# Tracker Measures of Departmental Performance





# **Greetings from MoDOT**

The Missouri Department of Transportation is committed to being open and transparent. We want you to know what we do well, what we don't do so well and what we are doing to get better. That is why we created the Tracker.

This document is your window into MoDOT – warts and all. It invites you to hold us accountable for exceeding your expectations. You expect MoDOT to get the best value out of every dollar spent. You expect us to make highways smoother and safer, soon. You expect us to fix bad bridges, be responsive and to proactively give you the information you need. You expect us to provide a world-class transportation experience.

We share your expectations and have built 18 tangible results around them. These results guide us everyday as we go about the business of delighting our customers. In the Tracker, you will see that we have established measures to gauge our progress and we are comparing ourselves to the best organizations in the country.

You can use the Tracker to see how we are measuring up. We make it available in a printed format and on our website at *www.modot.org*. Missouri's transportation system will not improve unless we all work together. The Tracker is one of the many ways you can help. Please look it over and let us know how we are doing.

Sincerely,



### Mission

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



Pete K. Rahn, Director Missouri Department of Transportation

# **Tangible Results**

- Uninterrupted Traffic Flow
- Smooth and Unrestricted Roads and Bridges
- Safe Transportation System
- Roadway Visibility
- Personal, Fast, Courteous and Understandable Response to Customer Requests (Inbound)
- Partner With Others to Deliver Transportation Services
- Leverage Transportation to Advance Economic Development
- Innovative Transportation Solutions
- Fast Projects That Are of Great Value
- Environmentally Responsible
- Efficient Movement of Goods
- Easily Accessible Modal Choices
- Customer Involvement in Transportation Decision-Making
- Convenient, Clean and Safe Roadside Accommodations
- Best Value for Every Dollar Spent
- Attractive Roadsides
- Advocate for Transportation Issues
- Accurate, Timely, Understandable and Proactive Transportation Information (Outbound)

# **Value Statements**

#### MoDOT will -

- support and develop employees because we believe they are the key to our success.
- be flexible because we believe one size does not fit all.
- honor our commitments because we believe in integrity.
- encourage risk and accept failure because we believe in getting better.
- be responsive and courteous because we believe in delighting our customers.
- empower employees because we trust them to make timely and innovative decisions.
- not compromise safety because we believe in the well-being of employees and customers.
- provide the best value for every dollar spent because we're taxpayers too.
- value diversity because we believe in the power of our differences.
- be one team because we all share the same mission.
- use teamwork because it produces the best results.
- foster an enjoyable workplace because we care about each other and our mission.
- be open and honest because we must be trustworthy.
- listen and seek to understand because we value everyone's opinion.
- treat everyone with respect because we value their dignity.
- seek out and welcome any idea that increases our options because we don't have all the answers.
- always strive to do our job better, faster, and cheaper because we want to meet more of Missouri's needs.

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**Please Note:** Tangible Results are listed in reverse alphabetical order, not by importance.



Tangible Result Driver – Don Hillis, Director of System Management

Missouri drivers expect to get to their destinations on time, without delays. Traffic, changes in weather, work zones and highway incidents can all impact their travel. MoDOT works to ensure that motorists travel as efficiently as possible on the state system by better managing work zones, snow removal and highway incidents, and by using the latest technology to inform motorists of possible delays and available options. Better traffic flow means fewer crashes.

## Average travel indices and speeds on selected freeway sections

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Troy Pinkerton, Traffic Liaison Engineer

#### **Purpose of the Measure:**

This measure tracks the average travel index values and average speeds on various freeway sections. The desired trend is for the travel index to remain at or near a value of 1.00. A value of 1.00 is representative of a free flow condition. The travel index is directly related to the average speed. The travel index represents the level of congestion by taking into consideration not only average speed but also the traffic volumes. The travel index is calculated according to the following equation:

#### Travel Index = Average speed/Free flow speed

Where: Average speeds are taken from sensor data.

The free flow speed is constant and is determined by averaging the speeds at which vehicles are traveling when the volumes are less than 200 vehicles per hour per lane (vphpl).

#### **Measurement and Data Collection:**

Data from the St. Louis and Kansas City regions are provided by MoDOT's traffic management centers. Information about the St. Louis traffic management center, Gateway Guide can be found at <a href="http://www.gatewayguide.com">http://www.gatewayguide.com</a> and information about the traffic management center in Kansas City, KC Scout can be found at <a href="http://www.kcscout.net/">http://www.kcscout.net/</a>. Data for the St. Louis region is also provided through a partnership with Traffic.com. Data for each location is updated quarterly.

#### **Improvement Status:**

#### Kansas City Metropolitan region:

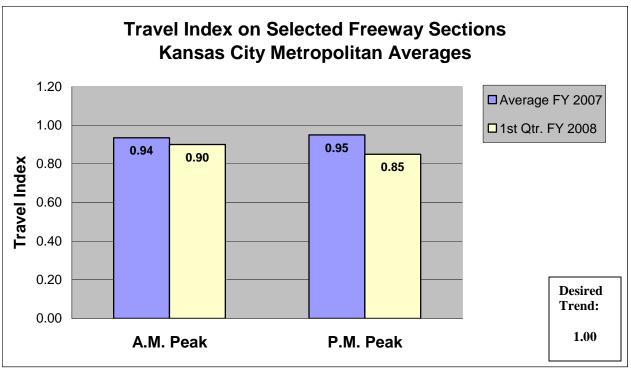
As shown on the graph, the freeway systems in the Kansas City region are performing below the free flow condition during the peak hours - down from 0.93 to 0.90 in the morning and 0.93 to 0.85 in the evening, for first quarter fiscal year 2008. The average a.m. and p.m. peak travel indices for FY 2007 for this region is 0.94 and 0.95, respectively. Most of the Kansas City region has been free from significant work zone impacts. However, the construction activities at the Paseo Bridge are causing increased congestion in the morning commute into downtown Kansas City. Likewise, the evening peak along eastbound Interstate 435 prior to the 3-Trails Crossing has experienced increased congestion due to the closing of the northbound Route 71 ramp from eastbound I-435. The ramp has since been reopened, and it is expected to increase in capacity and speed in the next quarter.

#### St. Louis Metropolitan region:

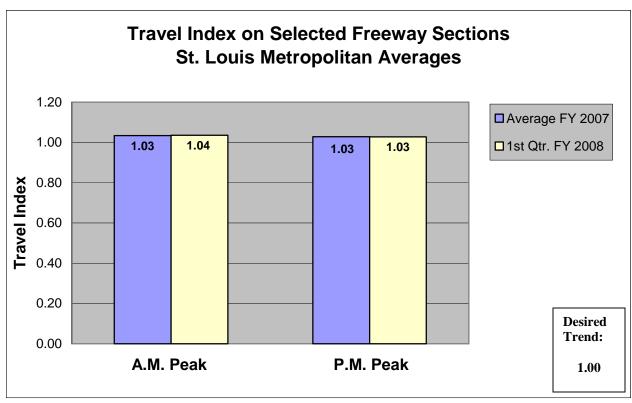
Data in the St. Louis region continues to perform at the free flow condition with average travel index values at 1.04 and 1.03 in the AM and PM respectively. The St. Louis region continues to focus efforts around preparation for the construction activities ongoing and forthcoming for Interstate 64. Travel times are now being displayed on Dynamic Message Signs along the Interstate 270 and Interstate 44 corridors. Additional information on the construction activities upcoming along I-64 can be found at <a href="https://www.thenewi64.org">www.thenewi64.org</a>.

#### Statewide:

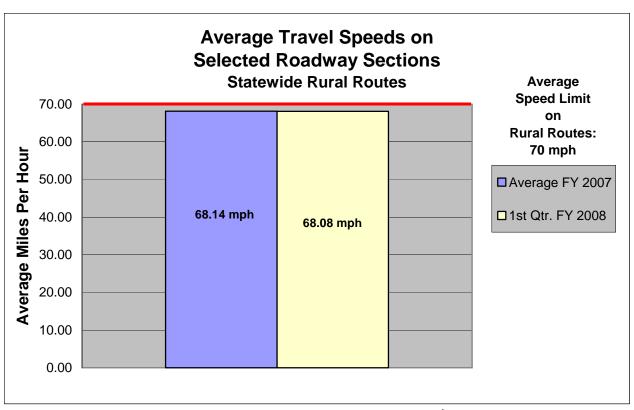
The Statewide Average Speed on Rural Routes for this quarter is 68.08 mph. The installation of permanently mounted Dynamic Message Signs along I-44 and Interstate 70 is complete. The deployment of these signs is one of several components within the new traveler information program, Driving Edge. More information about Driving Edge can be found on our Web site at <a href="https://www.modot.org/drivingedge">www.modot.org/drivingedge</a>.



\* The Average FY 2007 data is an average of the last two quarters in FY 2007. The  $1^{st}$  &  $2^{nd}$  quarters of FY 2007 are unavailable.



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<sup>\*</sup> The Average FY 2007 data is an average of the last two quarters in FY 2007. The  $1^{st}$  &  $2^{nd}$  quarters of FY 2007 are unavailable.

## Average rate of travel on selected signalized routes

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Julie Stotlemeyer, Traffic Liaison Engineer

#### **Purpose of the Measure:**

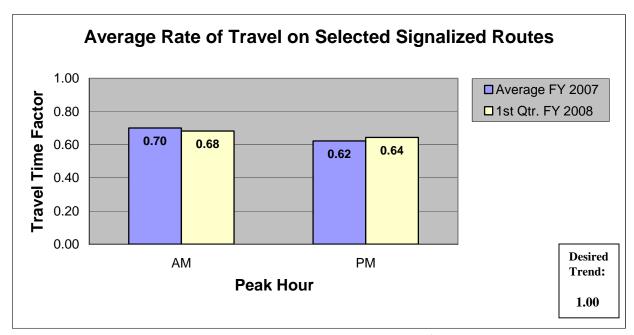
This measure indicates how well selected arterials across the state are operating during peak traffic times. As improvements are made, such as signal timing or access management, this measure will show the effects of those efforts and decisions on the arterial system.

#### **Measurement and Data Collection:**

Travel times are measured on various arterials. Data is collected from driving each route twice during a.m. and p.m. peak times and timing how long it takes to traverse the route. The travel time is compared to the speed limit and the travel time factor determined. As the travel time factor approaches 1.00, traffic is moving at the speed limit. Data collection began in the second quarter of fiscal year 2007. This is a quarterly measure.

#### **Improvement Status:**

For first quarter FY 2008, the average statewide travel time factor for a.m. peak is 0.68 and p.m. peak is 0.64. Overall performance is 0.66. The a.m. peak travel time is 4 percent higher than p.m. peak travel time. First quarter data shows a.m. and p.m. peaks for arterials operating about the same as average for FY 2007.



<sup>\*</sup> The Average FY 2007 data is an average of the last three quarters in FY 2007. The  $1^{\rm st}$  quarter FY 2007 is unavailable.

## Average time to clear traffic incident

**Result Driver**: Don Hillis, Director of System Management **Measurement Driver**: Rick Bennett, Traffic Liaison Engineer

#### **Purpose of the Measure:**

This measure is used to determine the trends in incident clearance on the state highway system. A traffic incident is an unplanned event that creates a temporary reduction in the number of vehicles that can travel on the road. The sooner an incident is removed, the sooner the highway system returns to normal capacity. Therefore, responding to and quickly addressing the incidents (crashes, flat tires and stalled vehicles) improves system performance.

#### **Measurement and Data Collection:**

Collection of data began March 1, 2005. Traffic Management Center staff record "incident start time" and the time for "all lanes cleared." Average time to clear traffic incidents is calculated from these times.

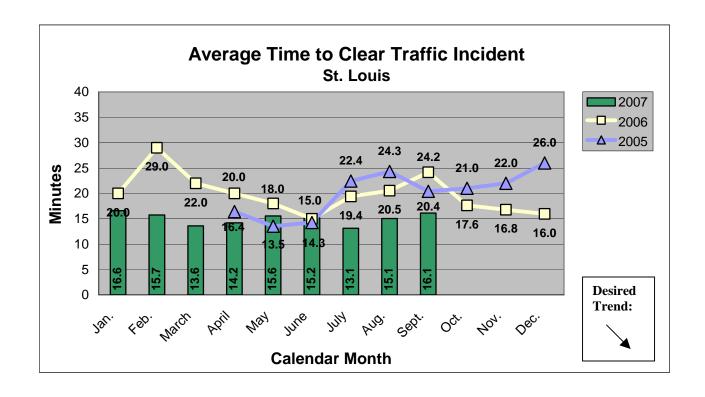
#### **Improvement Status:**

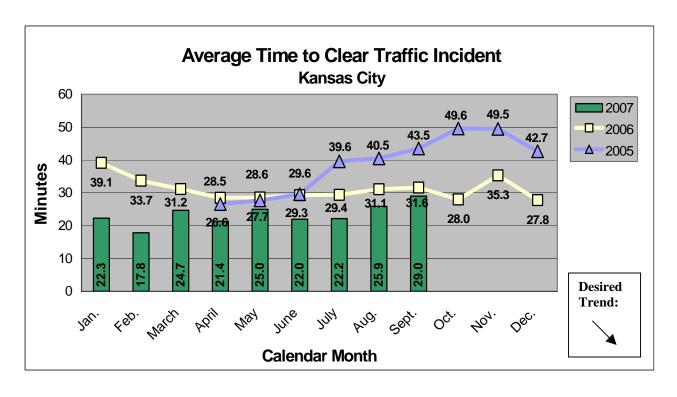
Overall, data shows that both St. Louis and Kansas City areas continue to experience incident clearance times at or below those for the same time period last year. Increased efforts in incident management, Motorist Assist and police coordination in both the St. Louis and Kansas City regions continue to support MoDOT's objective of quick clearance and open roadways.

Kansas City has maintained a consistent level of average time to clear incidents. August and September are traditionally higher due to incidents in or around work zones. The Kansas City area had over 40 incidents within work zones this quarter. There was also a 25 percent increase in overturned tractor-trailers in the Kansas City area this quarter that also attributed to a slightly elevated clearance time. Kansas City collected data on 243, 307 and 210 incidents respectively for the months of July, August and September.

St. Louis collected data on 1,142, 1,328 and 985 incidents respectively for the months of July, August and September. St. Louis experienced a slight increase in clearance times that can be attributed not only to an increase in work zones but also the increase in traffic volumes as the school season starts. St. Louis' data includes considerably more incidents, however St. Louis monitors more freeway miles with more cameras than the Kansas City area.

This data consists of only those incidents in which the TMC was able to collect data.





## Average time to clear traffic backup from incident

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Rick Bennett, Traffic Liaison Engineer

#### **Purpose of the Measure:**

This measure tracks the amount of time it takes to return traffic flow back to normal after a traffic incident. A traffic incident is any unplanned event that creates a temporary reduction in the number of vehicles that can travel on the road.

#### **Measurement and Data Collection:**

"Lanes cleared" and "clear backup" times are being recorded by MoDOT's Traffic Management Centers in Kansas City and St. Louis. Average times to clear traffic backups are calculated from these recorded times. In 2005, the Kansas City operators just terminated the incident when they perceived it to be back to "normal" conditions. To standardize that data, Kansas City set up benchmarks of what normal is across the system and automated it to the reports. Starting in January 2006, Kansas City reports were modified to capture when a backup was relieved as an automated process. The Kansas City area has devices to collect data along portions of interstates 435 and 70. St. Louis collects data manually using video equipment and verification from Motorist Assist operators. St. Louis continues to record "clear backup" times when they perceive traffic to be back to "normal" conditions. They will use advanced transportation management system devices and software when they become available.

