quickly addressing the incident (crashes, flat tires and stalled vehicles) improves system performance.

St. Louis recorded 576 incidents in January, 662 in February, and 636 in March. The average time to clear traffic incidents was 27.1 minutes, a decrease of nearly 7 percent compared to the first quarter of 2014.

Kansas City recorded 431 incidents in January, 507 in February, and 519 in March. The average time to clear traffic incidents was 24.9 minutes, an increase of 7 percent from the first quarter of 2014.







Rick Bennett, Traffic Liaison Engineer

PURPOSE OF THE MEASURE:

This measure tracks the traffic incident impacts on Interstate 70 and Interstate 44 due to highway incidents.

MEASUREMENT AND DATA COLLECTION:

Interstate route closures having an actual or expected duration of 30 minutes or more are entered into MoDOT's Transportation Management System for display on the Traveler Information Map. By using the incident locations identified from the Traveler Information Map data along with the Regional Integrated **Transportation Information** System (RITIS), real-time durations and delays for these incidents can be identified. The impact duration is the total amount of time that there was a noticeable impact on traffic speeds as a result of the incident regardless of how long the actual incident closure lasted. The maximum delay is the longest delay that an individual traveler would have experienced as a result of the incident. What is important about these measurements is that they represent the impacts that are "felt" by our customers resulting from incident closures.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM

Traffic incident impacts on major interstate routes-5d

Interstates are the arteries that connect our nation and keep people and commerce flowing. When they shut down in Missouri, the country is cut in half. Keeping interstates free-flowing is a top priority for MoDOT, but sometimes vehicle crashes affect the department's ability to keep the interstates moving.

The I-70 and I-44 charts below give a comparison of the duration of the incidents and the actual delay experienced by the travelers as provided by the RITIS tool. An incident with a long duration may not create a long delay. This can occur when at least one lane remains open or if there is a good detour route around the incident. The time of day and traffic volumes on the corridor also can be a factor. The final map provides a picture of where the incidents occurred in 2014 to see the areas with higher concentrations of incidents.

MoDOT continues to work with emergency responder partners to minimize the delay caused by closures on the interstate system. This measure gives us more information so staff can focus on the incidents with higher "real" impact to travelers. This information will be used to develop and implement strategies and best practices to reduce the impacts to travelers.

Top 10 Incidents by Delay January – March 2015

Route	County	Dir	Mile Marker	Date	Impact Duration		Max Delay	
1-44	PHELPS	W	183	2/28/2015	29 hrs.	18 min.	31 hrs.	20 min.
I-44	FRANKLIN	Е	254	2/25/2015	6 hrs.	0 min.	5 hrs.	54 min.
I-44	FRANKLIN	E	230	3/1/2015	6 hrs.	0 min.	4 hrs.	32 min.
I-70	WARREN	W	200	2/20/2015	8 hrs.	30 min.	3 hrs.	23 min.
I-70	JACKSON	Е	25	2/16/2015	4 hrs.	50 min.	3 hrs.	56 min.
I-44	ST. LOUIS CITY	E	288	3/16/2015	4 hrs.	0 min.	3 hrs.	44 min.
I-70	ST. LOUIS CITY	W	246	1/8/2015	3 hrs.	10 min.	3 hrs.	42 min.
I-70	SALINE	W	79	2/26/2015	4 hrs.	20 min.	2 hrs.	56 min.
I-70	LAFAYETTE	W	61	3/9/2015	3 hrs.	20 min.	2 hrs.	52 min.
I-44	FRANKLIN	E	238	3/1/2015	2 hrs.	20 min.	2 hrs.	31 min.





Missouri Department of Transportation 5d2



Jerica Holtsclaw, Design Liaison Engineer

PURPOSE OF THE MEASURE:

Work zones are designed to allow the public to travel through safely and with minimal disruptions. This measure indicates how well significant work zones perform.

MEASUREMENT AND DATA COLLECTION:

Work zone impacts are collected by conducting visual observations or using automated data collection. Recent updates to traffic data collection methods allow for more work zones to be evaluated. An impact is defined as the additional time a work zone adds to normal travel. They are categorized into three levels: a minor impact lasts less than 10 minutes: a moderate impact lasts 10 to 14 minutes; and a major impact lasts 15 minutes or more.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM

Work zone impacts to the traveling public-5e

Motorists want to get through work zones with as little inconvenience as possible. MoDOT tries to minimize the travel impacts by shifting work to nighttime hours or during times when there are fewer impacts to the traveling public. To get a wider range of data and better understand the impact work zones have on motorists, the department has increased the number of work zones it monitors each quarter. The department monitored 78 significant work zones this quarter, with three major impacts and three moderate impacts. One major impact was in the Kansas City District, one in the St. Louis District and one in the Southwest District. The delay in the Kansas City district was due to a vehicle crash beyond the work zone. Based on work zone surveys received this quarter, 88 percent of motorists are satisfied with timeliness when traveling in a work zone.





Mike Henderson, Transportation Planning Specialist

PURPOSE OF THE MEASURE:

This measure tracks concentrations of pollutants in on-road mobile source emissions. In other words, the department is tracking pollution caused by vehicles on the roads.

MEASUREMENT AND DATA COLLECTION:

MoDOT is still determining what pollutants to track and what concentration levels will align with the U.S. Environmental Protection Agency's air quality standards. At this time, the department collects data on oxides of nitrogen, volatile organic compounds, fine particulate matter and carbon monoxide. Because this measure is part of the latest federal surface transportation act's performance requirements, guidance for measurement and data collection will be established in 2015.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM

MAP-21

Effectiveness of improving air quality-5f

MoDOT is committed to improving air quality through modifying its daily operations, incorporating employee actions and education, providing information to the public, leading air quality improvements, managing congestion to reduce emissions, providing alternative choices for commuters and promoting the use of environmentally friendly fuels and vehicles.



RESULT DRIVER: Paula Gough, District Engineer

MEASUREMENT DRIVER:

Tim Chojnacki, Maintenance Liaison Engineer

PURPOSE OF THE MEASURE:

This measure tracks the amount of time needed to perform MoDOT's snow and ice removal efforts.

MEASUREMENT AND DATA COLLECTION:

For major highways and regionally significant routes, the objective is to restore them to a mostly clear condition as soon as possible after the storm has ended. MoDOT calls these "continuous operations" routes. State routes with lower traffic volumes should be opened to twoway traffic and treated with salt or abrasives at critical areas such as intersections, hills and curves. These are called "non-continuous operations" routes. After each winter event, maintenance personnel submit reports indicating how much time it took to meet the objectives for both route classifications.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM

Time to meet winter storm event performance objectives-5g

Knowing the time it takes to clear roads after a winter storm can help the department better analyze the costs associated with that work. MoDOT's response rate to winter events provides good customer service for the traveling public while keeping costs as low as possible. While the first half of this winter was light, Missouri experienced many winter storms in January and February of 2015. It took an average of 3.1 hours to meet MoDOT's objective for continuous operations routes, and an average of 4.4 hours for non-continuous routes. These numbers compare favorably with the type of storms received, but MoDOT still spent 574,000 hours fighting these snow and ice events at a cost of \$49.0 million through the end of March. Winter operations, on average, cost about \$47.6 million dollars per year. The money and time spent on clearing the roads of ice and snow means funds are not available to maintain the roadways in the spring, such as surface improvements, sign repair, brush cutting and drainage work.