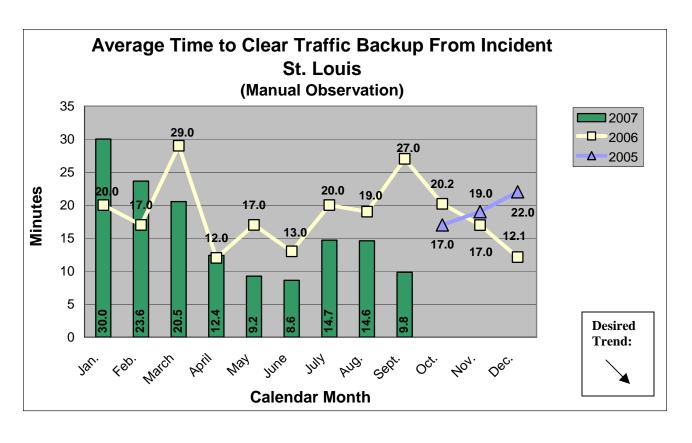
#### **Improvement Status:**

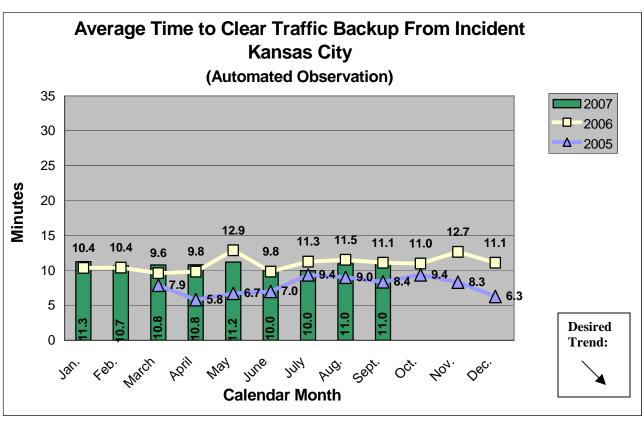
The Kansas City data includes all detected incidents on the KC Scout instrumented routes. The St. Louis data is skewed because it only includes a portion of major incidents on the St. Louis freeway network that can be monitored by operators in the traffic management center or by Motorist Assist and Emergency Response personnel on the scene. The St. Louis data does not necessarily capture short-term incidents that clear before a Motorist Assist operator can get to the scene. St. Louis area routes also have larger traffic volumes that create more significant congestion problems than in Kansas City.

Kansas City's average time to clear traffic backup has remained fairly consistent with the formulation of Kansas City's incident management program, and travel-time system that gives drivers real-time information to make informed decisions about detouring away from extended backups.

The decrease in the time to clear traffic backups in the St. Louis area in September may be attributed to the launch of the travel-time system on dynamic message signs and drivers having real-time information to make informed decisions about detouring away from extended backups and secondary accidents.

Renewed efforts in developing long-term partnerships with local agencies and law enforcement have increased the awareness of MoDOT's expectations for quick clearance and open roadways.





## Number of customers assisted by the Motorist Assist program

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Rick Bennett, Traffic Liaison Engineer

#### **Purpose of the Measure:**

This measure is used to gauge the use of the Motorist Assist programs. Incidents impact Missouri's transportation system capacity. An incident is any unplanned event that creates a temporary reduction in roadway capacity that impedes normal traffic flow. The sooner an incident is removed, the sooner the highway system returns to normal capacity. Therefore, responding to and quickly addressing the incidents (crashes, flat tires and stalled vehicles) improves system performance. Our Motorist Assist operators are able to respond to nearly every incident, major or minor, in the areas they cover.

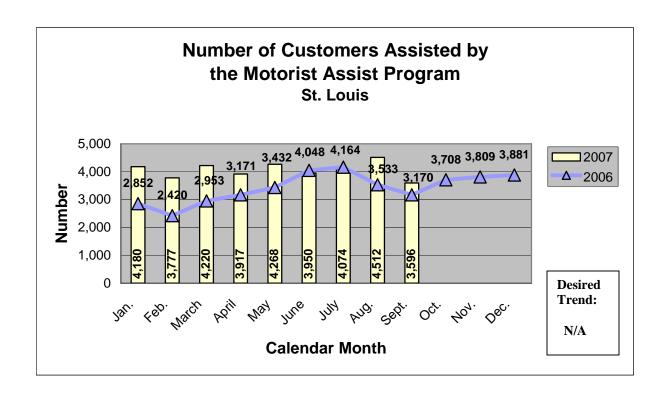
#### **Measurement and Data Collection:**

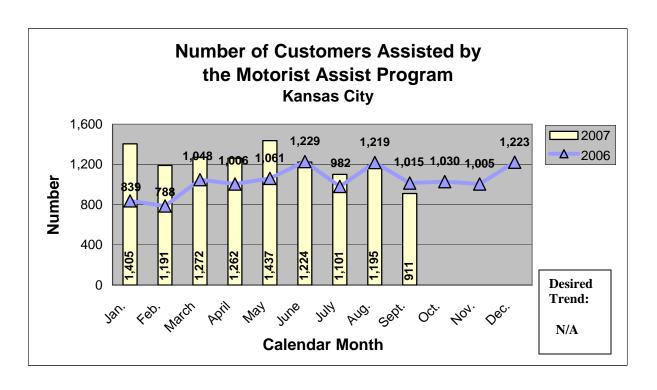
The Motorist Assist operators record each assist and then prepare a monthly summary. St. Louis operators patrol approximately 170 freeway miles, while Kansas City operators patrol approximately 60 freeway miles.

#### **Improvement Status:**

This data demonstrates that the Motorist Assist program in both St. Louis and Kansas City experienced a routine increase in assists due to increased roadway volumes. Typical patterns show increased assists during peak travel season and winter weather and decreased services in late summer and early fall.

The decreased number of assists in Kansas City in September is attributed to the decrease in operators available for that time period due to scheduled vacations and sick time.





## Percent of Motorist Assist customers who are satisfied with the service

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Rick Bennett, Traffic Liaison Engineer

#### **Purpose of the Measure:**

This measure helps evaluate services provided through MoDOT's Motorist Assist Program, specifically whether the customers who use the program are satisfied with the service. Information received provides direction on how to better serve our customers and keep traffic moving safely and efficiently.

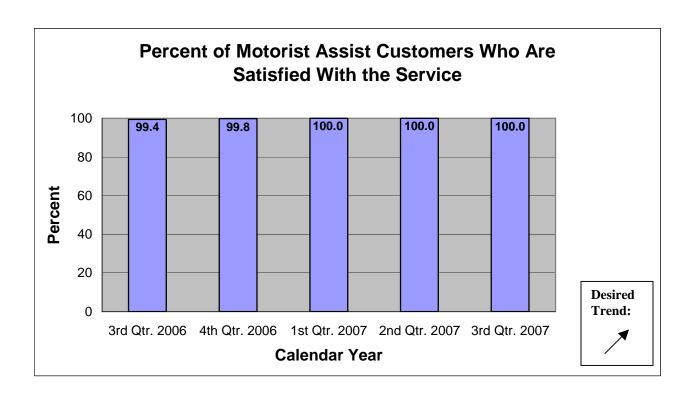
#### **Measurement and Data Collection:**

Motorist Assist operators distribute survey cards to customers. Data from the cards is compiled and tabulated by the Missouri Transportation Institute. Surveys with selections identifying that the service was "probably" or "definitely" valuable were tabulated as "satisfied" for this measure.

#### **Improvement Status:**

This data agrees with information provided by customers on prior comment forms - almost all customers are satisfied.

- Third Quarter 2006, 704 surveys received
- Fourth Quarter 2006, 575 surveys received
- First Quarter 2007, 540 surveys received
- Second Quarter 2007, 548 surveys received
- Third Quarter 2007, 851 surveys received



## Percent of work zones meeting expectations for traffic flow

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Scott Stotlemeyer, Traffic Liaison Engineer

#### **Purpose of the Measure:**

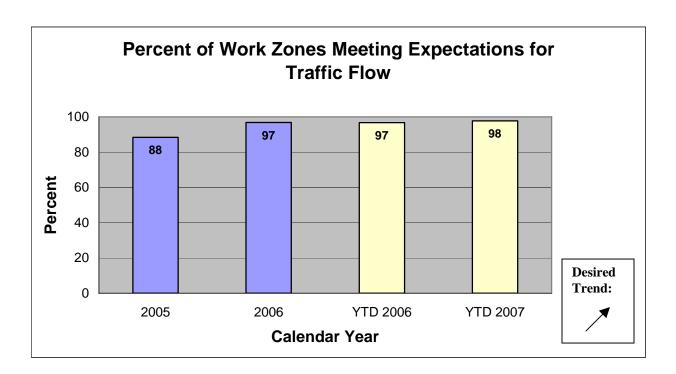
An important factor in evaluating the department's performance in temporary traffic control design, deployment, operation and maintenance is the measurement of work zones' affect on the mobility of highway users. This measure tracks how well the department meets customer expectations of traffic flow in, around and through work zones on state highways.

#### **Measurement and Data Collection:**

Using a formal inspection worksheet, Central Office and district employees evaluate mobility in work zones across the state. Each evaluation consists of a subjective assessment of engineered and operational factors affecting traffic flow. The evaluator assigns a pass, fail, or n/a rating to each of these individual factors and a pass or fail rating for their overall perception of traffic flow in, around and through the work zone. The overall perception ratings are compiled quarterly and reported via this measurement.

#### **Improvement Status:**

Compilation of the 2,896 evaluations performed by MoDOT staff between January and September of this calendar year resulted in a 98 percent satisfaction rating for work zone traffic flow (i.e., a negative perception of traffic flow was recorded in 2.3 percent of the evaluations). This rating is 1.0 and 0.8 percent higher than last calendar year's year-to-date and year-end ratings, respectively – a year the department showed an 8.5 percent improvement in work zone traffic flow when compared to the previous year's inspection results. Such progress is attributable to MoDOT's emphasis on creating exemplary work zones by minimizing work zone congestion and delays despite increased traffic demand and volume of work zones in Missouri.



# Time to meet winter storm event performance objectives on major and minor highways

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Tim Jackson, Technical Support Engineer

#### **Purpose of the Measure:**

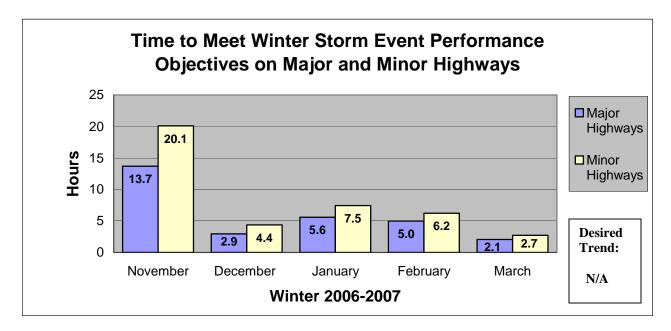
This measure tracks the amount of time needed to perform MoDOT's snow and ice removal efforts.

#### **Measurement and Data Collection:**

This data is collected in the winter event database. This measurement tracks the actual time involved in this process so improvements can be made. After each winter event, such as a snow or ice storm, area maintenance personnel submit a report indicating how much time it took to clear snow from the major and minor highways. Data collection for this measure runs from November through March of each winter season. After a storm ends, the objectives are to restore the major highways to a wet or dry condition as soon as possible, restore the higher-volume minor highways to a wet or dry condition as soon as possible, and have the lower-volume minor highways open to two-way traffic and treated with salt and/or abrasives at all critical areas such as intersections, hills and curves as soon as possible. The end of the storm is defined as when freezing precipitation stops accumulating on the roadways, either from falling or drifting conditions. This data is updated in the January and April Tracker reports. The time in hours is the statewide average for each month.

#### **Improvement Status:**

January and February had several large snowstorms that covered most of the state of Missouri. A major ice storm hit southwest, central and south central Missouri in January. The average time to meet the winter event performance objectives declined over January, February and March. These times will vary based on the amount of snow received, the duration and the intensity of the storm. Strategies to improve these numbers include pursuing equipment enhancements, testing new materials and continued training of snow removal employees.



Tangible Result Driver – Kevin Keith, Chief Engineer

MoDOT's customers have said they want smooth roads. Smoother roads mean less wear on vehicles, safer travel and greater opportunity for economic development.

MoDOT will delight its customers by providing smooth and unrestricted roads and bridges. MoDOT recognizes that road projects built and maintained to a high standard of smoothness will be more efficient.

MoDOT must provide customers with smooth roads – because everyone riding on a road can feel whether it is smooth or not!



## Percent of major highways that are in good condition

**Result Driver:** Kevin Keith, Chief Engineer

Measurement Driver: Jay Bledsoe, Transportation System Analysis Engineer

#### **Purpose of the Measure:**

This measure tracks the condition of Missouri's major highway road surfaces. The public has indicated the condition of Missouri's existing state roadway system should be one of the state's highest priorities. MoDOT places a high priority on improving the condition of state highways.

#### **Measurement and Data Collection:**

The major highway system is defined as all routes functionally classified as principal arterials. By definition, the principal arterial system provides for statewide or interstate movement of traffic. Examples include the Interstate System and most U.S. routes such as 63, 54 or 36.

In urban areas, principal arterials carry traffic entering or leaving the urban area and serve movement of vehicles between central business districts and suburban residential areas. Examples include Business 50 (Missouri Blvd.) in Jefferson City, MO 740 (Stadium Blvd.) in Columbia and Route D (Page Ave.) in St. Louis.

The major roads in Missouri total approximately 5,573 centerline miles. This revised figure reflects additional mileage based on statewide review of the highway system. Good condition is defined using a combination of criteria. On high-speed routes (speed limits greater than 50 mph) the International Roughness Index (IRI) is used. For lower-speed routes (mostly urban areas) where smoothness is less critical, a Present Serviceability Rating (PSR) is used. While smoothness is a factor in PSR, physical condition is also a factor.

Direct comparison to other states is difficult because of differences in measurement methodologies. However, a general order-of-magnitude comparison is possible given certain assumptions. For example, there are five states that report mileage for major highways within 10 percent of that maintained by MoDOT. Of these five, Georgia, with 5,875 miles, currently has the highest percentage of these highways classified in good condition based on smoothness only. The Missouri definition of good uses smoothness as one factor; however, it also includes other condition factors such as physical distress to determine quality. While the comparison is not exact, it does indicate the level of performance possible on a system of Missouri's size.

This is an annual measure. Missouri data is updated in January to reflect prior calendar-year ratings.

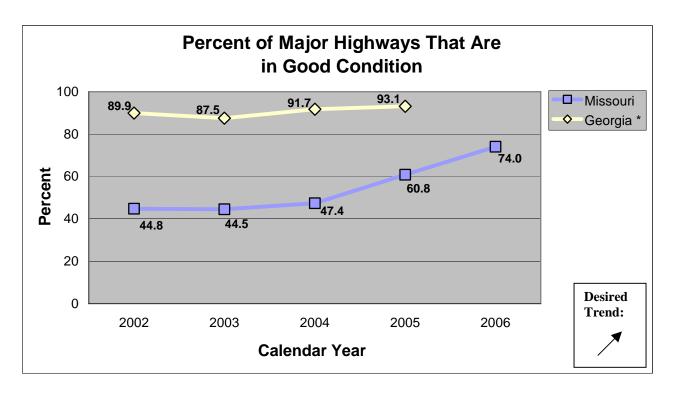
#### **Improvement Status:**

More than \$430 million per year is dedicated to taking care of the existing highway system. An additional \$359 million available from Amendment 3 (approved by Missouri voters in November 2004) was added to this sum as part of MoDOT's Smooth Roads Initiative (SRI).

Completion of the SRI has resulted in a significant improvement in pavement condition. Currently, 74 percent of the major highways are in good condition, up from 46 percent at the beginning of the SRI.

Under the Better Roads, Brighter Future program, MoDOT will emphasize maintenance of the miles improved under the SRI while making major improvements to the remainder of the 5,573 miles in the major highway system. By the end of 2011, a total of 85 percent of the major highways will have improved surfaces along with new or improved shoulders and rumble stripes. However, all 5,573 miles will benefit from safety features such as wider striping and brighter signing.

Funding for the Better Roads, Brighter Future program will come from existing Taking Care of System (TCOS) funds in accordance with the current funding allocation method directed by the Missouri Highways and Transportation Commission.



<sup>\*</sup> Source data for Georgia is "Highway Statistics" published by FHWA. Data for 2006 not available at time of publication. Georgia data is based only on pavement smoothness (IRI) submitted as part of the Highway Performance Monitoring System.

## Percent of minor highways that are in good condition

Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Jay Bledsoe, Transportation System Analysis Engineer

#### **Purpose of the Measure:**

This measure tracks the condition of Missouri's minor highway road surfaces. The public has indicated the condition of Missouri's existing state roadway system should be one of the state's highest priorities. MoDOT places a high priority on improving the condition of highways in the state system.

#### **Measurement and Data Collection:**

The minor highway system consists of all routes functionally classified as minor arterials or collectors. These routes mainly serve local transportation needs and include highways commonly referred to as lettered routes, such as Route A, Route C and Route DD. The public sometimes refers to these routes as farm-to-market roads. The minor roads in Missouri total approximately 27,000 centerline miles.

Good condition is defined using a combination of criteria. Where available, on high-speed routes (speed limits greater than 50 mph) the International Roughness Index (IRI) is used. For lower-speed routes where smoothness is less critical, a Present Serviceability Rating (PSR) or IRI is used. While smoothness is a factor in PSR, physical condition is also a factor.

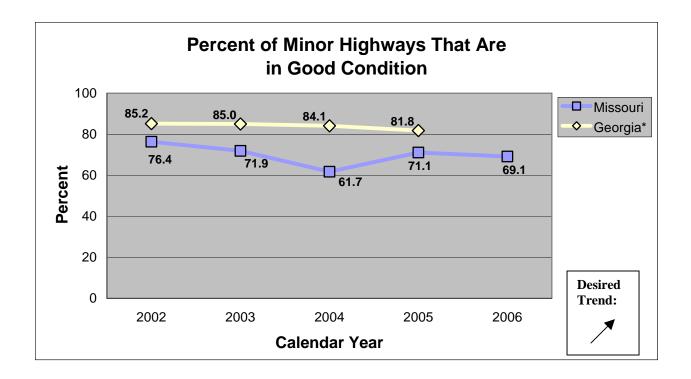
Direct comparison to other states is difficult because of differences in measurement methodologies. However, a general order-of-magnitude comparison is possible given certain assumptions. For example, there are six states that report mileage for minor highways within 10 percent of that maintained by MoDOT. Of these six, Georgia, with 24,707 miles, currently has the highest percentage of these highways classified in good condition. The ratings reported by states as part of the Highway Performance Monitoring System for roads classified as minor more closely relate to Missouri's rating system.

Federal Highway Administration allows conditions on minor highways to be reported on either IRI or Present Serviceability Index (PSI). PSI includes an assessment of physical distress similar to Missouri's definition. The Missouri definition of good uses smoothness as one factor. However, it also includes other condition factors such as physical distress to determine quality.

#### **Improvement Status:**

Prior to 2005, pavement conditions on minor highways had shown a steady decrease. The pavement condition increase in 2005 is due primarily to modification of the rating method. Prior to 2005, ratings used a combination of automated methods and MoDOT district manual ratings. More than 60 percent of minor roads were surveyed using automated methods by MoDOT Transportation Planning staff in 2006. The acquisition of additional equipment in 2007 should allow virtually all state system routes to be rated annually.

Through the Better Roads, Brighter Future program, MoDOT has identified the major highway system as a priority in the next five years. Efforts on the minor highways will emphasize maintenance of this system at or near the current levels. Work on minor highways will emphasize the use of MoDOT maintenance forces and will consist of treatments that include routine patching, crack sealing and chip seals.



<sup>\*</sup> Source data for Georgia is "Highway Statistics" published by the Federal Highway Administration. Georgia data for 2006 was not available at time of publication. Data is based on a combination of pavement smoothness – IRI or PSI – as submitted as part of the Highway Performance Monitoring System.

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## Percent of vehicle miles traveled on major highways in good condition

**Result Driver:** Kevin Keith, Chief Engineer

Measurement Driver: Jay Bledsoe, Transportation System Analysis Engineer

#### **Purpose of the Measure:**

This measure tracks the percent of vehicle miles traveled on Missouri's major highway system that take place on highways in good condition. The public has indicated the condition of Missouri's existing state roadway system should be one of the state's highest priorities. Emphasizing work on the major highway system insures that the majority of travel takes place on highways in good condition.

#### **Measurement and Data Collection:**

The major highway system is defined as all routes functionally classified as principal arterials. By definition, the principal arterial system provides for statewide or interstate movement of traffic. Examples include the Interstate System and most U.S. routes such as 63, 54 or 36.

In urban areas, principal arterials carry traffic entering or leaving the urban area and serve movement of vehicles between central business districts and suburban residential areas. Examples include Business 50 (Missouri Blvd.) in Jefferson City, MO 740 (Stadium Blvd.) in Columbia and Route D (Page Ave.) in St. Louis.

The major roads in Missouri total approximately 5,573 centerline miles. Good condition is defined using a combination of criteria. On high-speed routes (speed limits greater than 50 mph) the International Roughness Index (IRI) is used. For lower-speed routes (mostly urban areas) where smoothness is less critical, a Present Serviceability Rating (PSR) is used. While smoothness is a factor in PSR, physical condition is also a factor.

VMT is determined by multiplying the traffic volume on a given route by the route length. For this measure, the VMT is calculated on those routes in good condition and then divided by the total VMT for major routes to determine the percentage shown below. While the system of major highways in Missouri comprise only about 17 percent of the total system mileage, it carries more than 75 percent of all traffic on the state highway system.

This is an annual measure. While pavement data is available in January, year-end processing of traffic data will delay update of this measure until July of each year.

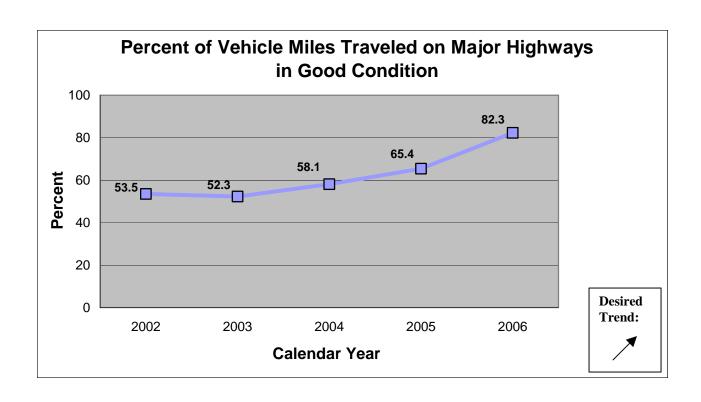
#### **Improvement Status:**

More than \$430 million per year is dedicated to taking care of the existing highway system. An additional \$359 million available from Amendment 3 (approved by Missouri voters in November 2004) was added to this sum as part of MoDOT's Smooth Roads Initiative (SRI).

Completion of the SRI has resulted in a significant improvement in pavement condition. Under the Better Roads, Brighter Future program, MoDOT will continue maintenance of the miles improved under the SRI while making major improvements to the remainder of the 5,573 miles in the major highway system. Continuing to emphasize work on the major highway system insures that the majority of travel by the public takes place on highways in good condition.

Currently, more than 82 percent of all travel on major highways takes place on highways in good condition.

Funding for the Better Roads, Brighter Future program will come from existing Taking Care of System (TCOS) funds in accordance with the current funding allocation method directed by the Missouri Highways and Transportation Commission.



## Percent of deficient bridges on major highways

**Result Driver:** Kevin Keith, Chief Engineer

Measurement Driver: Dennis Heckman, State Bridge Engineer

#### **Purpose of the Measure:**

This measure tracks progress toward improving the condition of Missouri's bridges on major highways. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on increasing the quality of bridges on the state system.

#### **Measurement and Data Collection:**

The major highway system is defined as all routes functionally classified as principal arterials. By definition, the principal arterial system provides for statewide or interstate movement of traffic. Examples include the Interstate System or most U.S. routes such as 63, 54 or 36.

In urban areas, principal arterials carry traffic entering or leaving the urban area and serve movement of vehicles between central business districts and suburban residential areas. Examples include Business 50 (Missouri Blvd.) in Jefferson City, MO 740 (Stadium Blvd.) in Columbia and Route D (Page Ave.) in St. Louis.

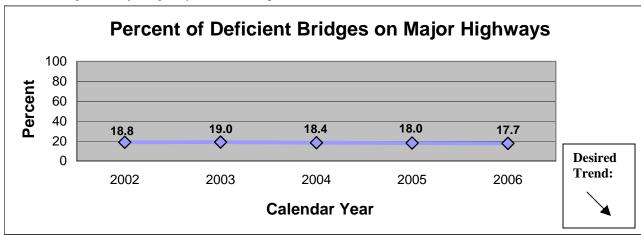
A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO) as defined using Federal Highway Administration criteria. A SD bridge is in poor condition or has insufficient load capacity when compared to modern design standards. A FO bridge has poor roadway alignment or has clearance or width restrictions that no longer meet the usual criteria for the system it serves. MoDOT staff inspects all state-owned bridges. There are currently 3,317 bridges on major highways.

This is an annual measure. Data is updated each April based on the prior year's inspections.

#### **Improvement Status:**

Bridge conditions on major highways have shown a moderate improvement. The percent of deficient bridges has been reduced to 17.7 percent over the last five years as a result of increasing funds directed to care for the existing highway system. A minimum of \$10 million per year is dedicated to preventive maintenance activities on major river crossings and other structures more than 1,000 feet in length.

The Safe & Sound bridge improvement program will address more than 800 of the state's most critical structures. This program will repair or replace these bridges over a five-year period and emphasize their maintenance at an acceptable level for an additional 25 years. While most of these bridges are located on the minor highway system, a benefit to bridges on major highways is also anticipated.



## Percent of deficient bridges on minor highways

**Result Driver:** Kevin Keith, Chief Engineer

Measurement Driver: Dennis Heckman, State Bridge Engineer

#### **Purpose of the Measure:**

This measure tracks progress toward improving the condition of Missouri's minor highway bridges. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on increasing the quality of bridges on the state system.

#### **Measurement and Data Collection:**

The minor highway system consists of all routes functionally classified as minor arterials or collectors. These routes serve more local transportation needs and include highways commonly referred to as lettered routes, such as Route A, Route C and Route DD. The public sometimes refers to these routes as farm-to-market roads.

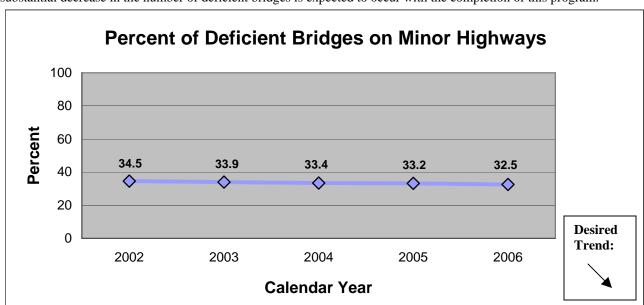
A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO) as defined using Federal Highway Administration criteria. A SD bridge is in poor condition or has insufficient load capacity when compared to modern design standards. A FO bridge has poor roadway alignment or has clearance or width restrictions that no longer meet the usual criteria for the system it serves. MoDOT staff inspects all state-owned bridges. There are currently 6,923 bridges on minor highways.

This is an annual measure. Data is updated each April based on the prior year's inspections.

#### **Improvement Status:**

Bridge conditions on minor highways have shown a moderate improvement. The percent of deficient bridges has been reduced to 32.5 percent over the last five years as a result of increasing funds directed to care for the existing highway system. A minimum of \$10 million per year is dedicated to preventive maintenance activities on major river crossings and other structures more than 1,000 feet in length.

The Safe & Sound bridge improvement program will address more than 800 of the state's most critical structures. This program will repair or replace these bridges over a five-year period and emphasize their maintenance at an acceptable level for an additional 25 years. Most of these bridges are located on the minor highway system. A substantial decrease in the number of deficient bridges is expected to occur with the completion of this program.



## Number of deficient bridges on the state system (major and minor highways)

**Result Driver:** Kevin Keith, Chief Engineer

Measurement Driver: Dennis Heckman, State Bridge Engineer

#### **Purpose of the Measure:**

This measure tracks progress toward improving the condition of Missouri's bridges. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on increasing the quality of bridges on the state system.

#### **Measurement and Data Collection:**

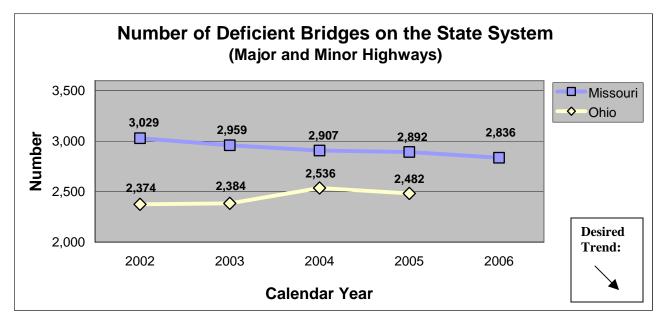
A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO) as defined using Federal Highway Administration criteria. A SD bridge is in poor condition or has insufficient load capacity when compared to modern design standards. A FO bridge has poor roadway alignment or has clearance or width restrictions that no longer meet the usual criteria for the system it serves. MoDOT staff inspects all state-owned bridges. There are currently a total of 10,240 bridges on the state highway system.

This is an annual measure. Data is taken from the National Bridge Inventory. Missouri data is available in April of each calendar year and is updated at that time. However, the data for other states is not published until the following year.

#### **Improvement Status:**

Bridge conditions on Missouri highways have shown a moderate improvement in the last five years as a result of increasing funds directed to care for the existing highway system. Currently, 2,836 bridges are considered deficient on the state highway system. A minimum of \$10 million per year is dedicated to preventive maintenance activities on major river crossings and other structures more than 1,000 feet in length.

The Safe & Sound bridge improvement program will address more than 800 of the state's most critical structures. This program will repair or replace these bridges over a five-year period and emphasize their maintenance at an acceptable level for an additional 25 years. A marked improvement in the number of deficient bridges will occur with the completion of this program.



<sup>\*</sup> Source for Ohio, "Better Bridges" November 2006, for data collected in calendar year 2005.

# **Safe Transportation System**

Tangible Result Driver – Don Hillis, Director of System Management

MoDOT works closely with other safety advocates to make our roads and work zones safer. The department supports educational programs which encourage safe driving practices and enforcement efforts which increase adherence to traffic laws. MoDOT will not compromise safety because it believes in the well-being of its employees and customers.





## **Safe Transportation System**

## Number of fatalities and disabling injuries

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

#### **Purpose of the Measure:**

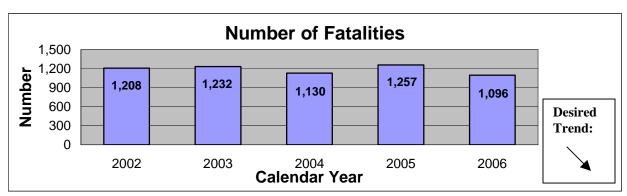
This measure tracks annual trends in fatal and disabling injuries resulting from traffic crashes on all Missouri roadways. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports the Missouri Blueprint for Safer Roadways. This document identifies the statewide initiatives with a goal of reducing fatalities to 1,000 or fewer by 2008.