RESULT DRIVER: Paula Gough, District Engineer

MEASUREMENT DRIVER:

Ron Effland, Non-motorized Transportation Engineer

PURPOSE OF THE MEASURE:

This measure tracks MoDOT's investment in pedestrian facilities and progress toward removing barriers. Accessibility needs occur both within the right of way, such as sidewalks and traffic signals, and within department buildings, parking lots and restrooms. Removal of the barriers listed in MoDOT's 2010 Transition Plan is required as part of the department's compliance with the Americans with Disabilities Act.

MEASUREMENT AND DATA COLLECTION:

Tracking of MoDOT's investment in pedestrian facilities is done by collecting awarded contract amounts for the 20 most common construction elements used on pedestrian projects each year. Transition Plan progress is based upon completed work that has corrected defective items reported in the August 2010 Transition Plan inventory. The dollar amounts are based on unadjusted estimates from 2008 and will not reflect actual expenditures. This avoids impacts from inflation or changing field conditions.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM

Bike/pedestrian and ADA transition plan improvements-5h

MoDOT has been responsive to public requests for improved accessibility and has been proactive in many areas to make systematic improvements when opportunities arise and limited funding allows. MoDOT has improved more than \$14.8 million worth of ADA facilities in the right of way since 2008. There is still more work to do as there is more than \$136.4 million worth of work left to complete on the 2010 ADA Transition Plan inventory.

Unfortunately, a dwindling revenue stream for construction projects at both state and federal levels makes it difficult to even maintain existing facilities. Additional funding sources will need to be developed before significant progress can be made in developing the facilities that Missourians desire.

MoDOT's investment in pedestrian facilities for the first quarter of the 2015 calendar year totals \$7.86 million in the first quarter. This exceeds the \$5 million invested in all of 2012 and the 2011 investment of \$7.81 million. In 2014, the annual investment was \$11.76 million. MoDOT is committed to complete ADA improvements, including cross slope corrections, as work is being done on the adjacent roadway section.

ADA compliance in MoDOT facilities is nearing completion with six of the seven districts showing ADA improvement projects are 100 percent completed. The Southeast District has just \$12,000 of ADA work to complete.







Amy Ludwig, Administrator of Aviation

PURPOSE OF THE MEASURE:

This measure tracks passenger use of modes other than highways in Missouri.

MEASUREMENT AND DATA COLLECTION:

Airline passenger counts are obtained from the Federal Aviation Administration and from individual airports. Washington is the benchmark due to its comparable population. Ferry passenger data is compiled from the New Bourbon and Mississippi County ferryboats, services owned and operated by Missouri public port authorities. Amtrak supplies Missouri River Runner passenger counts. Urban and rural transit services provide transit passenger data, with Wisconsin as the benchmark. Aviation and transit data is updated annually - in January and October, respectively - while ferryboat and rail data is updated quarterly.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM

Use and connectivity of modes of transportation-5i

Planes, trains, ferries and transit are vital means of transport for Missourians. Alternative modes of transportation connect Missourians to work, healthcare and other necessary activities. They also are used to grow Missouri's economy and create jobs. Missouri's current transportation funding for these modes is inadequate and unreliable. The state is unable to meet even the existing needs for these important transportation system components.

The number of airline passengers has remained fairly steady from 2010 to 2013, but appears to be increasing based on the preliminary estimates of passenger enplanements (boardings) for calendar year 2014. Due to increasing state Aviation Trust Fund revenues, MoDOT solicited grant applications in November 2014 from commercial service airports for the air service program for the first time since 2010. These grants can be used for air service promotion and marketing and to study potential new routes.

The number of ferry boat passengers decreased from about 5,500 passengers in the third quarter of fiscal year 2014 to about 3,200 in the third quarter of FY 2015. Ferry boat services are used by both passenger vehicles and commercial vehicles. Both ferry boat services saw a decline in passengers this quarter. The Mississippi County ferry saw a decrease in passengers due to winter weather conditions and fewer people traveling, while the New Bourbon ferry carried fewer passengers because the service was closed most of the quarter due to river conditions and repairs.

Missouri River Runner trains carried 38,856 passengers in the third quarter of FY 2015, a slight decrease in ridership from the same period in FY 2014. Lower gas prices are likely contributing to this decrease. On-time performance improved during this review period, likely due to a milder winter. In the third quarter, the Missouri Service arrived on schedule 92 percent of the time, compared to 87 percent a year earlier.

Transit ridership showed a small increase going from 62.5 million trips in FY 2013 to 63.1 million trips in FY 2014. Metro transit ridership saw an increase of 2 percent ridership while non-metro transit ridership saw a decrease of almost 30 percent ridership. Both of these shifts can be largely attributed to Cape Girardeau's ridership now being counted as metro transit ridership instead of rural. Even so, almost all the reporting rural transit agencies experienced declines in ridership from FY 2013 to FY 2014.



*2014 data is based on preliminary individual airport statistics. FAA publishes data in October for the preceding year.







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USE RESOURCES WISELY Brenda Morris, Financial Services Director



MEASURES OF DEPARTMENTAL PERFORMANCE



MoDOT has access to many resources including people, funding, supplies and equipment. Taxpayers trust MoDOT is a good steward of these limited resources while limiting the impact on our environment. We are accountable for everything we do.

Steve Meystrik, Special Projects Coordinator

PURPOSE OF THE MEASURE:

This measure tracks the change in the number of full-time equivalencies (a calculation of hours) expended within the department and compares it to the number of FTEs in the legislative budget.

MEASUREMENT AND DATA COLLECTION:

This measure converts the regular hours worked or on paid leave of temporary and salaried employees, as well as overtime worked (minus any hours that are flexed during the workweek), to FTEs. In order to calculate FTEs, the total number of hours worked or on paid leave is divided by 2,080. For comparison purposes, data for salaried employment is annualized, whereas temporary employment and overtime data represent actual year-to-date calculations. Salaried headcount is different than FTEs and is not included in the chart.

USE RESOURCES WISELY

Number of full-time equivalencies expended-6a

Having the right number of employees to provide outstanding customer service and respond to the state's transportation needs, especially during emergency situations, is an important part of MoDOT's efforts to use resources wisely. MoDOT remains below its targeted employment level of 5,106 salaried employees and continues the challenging task of reaching and maintaining its targeted employment level.

During the first three quarters of fiscal year 2015, the FTE level for salaried employment has increased compared to the same time last year. The FTE level for temporary employment also has increased due to the use of seasonal employees to fill staffing gaps at maintenance facilities. These temporary employees are needed to assist with emergency response functions such as snow and ice removal. FTEs resulting from overtime worked have decreased significantly due to fewer winter weather events compared to the previous year. Through March 31, 2015, the department worked approximately 136,000 fewer hours of overtime, equivalent to approximately 65 fewer FTEs, due to snow and ice prevention and removal compared to last year.