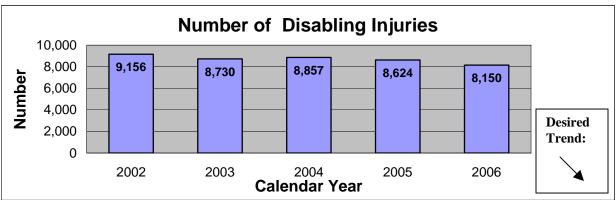
#### **Measurement and Data Collection:**

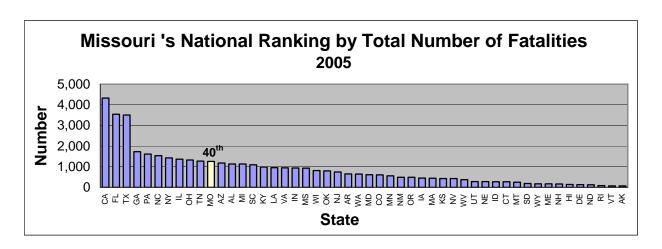
Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through both databases. Data is collected on an annual basis and is updated in July of the following year.

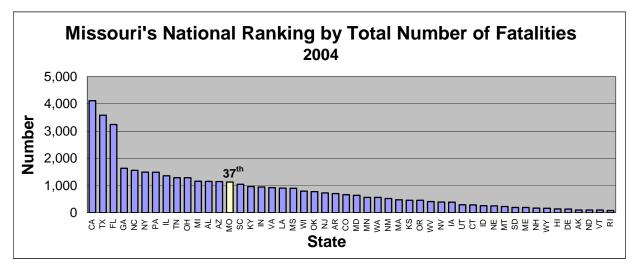
#### **Improvement Status:**

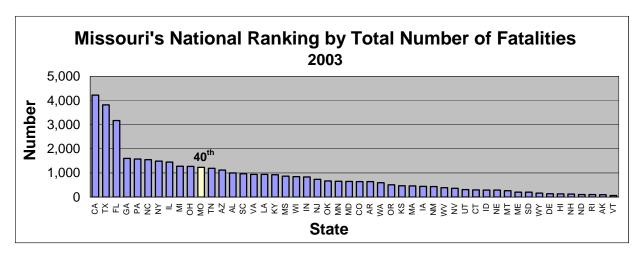
Fatalities decreased by 13 percent in 2006 after experiencing a significant increase in 2005. Fewer Missourians lost their lives in 2006 than have since 1999. Disabling injuries continue to show a decreasing trend. There were nearly 500 fewer disabling injuries in 2006 compared to 2005 and over 700 fewer when compared to 2004. The national data is not currently available for a 2006 comparison. Fatalities and disabling injuries are decreasing due in part to engineering enhancements such as three-stand guard cable, rumble strips and enhanced delineation. Also contributing are strong safety belt public information campaigns combined with increased law enforcement participation in statewide campaigns.











## **Safe Transportation System**

## Number of impaired driver-related fatalities and disabling injuries

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

#### **Purpose of the Measure:**

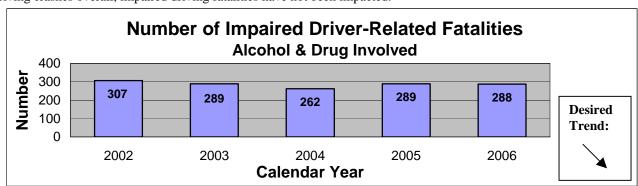
This measure tracks annual trends in fatalities and injuries resulting from traffic crashes on all Missouri roadways involving drivers who are impaired by alcohol and/or drugs. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports the Missouri Blueprint for Safer Roadways. This document identifies the statewide initiatives with a goal of reducing fatalities to 1,000 or fewer by 2008.

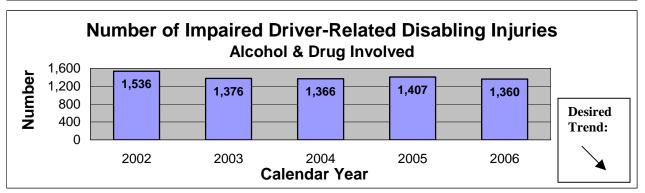
#### **Measurement and Data Collection:**

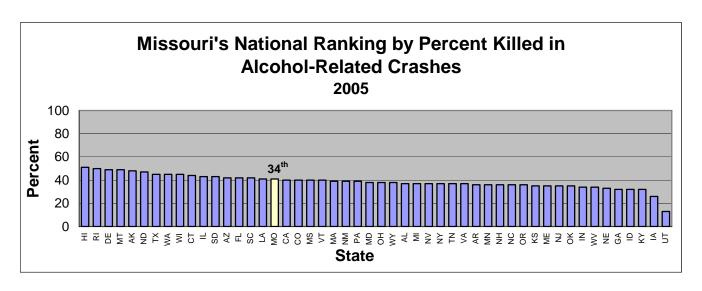
Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through both databases. Data is collected on an annual basis and is updated in July of the following year.

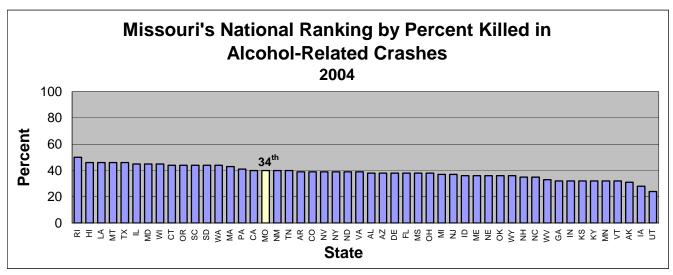
#### **Improvement Status:**

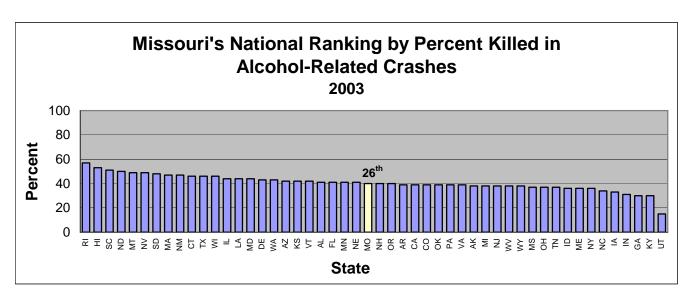
Alcohol- and drug-related fatalities and disabling injuries have remained constant for the past five years. The national data is not currently available for a 2006 comparison. In the previous national ranking, Missouri is moving away from the desired downward trend in percent of persons killed in alcohol-related crashes. In addition to Missouri participating in the national "You Drink and Drive, You Lose" campaign, the Missouri Law Enforcement Traffic Safety Advisory Council selected specific days to increase law enforcement activity through December 2008. Public information and education has been directed at high-risk drivers ages 21 to 35. Law enforcement efforts have been concentrated on high-crash corridors and increasing the number of sobriety checkpoints. Although these efforts have helped reduce impaired driving crashes overall, impaired driving fatalities have not been impacted.











### Rate of annual fatalities and disabling injuries

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

#### **Purpose of the Measure:**

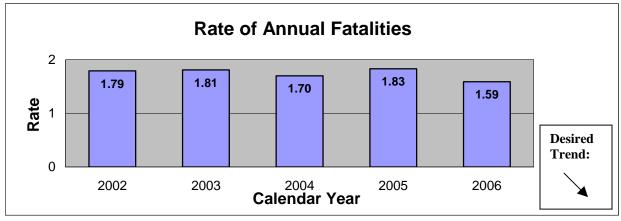
This measure tracks annual trends in fatal and disabling injury rates per 100 million vehicle miles traveled (HMVM) in Missouri. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports the Missouri Blueprint for Safer Roadways. This document identifies the statewide initiatives with a goal of reducing fatalities to 1,000 or fewer by 2008.

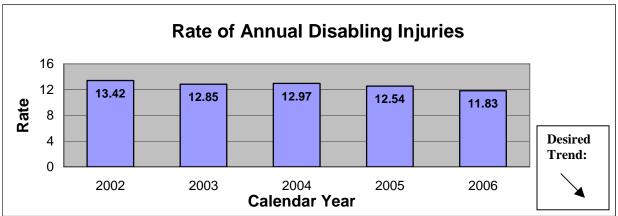
#### **Measurement and Data Collection:**

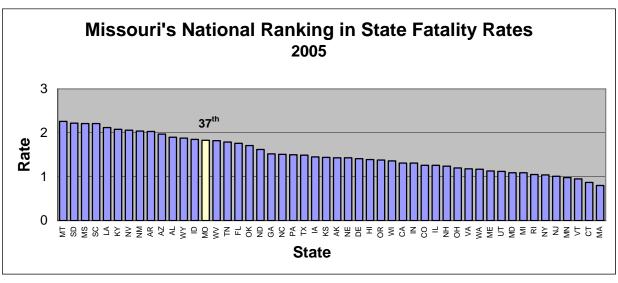
Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through both databases. Data is collected on an annual basis and is updated in July of the following year.

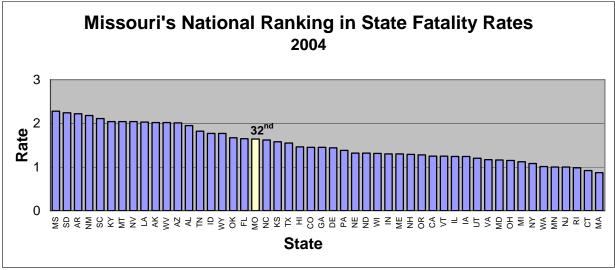
#### **Improvement Status:**

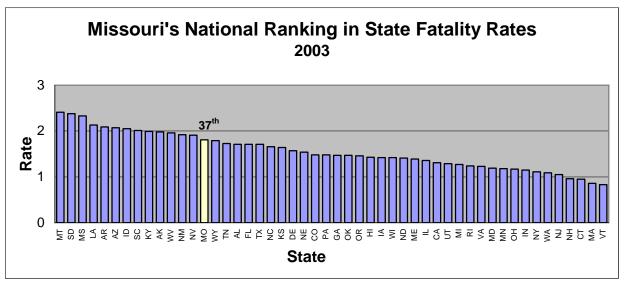
The fatality rate in Missouri is the lowest in six years. Based on the national comparison, however, Missouri has moved from 32<sup>nd</sup> in 2004 to 37<sup>th</sup> in 2005. Based on the national goal of a 1.0 fatality rate, Missouri is still moving in the right direction. Focused law enforcement efforts, engineering safety enhancements and increased public awareness all contribute to the decrease.











### Percent of safety belt/passenger vehicle restraint use

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

#### **Purpose of the Measure:**

This measure tracks annual trends in safety belt usage by persons in passenger vehicles. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports the Missouri Blueprint for Safer Roadways. This document identifies the statewide initiatives with a goal of reducing fatalities to 1,000 or fewer by 2008.

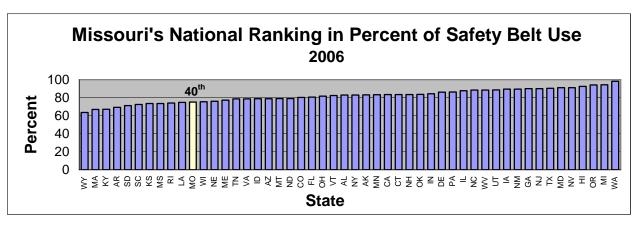
#### **Measurement and Data Collection:**

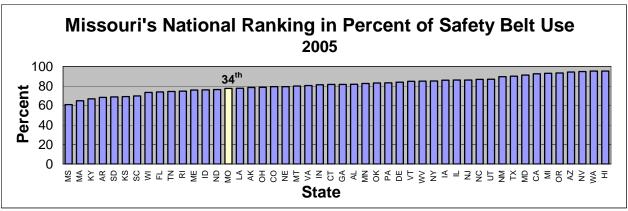
Each June, a statewide survey is conducted at 460 pre-selected locations in 20 counties. The data collected at these sites is calculated into a safety belt usage rate by using a formula approved by the National Highway Traffic Safety Administration. The safety belt usage survey enables data collection from locations representative of 85 percent of the state's population. The data collection plan is the same each year for consistency and compliance with the National Highway Traffic Safety Administration guidelines. Data is collected on an annual basis and is updated in August of the following year. Annual information for the national rankings is not available from all 50 states.

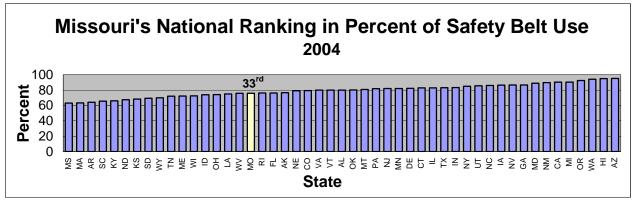
#### **Improvement Status:**

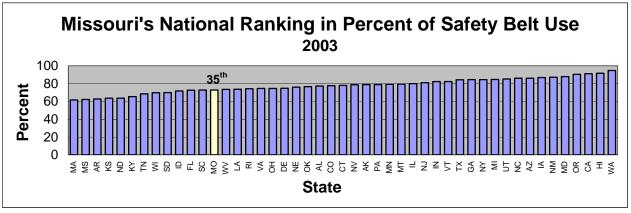
Safety belt use in Missouri has remained fairly constant for the past four years. In the 2006 national comparison, Missouri ranked 40<sup>th</sup> in safety belt usage. The 2007 national comparison will not be available until August 2008. Missouri continues to focus efforts through public information and education and law enforcement participation in the national "Click it or Ticket" campaign. A statewide program focusing on teen safety belt use, has also proven to be successful in increasing use among teenagers. MoDOT continues to promote the need for a primary safety belt law in Missouri.











# Number of bicycle and pedestrian fatalities and disabling injuries

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

#### **Purpose of the Measure:**

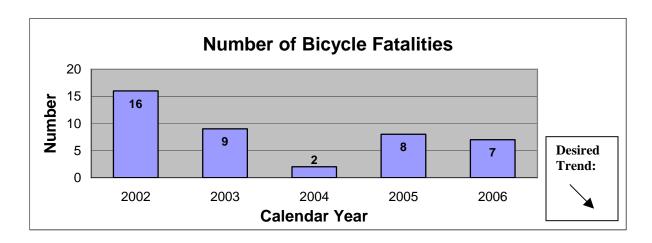
This measure tracks annual trends in fatalities and disabling injuries resulting from traffic crashes with bicycles and pedestrians on Missouri roadways. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports the Missouri Blueprint for Safer Roadways. This document identifies the statewide initiatives with a goal of reducing fatalities to 1,000 or fewer by 2008.

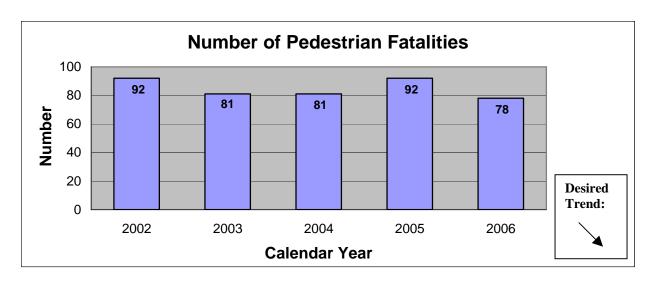
#### **Measurement and Data Collection:**

Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through both databases. Data is collected on an annual basis and updated in July of the following year.