Rudy Nickens, Equal Opportunity and Diversity Director

PURPOSE OF THE MEASURE:

This measure tracks the level of employee satisfaction throughout the department at specific points in time.

MEASUREMENT AND DATA COLLECTION:

Employee satisfaction is measured with an annual employee survey. Employees rate items related to their satisfaction with MoDOT using a five-point scale, with one indicating low satisfaction and five indicating high satisfaction. Society for Human Resources Management best practice data was gathered from an SHRM report of an annual job satisfaction survey of 55 Fortune 500 companies.

USE RESOURCES WISELY

Level of job satisfaction-6b

MoDOT wants employees to be satisfied with their work and workplace and feel like they are a good fit for their jobs. Employee satisfaction can be a driver of overall organizational performance. The more satisfied and engaged employees are with the workplace, the more discretionary effort they are willing to put forth on the job.

Between 2005 and 2010, the average employee satisfaction ratings and percent of satisfied employees both showed upward trends with peaks in 2009. Following a four-year break, the employee survey was conducted this past spring. Overall job satisfaction has dipped slightly from 3.5 in 2010 to 3.4 in 2014. The percentage of satisfied employees also experienced a slight decline from 65 percent in 2010 to 64 percent in 2014. However, the percentage of very satisfied employees increased from 7 percent in 2010 to 11 percent in 2014.

Areas of low satisfaction center on not seeking out employee suggestions, making employees feel valued and having opportunities to advance at MoDOT. The lack of salary increases was scored low on most surveys and dominated the written comments. Areas of high satisfaction revolve around being treated with respect by coworkers, having supervisors support needs to balance work and family, knowing how daily work relates to MoDOT goals and priorities and having cooperation within work units.

MoDOT senior managers have begun the process to form a number of teams with employees from across the department to develop specific actions to improve the organization.







Aaron Kincaid, Employment Manager

PURPOSE OF THE MEASURE:

This measure tracks the percentage of employees who leave MoDOT. Turnover rates as shown in this measure include voluntary and involuntary separations.

MEASUREMENT AND DATA COLLECTION:

The data is collected statewide from SAM II Advantage HR system and includes only salaried employees. Voluntary turnover includes resignations and retirements. Involuntary turnover reflects dismissals. Data is reported quarterly, with current year to date data included.

USE RESOURCES WISELY

Rate of employee turnover-6c

When employees leave MoDOT, the department loses a large investment in recruiting, hiring, and training its workforce. Historically, MoDOT has a relatively low employee turnover rate, which relates to the high percentage of employees who stay until retirement. While some turnover is desired, such as releasing poor performers, MoDOT needs to retain a great workforce that has the knowledge and specialized skills to deliver the department's commitments and provide outstanding customer service.

During the first three quarters of fiscal year 2015, voluntary turnover rates (199 retirements and 251 resignations) are showing an upward trend. The voluntary turnover rate has increased significantly from 6.03 percent in YTD FY 2014 to 8.92 percent in YTD FY 2015. First-year turnover remains high and is the focus for the department's employee retention efforts through the onboarding program. Involuntary turnover rates have remained steady from the first three quarters of FY 2014, reducing to more similar historical statewide rates with 41 involuntary separations (dismissals) in the first three quarters of FY 2015.



Todd Grosvenor, Special Projects Coordinator

PURPOSE OF THE MEASURE:

This measure shows the precision of state and federal revenue projections.

MEASUREMENT AND DATA COLLECTION:

State revenue for roads and bridges include motor fuel taxes, motor vehicle and driver licensing fees, and motor vehicle sales and use taxes paid by highway users, interest earnings and miscellaneous revenues. State revenue for other modes includes motor vehicle sales taxes, aviation fuel taxes, jet fuel sales taxes, motor vehicle licensing fees, railroad assessments, appropriations from General Revenue and interest earnings. The measure provides the cumulative, year-todate percent variance of actual state revenue versus projected state revenue by state fiscal year. Federal revenue for roads and bridges is the amount available to commit in a federal fiscal year of federal funds. Federal funds are distributed to states via federal law. Federal revenue for other modes is the amount reimbursed to MoDOT for expenses incurred in a state fiscal year.

USE RESOURCES WISELY

State and federal revenue projections-6d

State and federal revenue projections help MoDOT staff do a better job of budgeting limited funds for its operations and capital program. The desired trend is for actual revenue to match projections with no variance. MoDOT staff adjusts future operating and capital budgets to account for these variances, if needed.

The actual state revenue for road and bridge is slightly lower than projected and other modes is greater than projected for the third quarter of fiscal year 2015. State revenue for road and bridge has been stagnant from year-toyear. Based on the last three years, motor vehicle and driver licensing fees and motor vehicle sales and use taxes have grown, but motor fuel taxes have declined. The positive variance of 7.4 percent for other modes is attributable to the jet fuel sales tax and railroad assessments.

The largest source of transportation revenue is from the federal government. Funding is received through various federal transportation agencies including Federal Highway, Transit, Aviation and Railroad administrations. Federal funding is uncertain. In June 2012, Congress passed a new two-year federal transportation reauthorization act entitled Moving Ahead for Progress in the 21st Century Act. MAP-21 reduced the amount of road and bridge funding for all state DOTs. In July 2014, Congress passed legislation to extend MAP-21 until May 31, 2015. Federal revenue for other modes is reliant on the timing of project expenditures.

The primary source of federal and state revenue is fuel tax. With people driving more fuel efficient vehicles and fewer miles, motor fuel tax is a declining revenue source. The motor fuel tax rate has not changed in almost 20 years, while the costs for materials and labor have doubled, and even tripled for some materials, in the same time frame.







Missouri Department of Transportation 6d2











Frank Miller, District Planning Manager

PURPOSE OF THE MEASURE:

This measurement monitors the effectiveness of MoDOT's cost-sharing and partnering programs.

MEASUREMENT AND DATA COLLECTION:

MoDOT collects this data from the Statewide Transportation Improvement Program and the permits database. The dollars are shown in the state fiscal year in which construction contracts are awarded and permit jobs are issued. The percent is the number of cost-sharing projects divided by the total number of projects per year in the STIP.

USE RESOURCES WISELY

Number of dollars generated through cost-sharing and partnering agreements for transportation-6e

MoDOT works with public agencies to leverage its limited resources to implement projects that might not otherwise be built. Cost-share projects are transportation improvements in which costs are shared by MoDOT and other public agencies such as cities and counties. MoDOT allocated \$30.0 million in fiscal years 2010-2011, \$37.5 million in FY 2012, \$47.5 million in FY 2013 and \$44.9 million in FY 2014 for cost-share projects. In addition, MoDOT also partners with developers and other private entities to make improvements to the state transportation system through the permitting process. The Missouri Highways and Transportation Commission suspended the Cost Share Program at its January 2014 meeting.

The amount of funds invested by partnering entities in MoDOT projects for FY 2014 of \$76.0 million is above the five-year average of \$69.0 million and the same as FY 2013. Funding through the permit process was higher in FY 2014 than FY 2013, while funding from other sources in the STIP was lower in FY 2014 than FY 2013.

The percent of projects with funding participation from partnering agencies for FY 2014 is 13.4 percent, which is significantly higher than the five-year average of 8.8 percent. However, these projects have shifted from major projects to taking care of the system projects and smaller scale projects. This has resulted in the average partnership contribution to MoDOT projects to decrease from \$1.7 million in FY 2013 to \$866,000 in FY 2014.

As a greater share of MoDOT funds are focused on taking care of the system, partner contributions to MoDOT projects are expected to continue to decline. The value of permit projects may increase if the economy continues to improve and public and private entities fund expansion projects to address emerging needs that MoDOT cannot address with its limited project funds.





Dion Knipp, Administrator of Transit

PURPOSE OF THE MEASURE:

This measurement provides the percent of state funds invested in other modes of transportation. Modes include aviation, rail, transit, waterways and freight.

MEASUREMENT AND DATA COLLECTION:

Investments in other modes of transportation represent the state and federal dollars spent on aviation, rail, transit, waterways and freight. Federal investments represent the amount spent on MoDOT-administered programs only. Investments are limited to the amounts appropriated by the state legislature each year.

USE RESOURCES WISELY

Percent of state funds invested in other modes of transportation-6f

During the long-range planning process, "On the Move," Missourians chose more transportation choices as a top priority. MoDOT works closely with its multimodal partners to provide more choices within the available funding amounts. In fiscal year 2014, state and federal expenditures for multimodal programs increased \$3 million and \$3.5 million, respectively.

Aviation - State expenditures decreased by \$1.3 million to \$4 million, but federal expenditures increased by \$8 million to \$26 million. In FY 2014, state funds were 13 percent of total funds invested. Local funds in FY 2014 totaled \$3.1 million. FAA and State Aviation Trust funds require a minimum local match of 10 percent.

Rail - State expenditures increased by \$800,000 to \$10.1 million, and federal expenditures decreased by \$200,000 to \$13.3 million. In FY 2014, state funds were 43 percent of total funds invested. Ticket revenue from the Missouri River Runner and Railroad funds contributed \$10.1 million to offset state costs in FY 2014.

Transit - State expenditures decreased by \$100,000 to \$2.9 million, and federal expenditures decreased by \$4.1 million to \$25.9 million. In FY 2014, state funds were 10 percent of total funds invested. FTA funds require a local match of varying percentages depending on the program. Local funds contributed to the State Transit Assistance Program and the Missouri Elderly and Handicapped Transportation Assistance Program (MEHTAP) program were insignificant with state expenditures accounting for less than 1 percent of these two programs combined.

Waterways - State expenditures increased by \$2.7 million to \$3.3 million, but federal expenditures decreased from \$200,000 to zero dollars. Local funds in FY 2014 totaled \$700,000. The waterways capital improvement program requires a minimum local match of 20 percent.

Freight - State expenditures increased from zero dollars to \$900,000, but federal expenditures were zero dollars. Local funds in FY 2014 totaled \$200,000. The freight enhancement program requires a minimum local match of 20 percent.





RESULT DRIVER: Brenda Morris, Financial Services Director

MEASUREMENT DRIVER:

Kenny Voss, Local Program Administrator

PURPOSE OF THE MEASURE:

This measure tracks the percent of available Local Program funds committed to projects.

MEASUREMENT AND DATA COLLECTION:

The data is obtained from Federal Highway Administration's Fiscal Management Information System and is based on the federal fiscal year from October 1 through September 30. The committed amounts represent what FHWA will reimburse for the project. The available amounts represent the federal program funds distributed to local sponsors. The goal of this measure is to commit all federal funds available to local public projects.

USE RESOURCES WISELY

Percent of local program funds committed to projects-6g

Some of the federal funds MoDOT receives are required to be passed through to local entities, such as cities and counties. Available funds for local entities include those that are allocated this year and those that have not been committed in prior years. When local entities use federal funds, they provide the matching funds. Matching funds provided by local entities help MoDOT use all of the transportation federal funding available to Missouri.

As of the second quarter of federal fiscal year 2015, 40 percent (\$60 million) of the \$152 million in available funds has been committed to local projects. All federal funds for fiscal year 2015 are not yet available. This represents a \$2 million decrease in commitments compared to the same period in FFY 2014. Since FFY 2012, the percent of local program funds committed to projects has increased from 45 percent to 73 percent. MoDOT has a goal of 90 percent of local program funds committed to projects for federal fiscal year 2015.



Sunny Wilde, Resource Management Specialist

PURPOSE OF THE MEASURE:

This measure tracks the percent of inactive federal projects.

MEASUREMENT AND DATA COLLECTION:

The data is obtained from Federal Highway Administration's quarterly inactive projects report and is based on the federal fiscal year from October 1 through September 30. The inactive report includes projects with no expenditure activity for more than one year. MoDOT uses a tracking database to assist in the analysis and reporting of inactive projects.

USE RESOURCES WISELY

Inactive projects-6h

Project funds must be spent for taxpayers to benefit from their transportation investments. As resources continue to dwindle, ensuring available resources are committed to active projects is essential to maintaining the existing transportation system. Due to project schedule delays or lags in receiving project invoices, funds sometimes do not get spent in timely manner. When this happens, MoDOT analyzes projects to determine why there has been no activity, and actions are taken to accelerate project activity. Discussions with local project sponsors often are used to ensure invoices are submitted on a timely basis.

Due to MoDOT's increased efforts, inactive projects have declined from 2.9 percent in 2012 to 0.2 percent (\$1.9 million) in the second quarter of 2015. For the second quarter of federal fiscal year 2015, Missouri's inactive projects were below FHWA's national goal of 2 percent and below the national total inactive percentage of 1.1 percent. MoDOT's continued efforts to identify projects that will potentially become inactive in the coming months and taking any necessary actions on those projects has ensured the funds committed to projects are valid.



Doug Hood, Financial Services Administrator

PURPOSE OF THE MEASURE:

This measure tracks the amount of advance construction funds.

MEASUREMENT AND DATA COLLECTION:

MoDOT collects this data from Federal Highway Administration's Fiscal Management Information System. The federal fiscal year is from October 1 to September 30. Fiscal years 2016-2020 are estimates from the current financial forecast. The amount of advance construction is based on the total estimated project costs.

USE RESOURCES WISELY

Amount of advance construction-6i

Advance construction is an innovative finance tool MoDOT uses to more efficiently manage its limited resources. Advance construction helps provide the 20 percent match required for federal funds. Without advance construction, MoDOT would be unable to match federal funds today. As the amount of advance construction declines, the ability to match federal funds becomes more difficult.

By 2017, MoDOT won't have enough state revenue to match federal funds. That means Missouri's unmatched federal funds will be directed to other states and lost forever to improve Missouri's transportation system.



Kevin James, Assistant District Engineer

PURPOSE OF THE MEASURE:

This measure tracks progress of fleet usage compared to department thresholds based on annual mileage over the life of the equipment. The measure also tracks fuel efficiency for the five vehicle classes representing the majority of fleet expenditures and miles driven.