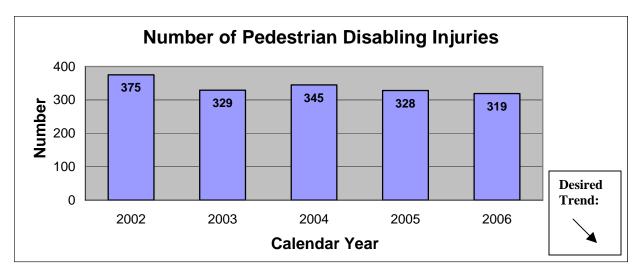
#### **Improvement Status:**

This data reflects the number of fatalities and disabling injuries occurring when a motor vehicle is involved in a crash with a bicycle or pedestrian. These bicycle numbers remain steady, although MoDOT has been increasing the miles of dedicated bike lanes. Pedestrian fatalities and disabling injuries reached the lowest numbers in the past five years mainly due to signaling and dedicated crossing area improvements. Funds have been dedicated to support the Bicycle Pedestrian Advisory Committee.









### Number of motorcycle fatalities and disabling injuries

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Leanna Depue, Highway Safety Director

#### **Purpose of the Measure:**

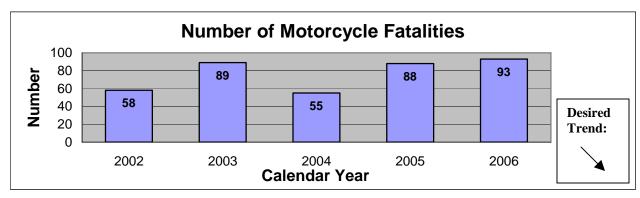
This measure tracks annual trends in fatal and disabling injuries resulting from motorcycle traffic crashes on all Missouri roadways. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports the Missouri Blueprint for Safer Roadways. This document identifies the statewide initiatives with a goal of reducing fatalities to 1,000 or fewer by 2008.

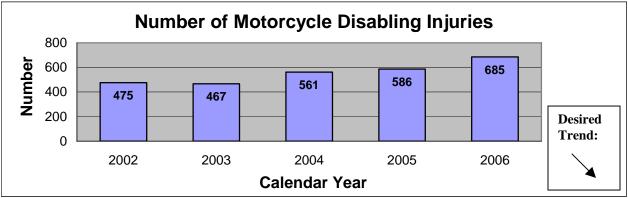
#### **Measurement and Data Collection:**

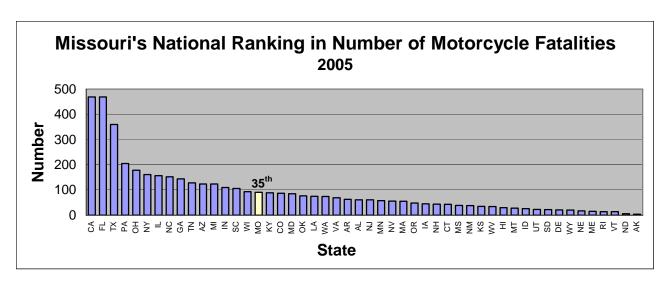
Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through both databases. Data is collected on an annual basis and updated in July of the following year.

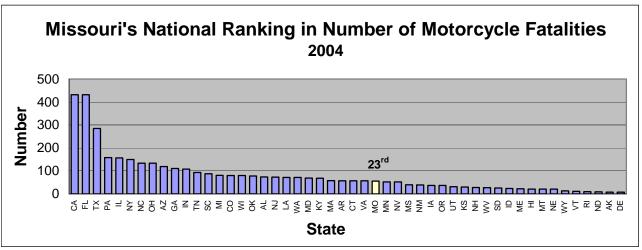
#### **Improvement Status:**

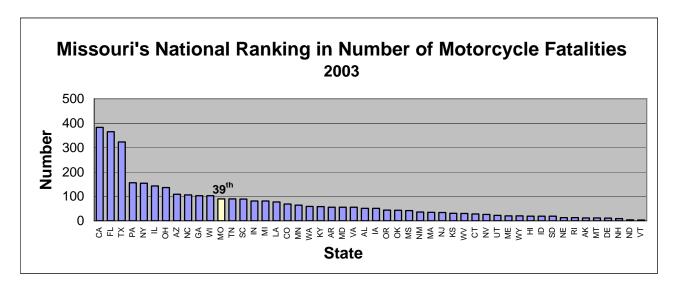
Fatalities and disabling injuries have shown an upward trend over the past four years. In 2006, Missouri experienced the highest number of motorcycle fatalities on record. The national data is not currently available for a 2006 comparison. Missouri's 2005 national ranking has worsened from 23<sup>rd</sup> in 2004 to 35<sup>th</sup>. A significant increase in the number of licensed motorcycles and riders has increased the exposure rate. Rider education classes are offered within one hour's driving time throughout Missouri. More than 4,000 riders at 28 sites are trained each year. In 2006, a Motorcycle Safety Task Force was organized and charged with developing a strategic plan. The task force has completed the plan and is currently moving forward with implementation.











# Number of commercial motor vehicle crashes resulting in fatalities

Result Driver: Don Hillis, Director of Systems Management

Measurement Driver: Charles Gohring, Motor Carrier Services Program Manager

#### **Purpose of the Measure:**

This measure tracks the number of commercial motor vehicles involved in fatal crashes each year. MoDOT uses the information to target educational and enforcement efforts.

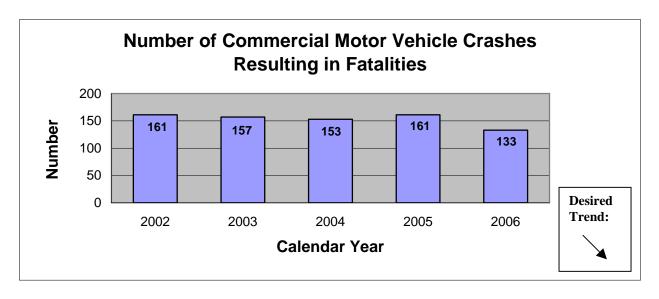
#### **Measurement and Data Collection:**

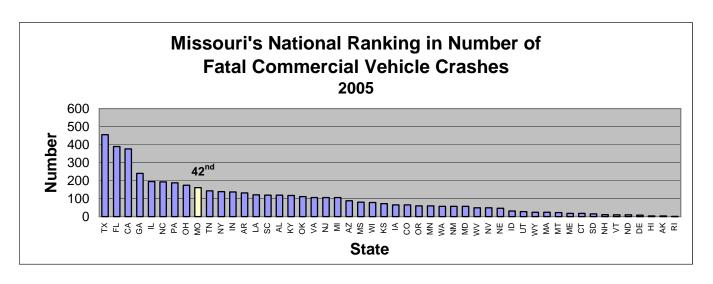
The Missouri State Highway Patrol collects and records the crash statistics used in this measure. The data used in this measure reports the number of commercial motor vehicles involved in a crash where one or more people die within 30 days as a result of the crash. This is an annual measure and will be updated each April for the previous year.

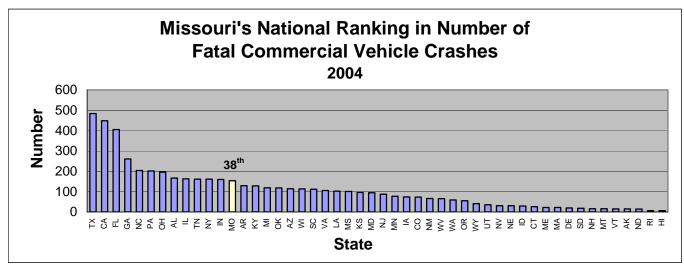
#### **Improvement Status:**

Between 2002 and 2004, the number of Missouri commercial motor vehicle fatal crashes dropped from 161 to 153. The number of fatal crashes notably decreased by 13 percent between 2005 and 2006. MoDOT coordinates its efforts with the Missouri State Highway Patrol, the Federal Motor Carrier Safety Administration Missouri Division and the Kansas City and St. Louis police departments. MoDOT efforts include the installation of larger highway signs, highly reflective pavement markings, cable guardrails, roundabout intersections, incident management alert signs, roadside rumble strips, and intelligent transportation systems at scales. MoDOT conducts carrier safety training, regulation compliance reviews, safety audits of new motor carrier firms and truck inspections at terminals and destinations. The Missouri State Highway Patrol, St. Louis and Kansas City Police Departments conduct commercial vehicle roadside inspections in order to remove unsafe drivers and vehicles from the road.

Missouri ranked 42<sup>nd</sup> in the number of fatality crashes nationwide in 2005.









# Number of commercial motor vehicle crashes resulting in injuries

Result Driver: Don Hillis, Director of Systems Management

Measurement Driver: Charles Gohring, Motor Carrier Services Program Manager

#### **Purpose of the Measure:**

This measure tracks number of commercial motor vehicles involved in injury crashes each year. MoDOT uses the information to target educational and enforcement efforts.

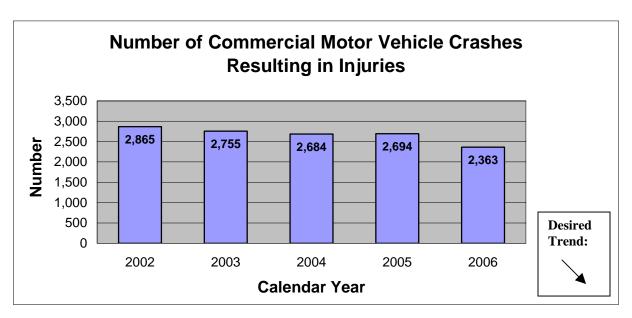
#### **Measurement and Data Collection:**

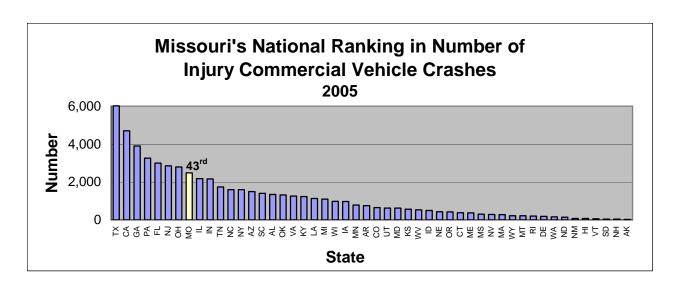
The Missouri State Highway Patrol collects and records crash statistics. The data for this measure reflects the number of commercial motor vehicles involved in crashes where one or more people are injured. This is an annual measure.

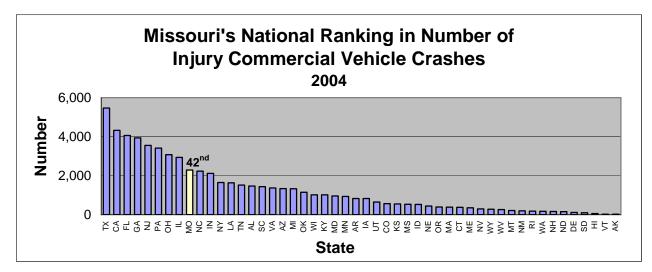
#### **Improvement Status:**

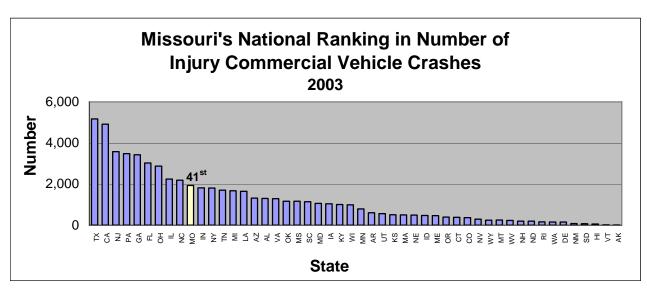
Between 2001 and 2004, the number of commercial motor vehicle crashes resulting in injuries decreased. The number of injury crashes notably decreased by 12 percent in 2006 to 2,363. The overall downward trend is due to the coordinated safety efforts of MoDOT, the Missouri State Highway Patrol, the Federal Motor Carrier Safety Administration Missouri Division, and the Kansas City and St. Louis police departments. MoDOT efforts include the installation of larger highway signs, highly reflective pavement markings, cable guardrails, roundabout intersections, incident management alert signs, rumble stripes, and intelligent transportation systems at scales. MoDOT conducts carrier safety training, regulation compliance reviews, safety audits of new motor carrier firms and truck inspections at terminals and destinations. The Missouri State Highway Patrol, St. Louis and Kansas City police departments conduct commercial vehicle roadside inspections in order to remove unsafe drivers and vehicles from the road.

Missouri ranked 43<sup>rd</sup> in the number of injury crashes nationwide in 2005.









# Number of fatalities and injuries in work zones

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Scott Stotlemeyer, Traffic Liaison Engineer

#### **Purpose of the Measure:**

An important factor in evaluating the safety of Missouri's transportation system is determining the safety of work zones on the state's roads. This measure tracks the number of traffic-related fatalities, disabling injuries, and crashes occurring in a work zone on any Missouri public road.

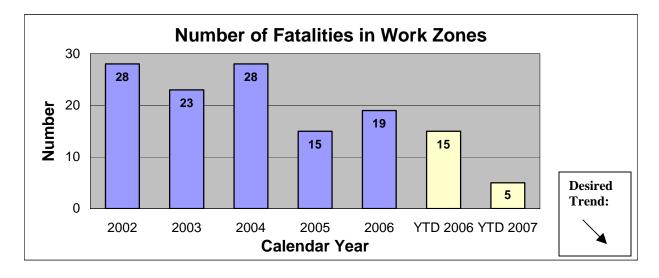
#### **Measurement and Data Collection:**

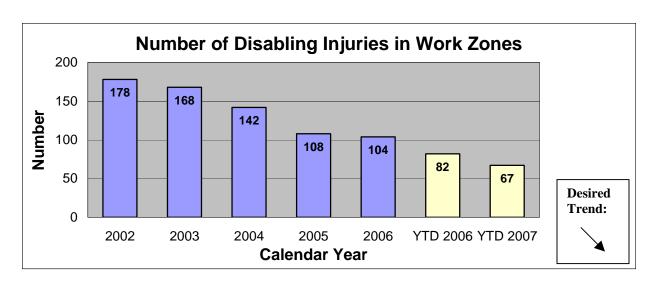
Missouri law enforcement agencies are required to report crashes by submitting a standardized vehicle accident report form to the Missouri State Highway Patrol. MSHP personnel enter these reports into a statewide traffic crash database. MoDOT staff queries this data to identify work zone-related crash statistics quarterly and report the results via this measurement.

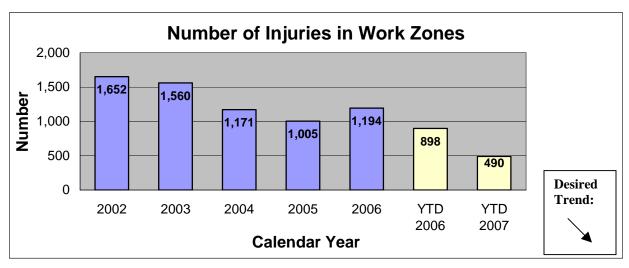
#### **Improvement Status:**

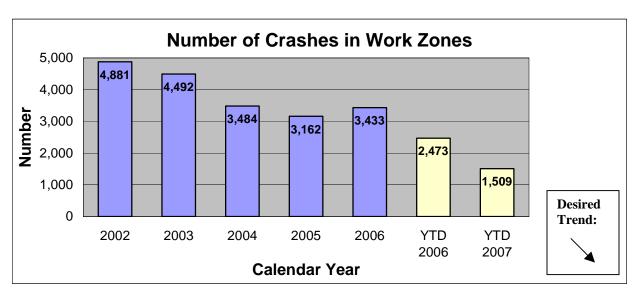
Crash statistics for January through September 2007, while not yet final, indicate a 67 percent reduction in the number of fatalities, an 18 percent reduction in the number of disabling injuries, a 45 percent reduction in the number of injuries and a 39 percent reduction in the number of crashes occurring in Missouri's work zones when compared to the final numbers for the same time period of calendar year 2006.

Despite an increase in work zone-related fatalities, injuries and crashes during calendar year 2006, Missouri generally has experienced a downward trend in these statistics since 2002. Such improvement in work zone safety is attributable partially to the department's proactive approach to raising work zone safety awareness and minimizing impacts on the traveling public.









### Number of highway-rail crossing fatalities and collisions

**Results Driver:** Don Hillis, Director of System Management **Measurement Driver:** Rod Massman, Administrator of Railroads

#### **Purpose of the Measure:**

This measure tracks annual trends in fatalities and collisions resulting from train-vehicle crashes at public railroad crossings in Missouri. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports the Missouri Blueprint for Safer Roadways. This document identifies the statewide initiatives with a goal of reducing fatalities to 1,000 or fewer by 2008.

#### **Measurement and Data Collection:**

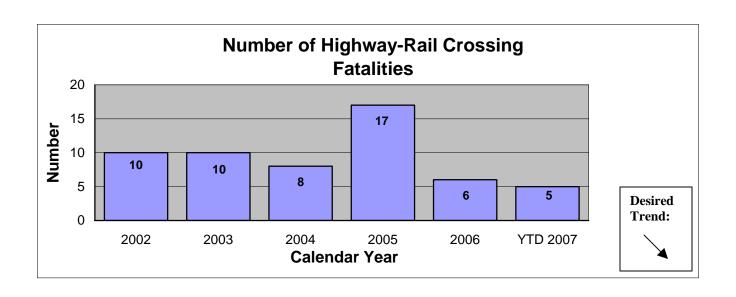
MoDOT collects crash data and enters it into a railroad safety information system used to update MoDOT's traffic management system. This does not include fatalities or collisions from those on railroad property at areas other than at public railroad crossings, which are tabulated separately. Missouri is then ranked with all other states using data from the Federal Railroad Administration that consists of the numbers of collisions and fatalities in each state. Data is updated quarterly.

#### **Improvement Status:**

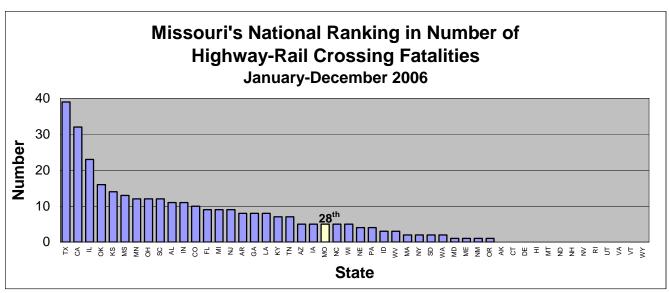
MoDOT continues to coordinate its railroad crossing projects in the areas of greatest need using a safety exposure index, in addition to focusing on crossings with a history of accidents or limited sight distance. By agreeing with the railroads to look at a defined area, called a corridor, and sharing financial responsibilities for improvements, limited funds can be spread over a wider area. This increases the number of overall projects completed in specific areas of the state.

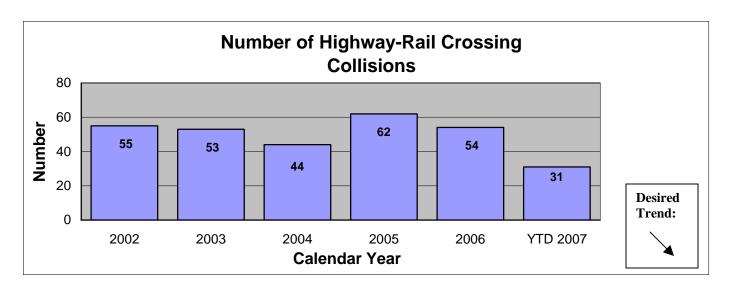
Other improvements include an increased emphasis on and MoDOT employee participation in public outreach opportunities on rail safety in conjunction with Operation Lifesaver, Inc. Another improvement is the exploration of partnerships with other government agencies, cities and school districts to upgrade flasher-only crossings to crossings with both lights and gates, to install gates and lights at crossings, and to replace outdated lighting with LED systems. There is also a renewed emphasis on closing unsafe, redundant or unnecessary crossings.

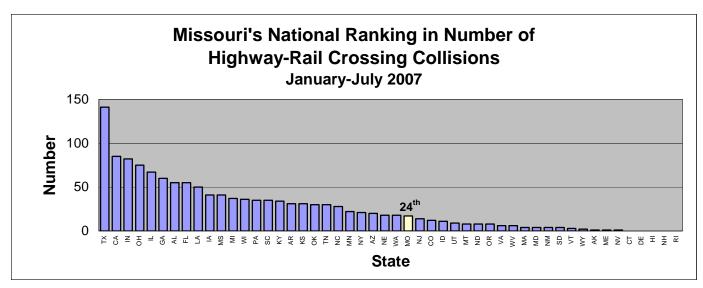
Although fatalities and collisions in calendar year 2006 were decreased markedly from 2005, so far in 2007 there have been five fatalities, which nearly matches the total for 2006. In order to combat this, in addition to the engineering factors, MODOT has increased and implemented more public outreach efforts. This has included distributing an emergency responder manual for train accidents, renewed effort to appear at driver's education classes to present rail crossing information, and having a MoDOT employee become certified in the area of Operation Lifesaver training. Throughout 2007, MoDOT also co-sponsored 'positive enforcement' efforts at crossings all across the state with the Missouri State Highway Patrol and Missouri Operation Lifesaver. The continuing focus throughout the year has been the three E's: engineering, education and enforcement. This continuing effort is designed to increase public awareness and discussion of the need for increased safety and heightened awareness at railroad crossings.

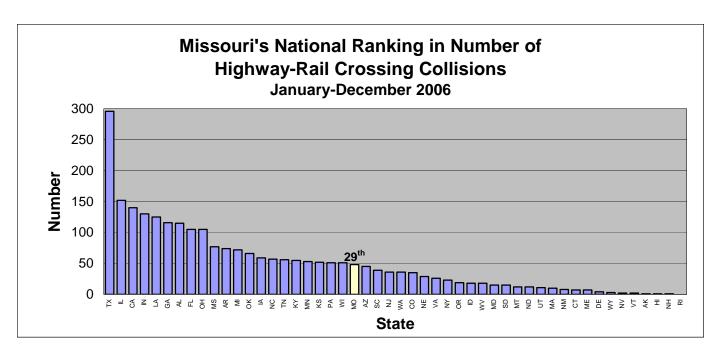












# Roadway Visibility Tangible Result Driver – Don Hillis,

Director of System Management

Good roadway visibility in all weather and light conditions is critical to safe and efficient travel. MoDOT will delight its customers by using top-quality and highly visible stripes and signs.

### Rate of nighttime crashes

Result Driver: Don Hillis, Director of System Management

Measurement Driver: Mike Curtit, Assistant State Traffic Engineer

#### **Purpose of the Measure:**

This measure tracks the types of crashes where visibility of stripes and signs may be a contributing factor.

#### **Measurement and Data Collection:**

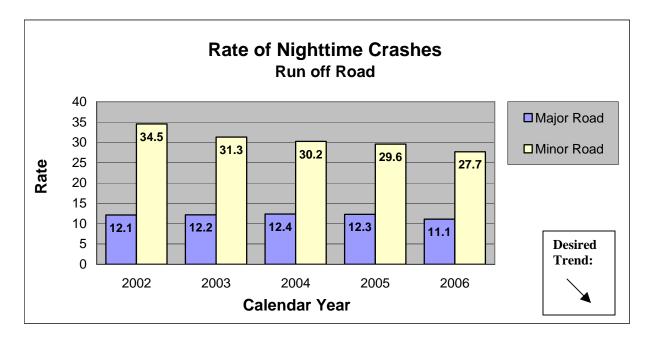
To measure the rate of nighttime crashes, data is collected from the statewide crash database to identify crashes that occur during night conditions. Further filtering of the data divides these night crashes by major and minor roadways. Major roadways are generally used for statewide or interstate travel and minor roadways are generally used for local traffic needs. Crash rates are calculated using the average annual daily traffic counts and are expressed in the unit, per 100 million vehicle miles (HMVM), which is the national standard for expressing crash rates. This is an annual measure with the data updated each April.

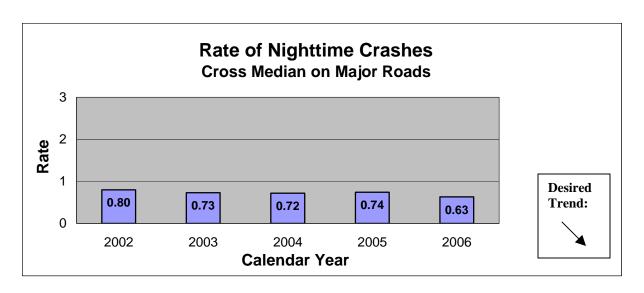
#### **Improvement Status:**

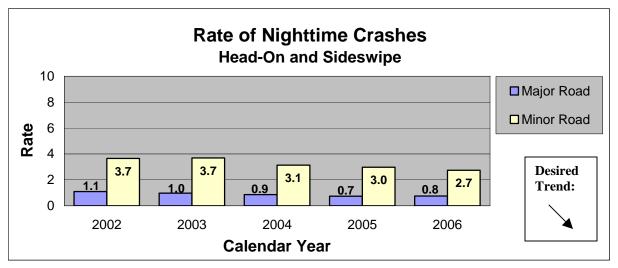
The rate of nighttime crashes on major and minor roads has decreased for each measure except for head-on and sideswipe crashes on major roads. The rate of head-on and sideswipe crashes on major roads has remained virtually flat from 2002 to 2006. The previous years' rates were also updated with current crash data.

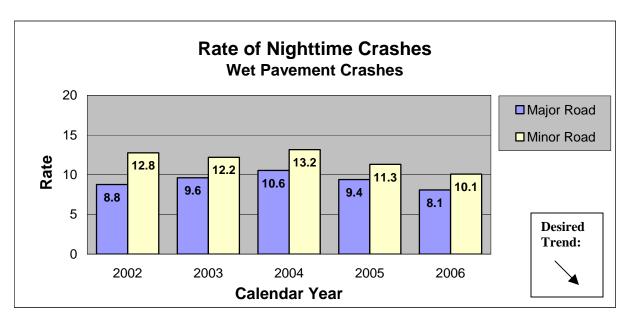
As part of the recently completed Smooth Roads Initiative (SRI), over 188,000 new signs, over 12,000 new emergency reference markers on interstates, over 150,000 delineators on guardrail and guard cable, and approximately 3 million feet of highly reflective pavement tape were installed. In addition, edgeline rumble stripes are being installed on SRI routes.

The guidelines for the Better Roads, Brighter Future program include upgrading the signing, continuing to implement the new pavement marking system, adding edgeline rumble stripes, and including centerline rumble stripes on two lane roadways. The pavement tape that will be used as a part of Better Roads, Brighter Future program will be a "wet reflective" tape that has improved visibility during wet pavement conditions.









# Percent of signs that meet customers' expectations

Result Driver: Don Hillis, Director of System Management

Measurement Driver: Mike Curtit, Assistant State Traffic Engineer

#### **Purpose of the Measure:**

This measure will track whether the department's sign policy and the design standards, and sign replacement policy are resulting in visible signs that meet customers' expectations.

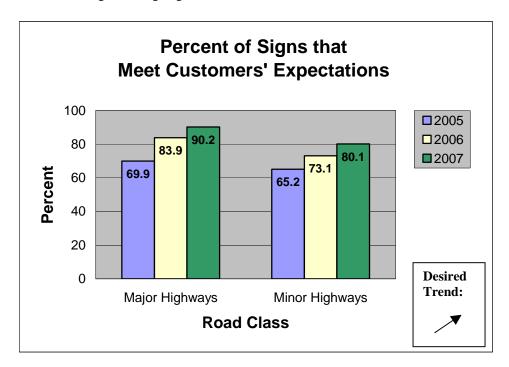
#### **Measurement and Data Collection:**

Sign-quality attributes that define user expectations have been developed based on an industry-wide literature review. The attributes selected for this measure are those that can be captured during a night sign log. A night sign log is conducted by MoDOT employees driving a road at night, recording the location and condition of the signs, particularly how visible the signs are with headlights. Data for this measure is collected by doing night sign logs on randomly generated road segments. MoDOT employees collect the data annually in the fall, and update it each October.

#### **Improvement Status:**

Over 90 percent of signs on major highways are in good condition. This represents a 6 percent increase from last year. Currently 80 percent of our signs on minor roads are in good condition. This represents a 7 percent increase from last year.

The Smooth Roads Initiative, which was completed in 2006, improved signing on the major routes. The Better Roads, Brighter Future program, which will be completed by the end of 2011, also emphasizes signing improvements on major routes. MoDOT performs annual inspections of every sign in Missouri and does random quality assurance reviews targeted at signing.



# Percent of stripes that meet customers' expectations

Result Driver: Don Hillis, Director of System Management

Measurement Driver: Jim Brocksmith, Technical Support Engineer

#### **Purpose of the Measure:**

This measure tracks whether MoDOT's striping policy, processes and materials used are resulting in visible stripes that meet customers' expectations.

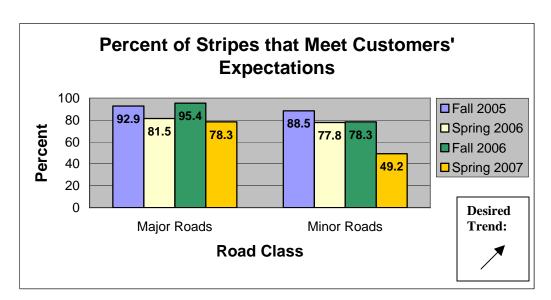
#### **Measurement and Data Collection:**

Striping quality attributes that define user expectations have been developed based on an industry-wide literature review. The attribute selected for this measure is the retroreflectivity of the striping or the visibility of the striping at night. Retroreflectivity is measured as the amount of light from vehicle headlights that is returned to the driver. We have established retroreflectivity benchmarks of 150 for white and 125 for yellow. These benchmarks were chosen because they are at the high end of what research and other states consider minimum acceptable levels. Data is collected by taking retroreflectivity readings on randomly selected road segments in the fall and spring of each year. This data is then compared to the benchmarks. Traffic volumes, winter weather and pavement condition all have an impact on the performance and durability of striping. The measurement unit for retroreflectivity is millicandellas per meter squared per lux (mcd/m²/lux).

#### **Improvement Status:**

The data was analyzed in respect to the above benchmarks MoDOT set as the minimum acceptable level of retroreflectivity. Fall readings are taken in October and November as the striping season is ending. Spring readings are taken in May to reflect the condition of the markings coming out of the winter when they are typically the poorest. The winter of 2006-2007 had several large snow and ice events that significantly impacted striping. On the major roads, the impact was significant but the durable markings installed on the SRI program performed well. On minor roads the impact was very significant with only approximately 50 percent of the roads having acceptable striping. The minor road drop is also related to the reduction in new striping done in 2006, with the conversion to the two-year striping cycle and a more durable high-build paint.