MEASUREMENT AND DATA COLLECTION:

Data reflects performance for the vehicle based on its age. Ideal fleet usage falls within 75 to 125 percent of the vehicle's threshold. For example, a passenger car has a threshold of 15,000 miles per year. If a car is three years old, the mileage should be between 33,750 to 56.250 miles. The fleet threshold analysis graphs are updated in January and July. This measure also reports MoDOT's total fuel consumed and shows how fleet choices can affect fuel economy. The fuel data is collected in the statewide financial system. Mileage data is obtained from the FASTER fleet management system.

USE RESOURCES WISELY

Fleet usage and fuel efficiency-6j

The fuel consumption and fuel efficiency measures are both following the desired trend directions. Fuel consumption so far in fiscal year 2015 has decreased by 867,233 gallons compared to the same period in FY 2014. Mileage recorded for these five vehicle classes in FY 2015 has reduced 3,044,474 miles compared to FY 2014. During third quarter FY 2015, fewer gallons were used to perform snow and ice removal. Changes in fuel use by activity resulted in an increase in fuel efficiency of 0.58 miles per gallon from the same period last year.





Fleet threshold analysis based on life of vehicle. *Annual miles and/or hours threshold
USE RESOURCES WISELY





MEASUREMENT **DRIVER:**

Jay Bestgen, Assistant State Construction and **Materials Engineer**

PURPOSE OF THE MEASURE:

This measure tracks MoDOT's recycling efforts in construction projects and internal operations.

MEASUREMENT **AND DATA COLLECTION:**

The recycled material used in construction projects is measured through MoDOT's SiteManager database, which tracks material incorporated into projects. Data is collected on an annual basis due to the seasonal nature of construction. Recycled material from internal MoDOT operations, are captured from the annual Missouri State Recycling Program report and from other internal records.

USE RESOURCES WISELY

Number of tons of recycled material-6k

In 2004, recycled asphalt pavements and roof shingles started being incorporated into new asphalt pavements to help offset increasing costs. While the cost of rock, sand, liquid asphalt, labor, fuel and equipment have increased since 2004, recycling efforts have helped offset the cost increases. In 2014, 31 percent of the 2.9 million tons of new asphalt pavement constructed came from recycled components. This saved MoDOT and taxpayers about \$9 per ton, or \$23.8 million overall. The \$23.8 million savings would be equivalent to improving over 500 miles of a two-lane roadway with a thin overlay.

MoDOT also engages in internal recycling efforts. The amount of recycled materials has decreased steadily since 2011, resulting from the consolidation of facilities and reduction of stockpiled materials. The majority of the recycled products come from aluminum, cardboard, office paper, scrap rubber/ tires, scrap metal, motor oil and wood pallets. In fiscal year 2014, 1,700 tons of scrap metal made up the majority of the recycling, followed by 360 tons of rubber/tires (equivalent to about 32,000 passenger car tires) and 330 tons of motor oil (equivalent to over 84,000 gallons). In FY 2014, it cost more than \$240,000 to recycle some items, such as scrap rubber/tires and to shred documents. However, other recycling efforts returned more than \$850,000 in revenue. The result was slightly more than \$610,000 in net revenue.

Recycling is good for the environment and helps stretch limited funding. With costs continuing to increase, fuel tax revenues declining and federal funding being uncertain, it is important to focus on increasing recycling efforts.



USE RESOURCES WISELY





MEASUREMENT DRIVER:

Gayle Unruh, Environmental and Historic Preservation Manager

PURPOSE OF THE MEASURE:

This measure tracks the annual trend of compliance with environmental laws and regulations, which includes obtaining and abiding by specific requirements contained in various permits.

MEASUREMENT AND DATA COLLECTION:

Notices of Violation are similar to a traffic ticket as they are written to indicate you are operating outside of legal limits. A Letter of Warning indicates that there are problems and if not corrected could lead to an NOV. Issued by environmental regulatory agencies, NOVs, LOWs and letters of satisfactory inspections are collected and tracked by location and/or project. The measure reports by calendar year the number of NOVs, LOWs and satisfactory inspections received by the department for any activity.

USE RESOURCES WISELY

Number of environmental warnings and violations – 61

MoDOT seeks to reduce its impact on Missouri natural resources by complying with environmental laws and regulations. The department is serious about protecting human health, air, water, wildlife and ecosystems. Compliance with environmental laws and regulations helps to prevent and counteract possible damage from MoDOT activities. Under current funding constraints, it is also important to avoid violations. Violations with fines assessed against MoDOT result in less funding for transportation projects.

MoDOT has a zero-tolerance policy toward any NOV from regulating agencies, such as the Missouri Department of Natural Resources or the Environmental Protection Agency. Department employees study the situations that lead to NOVs and LOWs and then take action to prevent future occurrences.

For calendar year 2015, MoDOT has received zero NOVs. The number of NOVs during the past five years (2011-2015) has ranged from zero to three, trending downward.

MoDOT received one LOW from DNR in calendar year 2015 for a sewer overflow in a location where it is reasonably certain to cause pollution of waters of the state. LOWs have ranged from one to 15 in the past five years. They were significantly down in 2014 from a high in 2013.

The department received one letter of satisfactory inspection from DNR for compliance with land disturbance requirements on a construction project.

MoDOT continues to work with facility supervisors and construction inspectors through training, inspections, and dialog to help with permit compliance.

USE RESOURCES WISELY





Note: There is no benchmark data presented with this measure. MoDOT has a zero-tolerance policy toward NOVs. Therefore, regardless of what other states are doing, MoDOT's desired results are zero NOVs, because NOVs are usually violations of law and state statute.

OPERATE A RELIABLE AND CONVENIENT TRANSPORTATION SYSTEM

MEASUREMENT DRIVER:

Eric Kopinski, Stormwater Compliance Coordinator

PURPOSE OF THE MEASURE:

This measure is to help MoDOT track compliance with its stormwater permit and court ordered consent decree, which resulted from stormwater violations in 2010 and 2011. The consent decree establishes requirements for MoDOT activities where greater than one acre of land is disturbed.

MEASUREMENT AND DATA COLLECTION:

A stormwater compliance database will be used to record the compliance of MoDOT and construction contractors with the following requirements:

• to maintain personnel in stormwater oversight positions

• to obtain the required stormwater training

• to ensure timely stormwater inspections

• to ensure the resulting stormwater control repairs are completed.

The database also tracks the fines that result from not meeting the requirements of the decree. The data reported in this measure will be both the number of failures to meet the requirements and the dollar amount of the stipulated penalties that result during each quarter of the calendar year for the next three years.

Number of stormwater violations-6m

Number of Stormwater Non-compliance Events and Resulting Fines



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ADVANCE ECONOMIC DEVELOPMENT Machelle Watkins, Transportation Planning Director



MEASURES OF DEPARTMENTAL PERFORMANCE



Missouri's transportation system has a direct impact on the state's economy. Missouri businesses depend on our roadways, rail, waterways and airports to move their products and services both nationally and globally. An efficient, well-connected transportation system helps attract new businesses to our communities and helps existing businesses maintain a competitive edge with easy customer access, minimal shipping costs and strong links to a diverse workforce. We believe investments in transportation should create jobs and provide opportunities for advancement to all Missouri citizens. An investment in transportation should provide a positive economic impact on both the citizens we serve and the communities in which they live.

Machelle Watkins, Transportation Planning Director

MEASUREMENT DRIVER:

Eva Voss, Senior Transportation Planner

PURPOSE OF THE MEASURE:

This measure tracks the economic impact resulting from the state's transportation investments.

MEASUREMENT AND DATA COLLECTION:

MoDOT works with the Economic Development Research Group to perform economic impact analyses for the state's transportation investments. The analyses are performed using a model called the Transportation Economic Development Impact System, or TREDIS. The TREDIS model results demonstrate a strong link between transportation investment and economic development.

ADVANCE ECONOMIC DEVELOPMENT

Economic return from transportation investment-7a

Investment in transportation improvements have long been held as a major economic engine that drives growth in job creation, personal income and new value added to Missouri's economy. However, decreasing transportation funding and increasing costs have decreased at the levels of economic return.

Based on MoDOT's 2015-2019 Statewide Transportation Improvement Program investment of \$3.5 billion, the program is estimated to create 3,946 new jobs. Transportation investments are expected to contribute \$10.1 billion of economic output during the next 20 years, resulting in a \$2.97 return on every \$1 invested in transportation.

The most recent economic analysis of the 2015-2019 STIP included an updated methodology, which included higher wage rates, increased labor productivity and fewer large transportation improvement projects. While providing a more accurate estimate of economic return, the overall result is transportation investments support fewer jobs and a smaller return for every dollar invested. The figures tell a powerful story of economic success, but are also a sign of missed opportunity. When compared to the previous year's STIP (2014-2018), the number of jobs created estimate decreased 40 percent. For the first time, this year's results also include multimodal projects.

As decreasing transportation funding and increasing costs chip away at the levels of economic return, the situation will become more drastic as Mo-DOT's annual construction program drops from over \$700 million in 2015 to less than \$600 million in 2016, and drops to slightly more than \$300 million in 2017-2019.







Machelle Watkins, Transportation Planning Director

MEASUREMENT DRIVER:

Ben Reeser, Long-Range Transportation Planning Coordinator

PURPOSE OF THE MEASURE:

This measure analyzes the strength of Missouri's transportation infrastructure for conducting business.

MEASUREMENT AND DATA COLLECTION:

Data for this measure is obtained from an annual study conducted by the Consumer News and Business Channel. The study scores all 50 states on 56 measures of competitiveness developed collaboratively with business groups including the National Association of Manufacturers and the Council on Competitiveness, as well as the states themselves. Metrics are separated into 10 categories, including infrastructure and transportation. The infrastructure and transportation category measures the following for each state:

- Value of goods shipped by air, waterways, roads and rail (2013 based on quantity of goods shipped, not value)
- Availability of air travel
- Quality of roads and bridges
- Time it takes to commute to work (added in 2012)
- Supply of safe drinking water (added in 2013)

ADVANCE ECONOMIC DEVELOPMENT

National ranking of transportation infrastructure-7b

Transportation infrastructure leads to the attraction of new businesses and of employers looking to expand. These actions lead to new jobs, new opportunities and new revenue for states. A robust transportation infrastructure allows manufacturers to distribute their products quickly and inexpensively and allows citizens to get to work and to conduct business efficiently.

Prior to 2012, Missouri's national rank in transportation infrastructure was in the top nine. In 2012, Missouri decreased to 20 in the national ranking as the measure added time it takes to commute to work. The ranking improved in 2013 as the measure changed to quantity of goods shipped instead of value. Missouri's ranking declined again in 2014 as the measure changed back to value of goods shipped instead of quantity.

Missouri's ranking of 13th best in the nation is challenging to maintain as the state's annual transportation infrastructure funding decreased from \$1.2 billion to \$700 million beginning in 2011, and is projected to decline to \$325 million beginning in fiscal year 2017. At that point, MoDOT will not be able to keep the transportation system in the shape it is in today. Many of the factors used to rank transportation infrastructure are expected to decline.





Transportation Planning Director

MEASUREMENT DRIVER:

Tona Bowen, Financial Services Administrator

PURPOSE OF THE MEASURE:

The measure reports how Missouri's state highway system funding situation compares to that of other states.

MEASUREMENT AND DATA COLLECTION:

Per state revenue and highway mileage counts used in this measure are gathered from Federal Highway Administration annual reports. The information is updated as the data becomes available from the Federal Highway Administration. The bridge count information was received from Better Roads magazine.

ADVANCE ECONOMIC DEVELOPMENT

MoDOT national ranking in revenue per mile-7c

Missouri's revenue per mile of \$58,234 currently ranks 46th in the nation. Missouri's state highway system, consisting of 33,891 miles, is the seventh largest system in the nation. In addition, Missouri ranks sixth nationally in number of bridges with 10,376 bridges. New Jersey's revenue per mile of \$1,859,492 ranks first. However, its state highway system includes only 2,326 miles and 2,408 bridges.

The cost to build and maintain roads and bridges increased sharply during the past 10 years due to inflation. In contrast, revenues from fuel taxes continue to decrease as vehicles become more fuel efficient and people drive less.

MoDOT stretches transportation revenue as far as it can, in order to put as much as possible into roads and bridges. However, MoDOT's revenue per mile will continue to plummet if the current projections hold true. By 2020, MoDOT won't have enough state revenue to match federal funds. The unmatched funds will be given to other states instead. By fiscal year 2017, construction funding will not cover the cost of keeping Missouri's transportation system in the shape it is in today and won't begin to address the system expansion projects Missourians desire in their transportation system.





Machelle Watkins, Transportation Planning Director

MEASUREMENT DRIVER:

Cheryl Ball, Waterways and Freight Administrator

PURPOSE OF THE MEASURE:

This measure tracks the estimated cost of transporting representative Missouri products from key economic industries (chemical manufacturing, transportation equipment, and agriculture) to top destinations as compared to shipping the same products from competitor states. The relative costs for these illustrative products serve as a proxy for Missouri's competitiveness on transport costs as a whole.

MEASUREMENT AND DATA COLLECTION:

Transearch 2011 freight data was used to identify products representative of Missouri's economic drivers, as well as the top origins, destinations, and modes of transport. Estimates of the transport costs are calculated using different external sources for the modes: (1) The 2014 American Transportation Research Institute (ATRI) report, An Analysis of the Operational Costs of Trucking, (2) AAA's diesel on-highway price data, (3) the Bureau of Labor Statistics wage data, (4) the Surface Transportation Board's (STB) Uniform Railroad Costing System (URCS), and (5) the USDA's Average Weekly River Barge Rates.

ADVANCE ECONOMIC DEVELOPMENT

Goods movement competitiveness-7d

Product transportation costs vary depending on factors including the efficiency, reliability, safety and modal options in a state's transportation system. Keeping transportation costs low is important to retaining businesses and attracting new business to create new employment. Reducing any of these factors could result in higher prices in local stores, and reduced competitiveness for Missouri products.

MoDOT plays an active role in keeping costs low by working with existing businesses to identify transportation barriers that reduce their competitiveness. MoDOT continually aims to find solutions for these barriers, but the stark reality of Missouri's transportation funding situation limits the agency's ability to fully respond to those needs.