The roadway visibility plan for major roads is definitely showing improvements. As MoDOT enters the second year of implementing high-build paint on the minor roads, improvements due to the longer life expectancy of the paint will be realized. Also, implementation of the recommendations of the Striping Quick Action Team will provide for better utilization of both equipment and funding for striping.



# Percent of work zones meeting expectations for visibility

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Scott Stotlemeyer, Traffic Liaison Engineer

#### **Purpose of the Measure:**

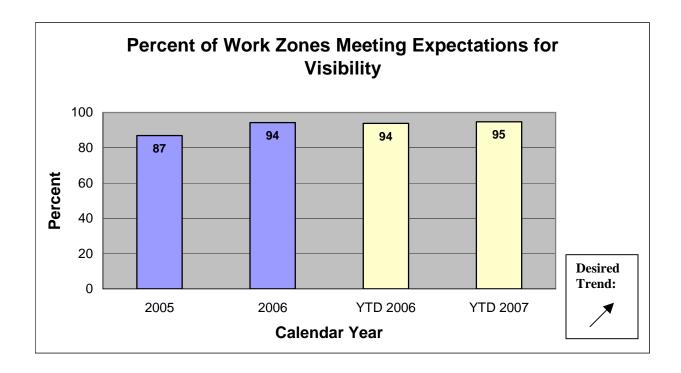
An important factor in evaluating the department's performance in temporary traffic control design, deployment, operation, and maintenance is the measurement of the effectiveness of the visual guidance provided to motorists in our work zones. This measure tracks how well the department meets customers' expectations of visibility in work zones on state highways.

#### **Measurement and Data Collection:**

Using a formal inspection worksheet, Construction and Materials, Maintenance, Traffic and district employees evaluate visibility of construction, MoDOT and permit work zones across the state. Each evaluation consists of a subjective assessment of engineered and operational factors affecting visibility. The evaluator assigns a pass, fail or n/a rating to each of these individual factors and a pass or fail rating for their overall perception of the work zone visibility. The overall perception ratings are compiled quarterly and reported via this measurement. Note: This inspection program began in June 2005.

#### **Improvement Status:**

Compilation of the 2,896 evaluations performed by MoDOT staff between January and September of this calendar year resulted in a 95 percent satisfaction rating for work zone visibility (i.e., a negative perception of visibility was recorded in 5.3 percent of the evaluations). This rating is 0.9 and 0.5 percent higher than last calendar year's year-to-date and year-end ratings, respectively – a year the department showed a 7.3 percent improvement in work zone traffic visibility when compared to the previous year's inspection results. Such progress is attributable to the greater emphasis MoDOT has placed on providing quality temporary traffic control installations that effectively direct, guide and inform users through and around construction and maintenance work zones on the state highway system.



Tangible Result Driver – Shane Peck, Community Relations Director

Responding to customers in a courteous, personal and understandable way is important. MoDOT listens and seeks to understand, because it values everyone's opinion. MoDOT's goal is to delight them with its customer service.



# Percent of overall customer satisfaction

Result Driver: Shane Peck, Community Relations Director

Measurement Driver: Sally Oxenhandler, Community Relations Coordinator

#### **Purpose of the Measure:**

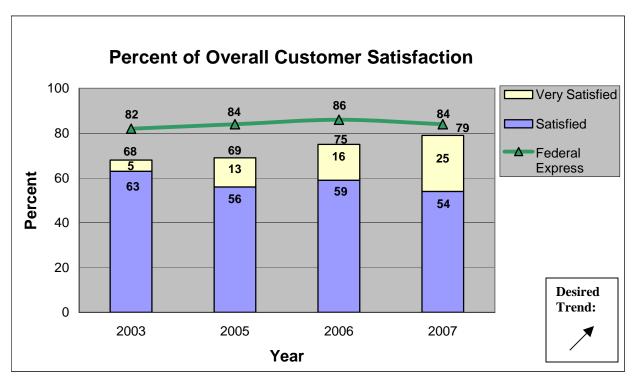
This measure tracks MoDOT's progress toward the mission of delighting its customers.

#### **Measurement and Data Collection:**

This is an annual measure. Data is collected from interviews with over 3,500 randomly selected adult Missourians each May. MoDOT continues to use Federal Express as the benchmark for this measure. Based on information compiled by the American Customer Satisfaction Index, Federal Express has the highest customer satisfaction rate – 84 percent – out of the 200 companies and government agencies that the ACSI scores. MoDOT continues to research customer satisfaction rates for other state departments of transportation. One example is Alaska, which had an 80 percent customer satisfaction score in 2005.

#### **Improvement Status:**

MoDOT has made significant accomplishments in the year since the last customer satisfaction study was taken. Completing the Smooth Roads Initiative a year ahead of schedule; tackling the largest construction season ever; announcing plans to fix 800 of Missouri's worst bridges; and unveiling the Better Roads, Brighter Future program are just a few of the department's recent successes. As a result, customer satisfaction with MoDOT rose from 75 percent in 2006 to 79 percent in 2007. Since the customer satisfaction survey was first taken in 1999, the percent of people who are satisfied with MoDOT has grown from 64 percent to 79 percent. The increase in the percentage of people who are very satisfied with MoDOT rose 9 percent in the last year, from 16 percent to 25 percent. In the past four years, the percentage of people who are very satisfied with MoDOT has grown 20 percent. The percentage of those who reported being dissatisfied with MoDOT dropped from 25 percent to 21 percent in the past year.



# Percent of customers who contacted MoDOT that felt they were responded to quickly and courteously with an understandable response

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Manager

#### **Purpose of the Measure:**

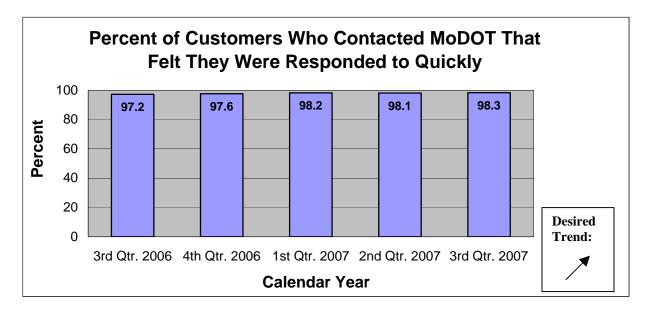
This measure indicates whether customers are comfortable with the speed, courtesy and clarity of MoDOT customer service.

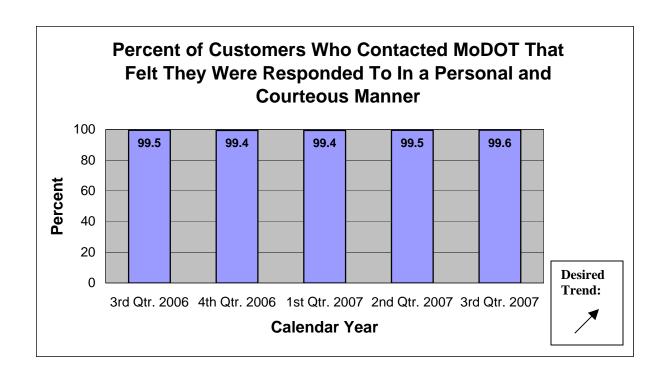
#### **Measurement and Data Collection:**

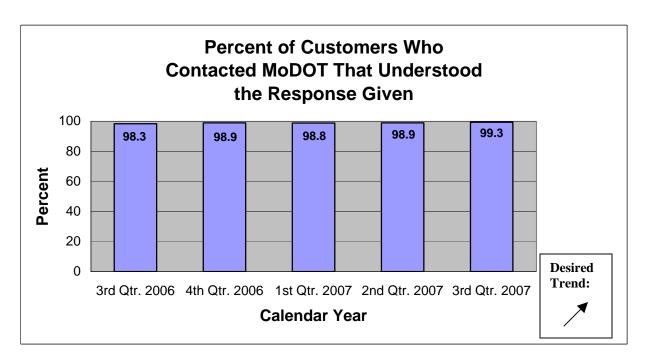
Customers who contact MoDOT Customer Service Centers are asked to complete a short telephone survey when their business with the customer service representatives is complete. Callers who agree are forwarded to an automated survey that asks three "yes or no" questions on the timeliness, accuracy and courtesy of the call.

#### **Improvement Status:**

Results continue to be extremely high across the board, and are slightly higher this quarter. This data comes from 3,002 surveys taken in the past quarter. Ongoing "secret shopper" efforts encourage continued improvement.







### Percent of documented customer requests responded to within 24 hours

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Manager

#### **Purpose of the Measure:**

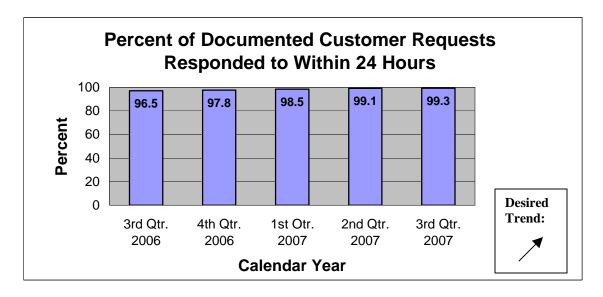
This measure tracks how quickly MoDOT responds to customer requests through the customer service centers.

#### **Measurement and Data Collection:**

This information comes from the customer service database, where customer requests requiring follow-up are documented from the time the call comes in until the request is responded to. This may include requests for signs, traffic signal review, pothole patching or work zone congestion. More than 90 percent of our total customer requests are responded to immediately, including basic phone call transfers, questions, or requests for general information; these routine contacts are not documented here.

#### **Improvement Status:**

Numbers are extremely high in this area, and continue to improve. Database improvements to document response times, including automated e-mail reminders for delayed responses, helped these numbers improve. There were 7,377 documented customer requests in the quarter.



### Average completion time on requests requiring follow up

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Manager

#### **Purpose of the Measure:**

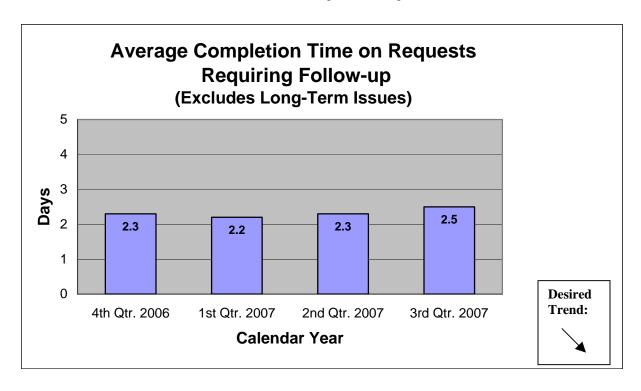
This measure tracks MoDOT's responsiveness to customer inquiries that are received through the customer service centers and documented in the database.

#### **Measurement and Data Collection:**

Customer requests in the customer service database are tracked for average completion time. Longer-term requests that require more than 30 days to complete are removed from the results because these longer-term requests would skew the overall results. Time is measured in working days; weekends and holidays are excluded.

#### **Improvement Status:**

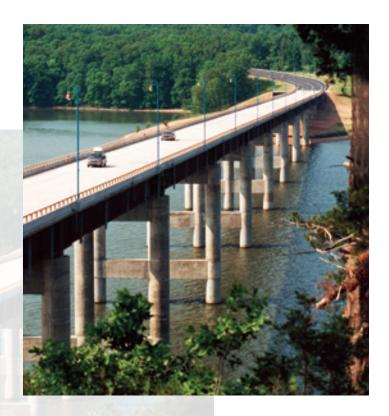
Average completion times remain low, although there was a slight increase this quarter. This was the first complete quarter using new, more specific definitions of what should be reported. This resulted in more consistency among districts, but also may have led to the increased completion time, since some districts' routine customer requests were removed. There were 7,377 documented customer requests in the quarter.



# Partner with Others to Deliver Transportation Services

Tangible Result Driver – Kevin Keith, Chief Engineer

To be an effective leader in transportation, MoDOT must work with agencies and branches of government, including state, county, private industry and municipalities to deliver a quality transportation system that meets the needs of everyone. A coordinated transportation system requires partnerships to ensure compatible decisions are made. Partnering builds trust and ensures quality results.



# **Partner With Others to Deliver Transportation Services**

### Number of dollars of discretionary funds allocated to Missouri

Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Todd Grosvenor, Finance Manager

#### **Purpose of the Measure:**

This measure shows the number of dollars of discretionary funds allocated to Missouri.

#### **Measurement and Data Collection:**

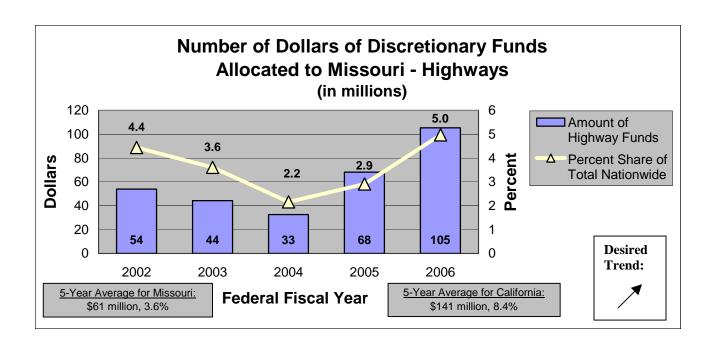
This is an annual measure updated each January. The federal government allocates discretionary funds to states for specific highway and multimodal projects. Multimodal projects include waterway, aviation and transit activities. These funds are distributed administratively for programs that do not have statutory distribution formulas. States compete for these funds, which are above the formula apportionments. Resource Management collects this information from the Federal Highway Administration, Federal Transit Administration and Federal Aviation Administration. Missouri's share of the total highway funds allocated nationwide over the last five years is 3.6 percent, which ranks seventh. The state of California received the largest share with 8.4 percent. Missouri's share of the total multimodal funds allocated nationwide over the last five years is 2 percent, which ranks 16th. The state of New York received the largest share with 11.8 percent.

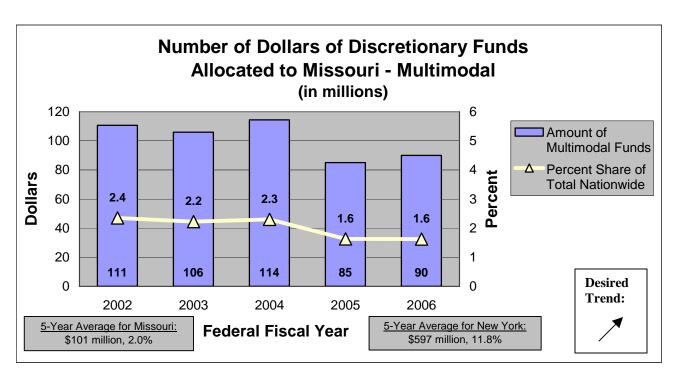
#### **Improvement Status:**

The number of dollars of discretionary funds allocated to Missouri for highway projects increased significantly in 2006. This was mainly attributable to an increase in the funds made available from the annual appropriations bill and an increase in the annual allocation percentages for the projects identified in the current highway act, SAFETEA-LU. The funds allocated to Missouri increased 54 percent from 2005 to 2006, while the funds allocated nationwide decreased by 10 percent. Missouri's Congressional delegates were successful in securing discretionary funds for highway projects in Missouri.

The number of dollars of discretionary funds allocated to Missouri for multimodal projects increased slightly in 2006. This was mainly attributable to an increase in transit funds. The funds allocated to Missouri increased 6 percent, which is the same increase as nationwide.

MoDOT continues to work closely with Missouri's Congressional delegates to identify specific transportation projects that are good candidates for discretionary funds.





# **Partner With Others to Deliver Transportation Services**

# Percent of earmarked dollars that represent MoDOT's high priority highway projects

Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Todd Grosvenor, Finance Manager

#### **Purpose of the Measure:**

This measure shows the percent of earmarked dollars that represent MoDOT's high priority highway projects.