Soybeans were the most valuable crop in 2014 bringing in more than \$2 billion in receipts and employing nearly 300,000 workers. A record-high harvest in Missouri moved the state from 7th to 6th largest soybean producer in the US. The Bootheel region grows approximately 40 percent of Missouri's agricultural output, with New Madrid County being the largest producer of soybeans. This crop is transported by truck to the Mississippi River and then by barge to New Orleans for international distribution. The average cost per ton from New Madrid to New Orleans rose in 2014 from \$11.95 to \$18.83. The price increase reflects record-high crop harvest combined with overall reduction in available capacity.

Transportation equipment is one of the state's largest exports, bringing in over \$2.7 billion to the state economy in 2013 and employing nearly 35,000 workers. Finished motor vehicles were the second most valuable in this industry at \$1.6 billion, behind motor vehicle parts. Claycomo's truck transportation cost to Toronto decreased from \$237 to \$227 this year. While the trucking cost is still relatively higher than most of the competitor states, its central location provides versatility to Ford with economical transportation to domestic markets by rail. Missouri's rail connection to Los Angeles' major international shipping port provides the lowest cost per vehicle among competitors at an average of \$291 per vehicle.

Chemical manufacturing is Missouri's second largest international export bringing in more than \$2.2 billion in 2013 and employing 7,000 Missourians, the fifth largest of all manufacturing sectors. Agricultural products are a significant sector of Missouri's chemical industry. The clusters of chemical manufacturing are located primarily in the Northeast, Northwest, and St. Louis regions. These products are shipped all over the world. The average cost of the trip from Hannibal, MO, to Los Angeles decreased to \$161, which is very competitive with the other large chemical producing states.



Missouri Department of Transportation 7d2



Transportation Planning Director

MEASUREMENT DRIVER:

Eric Curtit, Administrator of Railroads

PURPOSE OF THE MEASURE:

This measure tracks the amount of freight moved by Missouri's largest transportation modes.

MEASUREMENT AND DATA COLLECTION:

Two times a year, a freight tonnage estimator is used to calculate the amount of freight moved by railroads and highways. The estimator provides timely information for Missouri's primary freight movers. Freight data for aviation and waterways is a combination of direct surveys and trend analysis. This measure's data is estimated but provides an indication of current trends and movements.

ADVANCE ECONOMIC DEVELOPMENT

Freight tonnage by mode-7e

Everything comes from somewhere. How it gets from place to place depends on a number of factors. These modes experience volume shifts from year to year, often based on the health of the national economy and shifts in consumer preferences. A key element to a healthy economy is a robust transportation system.

Unfortunately, transportation funding is decreasing, making it difficult to maintain highways and bridges in their current condition. State funding cannot address transportation needs other than highways and bridges. Moving 961 million tons of freight a year requires thoughtful improvements of transportation facilities such as ports, railroads and airports, yet many of these needs remain underfunded.

During 2014, Missouri experienced an increase in movements as compared to the same period last year. Railroad tonnage was up slightly, supported by increases in crude oil and intermodal shipments. Motor carriers hauled the most tonnage, which can be attributed to continuing increases in durable good shipments. Durable goods, such as appliances and furniture, tend to move by truck. Aviation maintained tonnage similar to previous levels. Public ports experienced increased tonnage, which is attributed to crude oil shipments and increased agriculture product shipments.



Transportation Planning Director

MEASUREMENT DRIVER:

Aaron Hubbard, Motor Carrier Services Project Manager

PURPOSE OF THE MEASURE:

This delay measure is proposed to be used as a Moving Ahead for Progress in the 21st Century Act national freight performance measure.

MEASUREMENT AND DATA COLLECTION:

Annual hours of truck delay (AHTD) quantifies the extra time spent by commercial motor vehicles on an interstate corridor based upon a state-determined threshold. Missouri's threshold is set at 55 mph in St. Louis and Kansas City. All other rural areas have a threshold of 65 mph. Speeds below that rate indicate congestion and/or other delay factors for trucks. Missouri chose this threshold because many commercial trucks are governed at 65 mph even though the posted speed limit for most interstate highways is 70 mph. Commercial vehicle delay on the interstate system may be caused by congestion due to factors such as traffic, severe weather, safety inspections or roadway geometrics. AHTD is composed of vehicle miles traveled by trucks, speed of travel and the desired speed of travel.

ADVANCE ECONOMIC DEVELOPMENT



Annual hours of truck delay-7f

Time is money. Delay impacts the cost of goods and reduces an organization's ability to compete on a global basis. American businesses require more operators and equipment to deliver goods when delays lengthen shipping time. Businesses must hold more inventory in more distribution centers to deliver products quickly when lengthier trips are unreliable and slow. Slow traffic also affects the local economy by reducing the number of workers and job sites within easy reach of a location.

Growth in freight volumes is a major contributor to congestion in urban areas and on intercity routes. Long-distance freight movements are often a significant contributor to local congestion, and local congestion typically impedes freight to the detriment of local and distant economic activity. Unfortunately Missouri's construction budget is falling to a point that will make it very difficult for MoDOT to address congestion factors in the future. In fiscal year 2017, the \$325 million construction budget will not even cover the costs of keeping today's transportation system in the status quo.

On average, those shipping by truck can expect a delay of 25.7 minutes per trip on I-70, 21.5 minutes on I-44, 11.9 minutes on I-55 and 8.9 minutes on I-35. The annual cost of delay for the trucking industry on I-70 is \$56.7 million, \$79.1 million on I-44, \$30.0 million on I-55, and \$21.2 million on I-35. Given MoDOT's financial situation, delays and the cost of delay are expected to grow.





Transportation Planning Director

MEASUREMENT DRIVER:

Chuck Gohring, Motor Carrier Services Assistant Director

PURPOSE OF THE MEASURE:

This reliability measure is proposed to be used as a Moving Ahead for Progress in the 21st Century national freight performance measure. By annually comparing the reliability index number for each corridor, MoDOT can determine if the corridor has become less or more reliable. A lower index for a succeeding year means reliability has improved.

MEASUREMENT AND DATA COLLECTION:

This measure uses the Truck Reliability Index, a ratio of the total truck travel time needed to ensure on-time arrival four out of five times to the agencydetermined threshold speed of 55 mph in St. Louis and Kansas City, and 65 mph in all other rural areas. The ratio is used to gauge consistency in truck freight travel times. Further guidance about data requirements and measure methodology will be forthcoming from the Federal Highway Administration.

ADVANCE ECONOMIC DEVELOPMENT

Truck reliability index-7g

The reliable movement of goods by truck is critical to Missouri's economy. Travel time reliability is the variation of travel time for the same trip from day to day. When the variability is large, the travel time is unreliable; and, vice versa, when there is little to no variability, the travel time is reliable. Variable or unpredictable travel times make it more difficult for motor carriers and shippers to plan their travel, often forcing them to add extra time to protect themselves against the uncertainty of arrival times. This uncertainty can lead to unproductive travel decisions that waste time and money. The map includes four freight-significant corridors: I-70, I-44, I-55 and I-35. The color green indicates the most reliable travel times; yellow slightly less reliable; and red the least reliable of travel times.

MAP-21

MoDOT continually seeks ways to deliver the infrastructure to support reliable trips for drivers and to help keep costs down. Many new strategies and technologies for operating highway systems are emerging that can help improve travel-time reliability, however with declining state and federal transportation funding and increasing costs to do business, MoDOT is unable to make needed reliability investments.





Machelle Watkins, Transportation Planning Director

MEASUREMENT DRIVER:

Doug Hood, Financial Services Administrator

PURPOSE OF THE MEASURE:

This measure tracks the number of jobs created through MoDOT's economic development program.

MEASUREMENT AND DATA COLLECTION:

Data for this measure is collected from a partnership development database. This measure is based on the state fiscal year – July 1 to June 30.

ADVANCE ECONOMIC DEVELOPMENT

Jobs created by projects funded through the economic development program-7h

The Cost Share/Economic Development Program builds partnerships with local entities to pool efforts and limited resources in order to deliver state highway and bridge projects. In the past, MoDOT allocated \$45 million of Cost Share/Economic Development funds annually, based on the funding distribution formula set by the Missouri Highways and Transportation Commission. Each year, a minimum of \$5 million were set aside for projects that demonstrated economic development through job creation. MoDOT contributed up to 100 percent of the total cost for projects on the state highway system if the Missouri Department of Economic Development verified the project created jobs. Retail development projects were not eligible.

In light of a plummeting 2016-2020 construction program, the Missouri Highways and Transportation Commission suspended the Cost Share/Economic Development Program on January 8, 2014. With contractor awards dropping from just more than \$600 million in 2016 to about \$325 million beginning in 2017, MoDOT will be unable to maintain the existing system, much less pursue projects that add to the system. Projects already reviewed and approved by the cost share committee are eligible to move forward. However, no additional projects will be considered for funding.

In fiscal year 2012, Edward Jones created 588 verified new jobs in conjunction with interchange improvements at I-270 and Dorsett Road in St. Louis County.





Transportation Planning Director

MEASUREMENT DRIVER:

Ida Mitchell, Senior Human Resources Specialist

PURPOSE OF THE MEASURE:

This measure tracks minority and female employment in MoDOT's workforce and compares it with availability data from the Missouri 2010 Census report.

MEASUREMENT AND DATA COLLECTION:

The SAM II database is used to collect data. The Missouri 2010 Census data is used as the benchmark for this measurement.

ADVANCE ECONOMIC DEVELOPMENT

Percent of minorities and females employed-7i

By placing the right people in the right position, MoDOT can better serve its customers and help fulfill its responsibilities to taxpayers.

The number of minority employees increased by 2.9 percent (479 to 493) from the second quarter of fiscal year 2015 to the third quarter of FY 2015.

The number of female employees remained the same from second quarter of FY 2015 to third quarter of FY 2015 (949 to 949). When compared to overall employment, the percent of females decreased (18.86 to 18.79) but is still above Missouri availability of 16.16 percent. The percent of minorities increased (9.53 to 9.76), but is below Missouri availability of 11.74 percent. Total full-time employment during this quarter increased from 5,027 to 5,051.

During the third quarter of FY 2015, department staff partnered with local groups to offer CDL training and attended meetings of organizations geared towards minorities to talk to attendees about career opportunities at Mo-DOT. Supervisors continue to refer minority and female employees to the mentor program and ALD. The department continues to focus on increasing MoDOT's applicant pool with qualified minorities and females. All the local offices have been very active in their respective communities talking with diverse groups about career opportunities and advertising MoDOT jobs in publications that are highly visible to minorities and females.







Machelle Watkins, Transportation Planning Director

MEASUREMENT DRIVER:

Lester Woods, Jr., External Civil Rights Director

PURPOSE OF THE MEASURE:

This measure tracks the percent of Disadvantaged Business Enterprise use on construction and engineering projects.

MEASUREMENT AND DATA COLLECTION:

Data is collected through Site Manager for each construction project. The overall DBE goal is a yearly target established by MoDOT and the Federal Highway Administration regarding the expected total DBE participation on all federally-funded construction projects. Individual DBE project goals are determined by subcontract opportunity, project location and available DBE firms that can perform the scope of work. DBE utilization is tracked for each construction project identifying the prime contractor, contract amount, the established goal and how the prime contractor fulfilled the goal. This measure is based on the federal fiscal year, which is Oct. 1 through Sept. 30. Collection of data of the DBE classifications began in FFY 2012.

ADVANCE ECONOMIC DEVELOPMENT

Percent of disadvantaged business enterprise participation on construction and engineering projects-7j

MoDOT believes it is good business to support diversity among its contractors, subcontractors and suppliers. Contractors, subcontractors and suppliers working on construction projects that receive federal aid or federal financial participation are required to take reasonable steps to ensure DBEs have an opportunity to compete for and participate in project contracts and subcontracts.

The overall DBE goal for FFY 2015 is 13.49 percent. The DBE participation for the first quarter of FFY 2015 is 9.70 percent. This is a 3.44 percent decrease from FFY 2014. Of the 9.70 percent utilization, 2.33 percent is participation from minority-owned DBE firms, 0.19 percent is participation from minority women-owned DBE firms and 7.18 percent is participation from women-owned DBE firms. The collective goals set for projects closed during this period amounted to 7.44 percent.

MoDOT continues to support diversity among its contractors, subcontractors and suppliers even as the funding available for its construction program declines.







Machelle Watkins, Transportation Planning Director

MEASUREMENT DRIVER:

Rebecca Jackson, General Services Manager

PURPOSE OF THE MEASURE:

This measure tracks the department's non-program spending with certified minority, women, and disadvantaged business enterprises (MWDBE). Vendors may be certified through the Office of Administration as well as the Missouri Regional Certification Committee. Included in these expenditures are items such as materials, equipment, tools and supplies. Program spending, including construction, design consultants, local agencies, highway safety and multimodal programs and exempted activities such as utilities, postage, organizational memberships, conferences and travel are excluded from total dollars spent.

MEASUREMENT AND DATA COLLECTION:

Data is obtained from the statewide financial accounting system expenditure reports and United Missouri Bank purchasing card reports. Certified vendors are maintained in a statewide procurement vendor database.

ADVANCE ECONOMIC DEVELOPMENT

Expenditures made to certified minority, women and disadvantaged business enterprises-7k

Ensuring MoDOT spending is representative of Missouri communities advances economic development for all business enterprises. Historical data helps identify opportunities for improvement. Improvement efforts include training staff who have procurement authority, outreach to MWDBE vendors to encourage them to become certified and focused inclusion efforts.

Fiscal year 2015 third quarter results show an increase of \$400,000 in MWDBE disbursements compared to FY 2014. Compared to third quarter FY 2014, the FY 2015 percentage of MWDBE expenditures spent increased by 0.8 percent.

With declining state and federal transportation funding and the increasing costs to do business, the dollars spent with all vendors, including MWDBE vendors, are expected to fall. This measure will continue to track the department's efforts to ensure the vendor pool is representative of the business community as a whole.



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