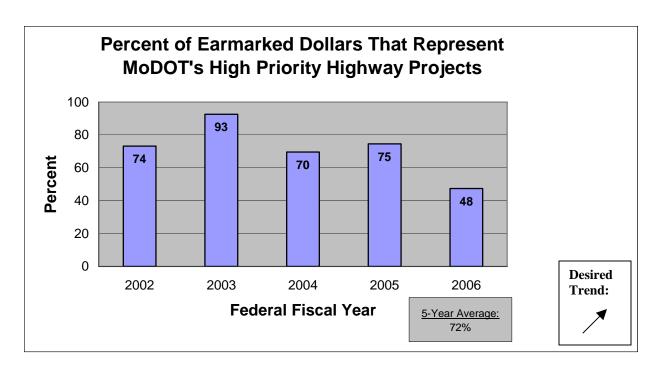
#### **Measurement and Data Collection:**

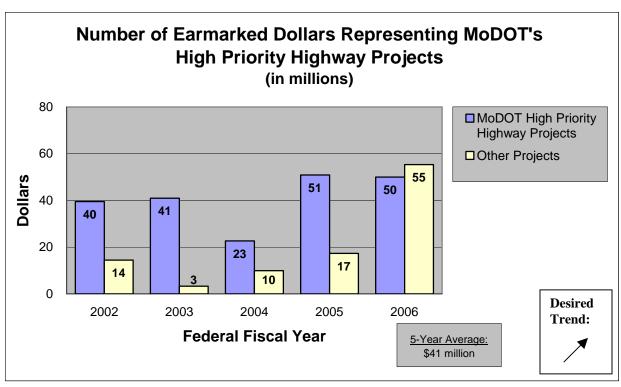
This is an annual measure updated each January. Earmarked dollars are federal funds allocated to states for specific highway projects. These funds are distributed administratively for programs that do not have statutory distribution formulas. States compete for these funds, which are above the formula apportionments. Resource Management collects this information from the Federal Highway Administration. MoDOT's high priority highway projects are identified in the Federal Priorities list that is prepared by Governmental Relations. This list is provided to Missouri's Congressional delegates.

#### **Improvement Status:**

Missouri's earmarked dollars for specific highway projects increased significantly in 2006. This was mainly attributable to an increase in the funds made available from the annual appropriations bill and an increase in the annual allocation percentages for the projects identified in the current highway act, SAFETEA-LU. Missouri's Congressional delegates were successful in securing earmarked dollars for highway projects in Missouri. However, the percent of earmarked dollars that represent MoDOT's high priority highway projects decreased considerably. Many of the earmarked dollars were for projects not identified in our Federal Priorities list. Over the last five years, MoDOT's high priority highway projects received 72 percent of the earmarked dollars.

MoDOT continues to work closely with Missouri's Congressional delegates to identify MoDOT's high priority highway projects that are good candidates for earmarked dollars.





# **Partner With Others to Deliver Transportation Services**

# Number of dollars generated through cost-sharing and other partnering agreements

Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Jay Moore, Special Projects Coordinator

#### **Purpose of the Measure:**

This measure monitors the effectiveness of MoDOT's cost-sharing and partnering programs. It estimates the funds invested in highway construction by cities, counties, transportation corporations, and transportation development districts as a result of funds being made available for local construction by MoDOT.

#### **Measurement and Data Collection:**

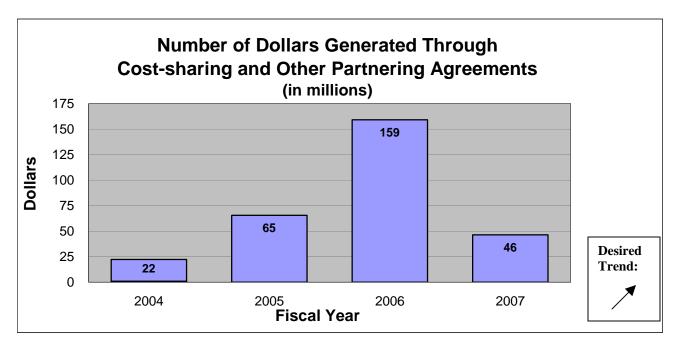
This is an annual measure updated each October. The data comes from various sources, both internal and external to MoDOT. The sources include transportation corporations, transportation development districts, MoDOT districts and MoDOT partnering programs.

Agreements included in this data set were compiled in the fiscal year in which the agreement was entered into or during which the permit was issued.

#### **Improvement Status:**

In fiscal year 2006, two partnering agreements (Highways 67 and 36) were reached that accounted for \$103 million of the total shown. In fiscal year 2007, MoDOT approved \$43.5 million of partnering projects through the cost-share program.

To advance this measure, MoDOT has implemented a marketing plan featuring workshops for district staff, as well as exhibits at appropriate conferences. The marketing workshops have been completed throughout all areas of the state. In fiscal year 2007, MoDOT exhibited or presented at 39 events.



# Leverage Transportation to Advance Economic Development

Tangible Result Driver – Roberta Broeker, Chief Financial Officer

Transportation is essential to Missouri's economic well-being. It plays a critical role in creating jobs and stimulating lasting growth for Missouri. In addition, focusing on ways to advance economic development helps MoDOT achieve its mission of promoting a prosperous Missouri.



### **Leverage Transportation to Advance Economic Development**

### Number of miles of new four-lane corridors completed

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Jay Bledsoe, Transportation System Analysis Engineer

### **Purpose of the Measure:**

This measure tracks the miles of additional divided highways available to the public. Access to a divided highway system supports economic development in Missouri. One of MoDOT's recent priorities has been completion of four-lane corridors in order to connect segments of highway where gaps exist.

#### **Measurement and Data Collection:**

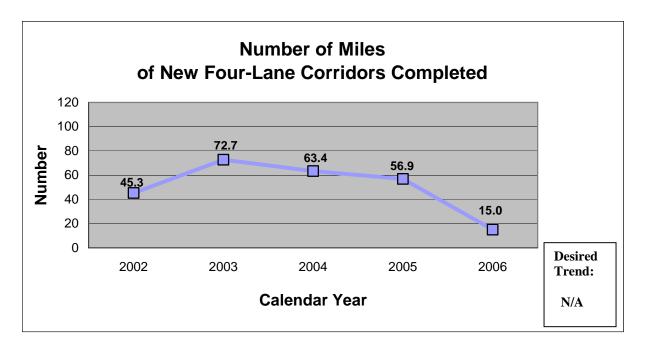
Projects that create or complete sections of dual-divided highways will be identified and tracked. Completion will be defined as the date the project is opened to traffic.

This is an annual measure updated each January.

#### **Improvement Status:**

Approximately 15 miles of new four-lane corridors were completed during calendar year 2006, primarily on U.S. Route 63. Because of the department's emphasis on Smooth Roads Initiative projects, progress in 2006 was significantly lower. However, the number of miles of new four-lane corridors constructed will begin to increase in 2007 due to Amendment 3 bond funds approved by Missouri voters in November 2004.

As part of a partnership with the Missouri Department of Economic Development, MoDOT is initiating a study to track the creation and location of businesses along newly established four-lane corridors. This information, along with data on business size and employment, will help determine the economic value of four-lane corridors.



### **Leverage Transportation To Advance Economic Development**

### Percent utilization of SIB & STAR loan programs

**Result Driver:** Roberta Broeker, Chief Financial Officer **Measurement Driver:** Jay Moore, Special Projects Coordinator

### **Purpose of Measure:**

This measure shows the percent utilization of MoDOT's revolving loan programs, the Missouri State Infrastructure Bank and the State Transportation Assistance Revolving program. It demonstrates how well utilized these funds are by showing a ratio of how much is currently on loan versus the amount available for loan.

The Missouri Transportation Finance Corporation, a not-for-profit corporation, is Missouri's SIB. The SIB program was created by federal law in 1995 to finance both highway and non-highway projects. The STAR program finances non-highway projects such as air, water, rail, or mass transit facility construction, mass transit vehicles, and vehicles for elderly or handicapped persons. STAR funding is appropriated by the General Assembly.

#### **Measurement and Data Collection:**

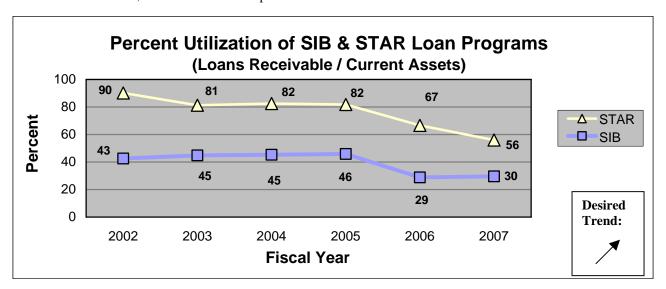
This is an annual measure. New information will be available in July 2008. The data used to calculate the amounts of funds currently on loan is collected through a database used to track the SIB and STAR loans. Amounts available to be loaned are obtained from financial reports.

#### **Improvement Status:**

A SIB loan for \$7.36 million was disbursed during fiscal year 2007. A smaller amount of loans was repaid to the SIB in FY 2007 than was disbursed. This resulted in a slightly higher percentage of SIB funds being utilized. On June 30, 2007, the SIB had fourteen loans totaling \$89.7 million approved but not disbursed, and seven loans in the discussion stage. On June 30, 2007, the SIB funds balance was approximately \$58 million.

A STAR fund loan of \$250,000 was disbursed in FY 2007. Loan repayments and interest earnings on the STAR fund outpaced loan disbursements, resulting in a lower utilization in FY 2007. On June 30, 2007, the STAR fund balance was approximately \$1.44 million.

To advance this measure and improve SIB utilization, the MTFC Board ratified a marketing plan prepared by the partnership development staff. Part of the plan adopted by the board featured marketing workshops for district staff and exhibiting at appropriate conferences. The marketing workshops have been completed throughout all areas of the state. In FY 2007, MoDOT exhibited or presented at 39 events.



### **Leverage Transportation to Advance Economic Development**

### Economic return from transportation investment

**Result Driver:** Roberta Broeker, Chief Financial Officer **Measurement Driver:** Ben Reeser, Finance Manager

### **Purpose of the Measure:**

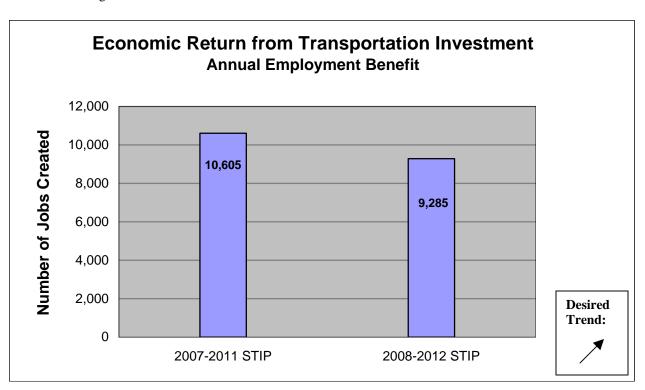
This measure tracks the economic impact resulting from the state's transportation investments. Economists have found that transportation investments affect employment, personal income, and economic output.

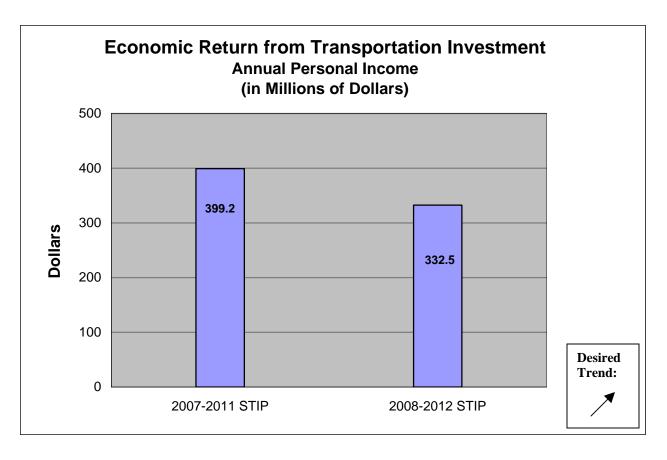
#### **Measurement and Data Collection:**

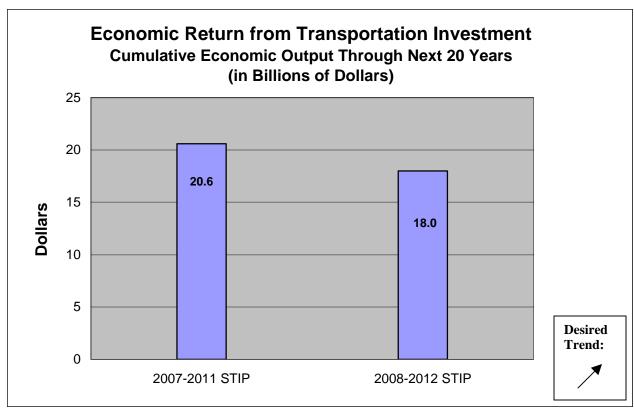
MoDOT works with the Department of Economic Development to perform economic impact analyses for the state's transportation investments. The analyses are performed using a model called the Regional Economic Modeling, Inc. Through these efforts, the department can provide state and regional estimates to demonstrate employment, income and state benefits related to specific projects, corridors and program expenditures. This annual measure is updated each October.

#### **Improvement Status:**

The REMI model results demonstrate the strong link between transportation investment and economic development. An analysis of the Statewide Transportation Improvement Program provides a summary of economic benefits related to transportation investments over the next 20 years. The fiscal year 2008 through 2012 STIP will invest over \$5 billion in 772 transportation projects across the state. On average, STIP investments will create approximately 9,285 new jobs with an average wage of \$27,080 per job. As a result, average personal income is expected to increase by \$332.5 million. The FY 2008 through 2012 STIP projects will contribute over \$901.1 million to economic output for the state per year totaling \$18 billion dollars over the next 20 years. This equates to \$3.56 return on every \$1 invested in transportation. The economic return for transportation investment in the 2008 through 2012 STIP declined compared to the 2007 through 2011 STIP since total dollars invested decreased from \$5.7 billion to \$5 billion. MoDOT continues to work with DED to conduct economic impact analysis for transportation investments throughout the state.









# Innovative Transportation Solutions Tangible Result Driver – Mara Campbell,

Organizational Results Director

MoDOT values innovation. The department empowers employees and seeks input from stakeholders to generate innovative ideas. Collaboration with staff, academia and industry make unique concepts come to life so MoDOT can serve its customers better, faster and at less expense to the taxpayer.



### Number and percent of research recommendations implemented

Result Driver: Mara Campbell, Organizational Results Director

Measurement Driver: Ernie Perry, Organizational Performance Administrator

### **Purpose of the Measure:**

This measure tracks the number of completed research projects, and the percentage of implemented research recommendations, be they ideas, methods, or tools that MoDOT implements as a result of research efforts. MoDOT realizes the importance of supporting innovation and research and is driven to provide the department with the latest ideas, technologies, and solutions needed to deliver the most efficient, safe, and economical transportation system.

#### **Measurement and Data Collection:**

Research projects implemented include any new ideas, methods, policies, processes, standards, equipment or tools introduced for the purpose of improving the department's operation, services, or products. For this measure, research projects are categorized into two areas: 1) Information and policy guidance research, and 2) Technical, product-focused research. Both categories are reported as the number of completed activities and percent of recommendations implemented. Examples of information and policy guidance research products include determining the economic impact of highway construction or smoother pavements, or development of freight planning agendas. Technical, product-focused research projects examples include developing passing lane alternatives, or concrete curing specifications.

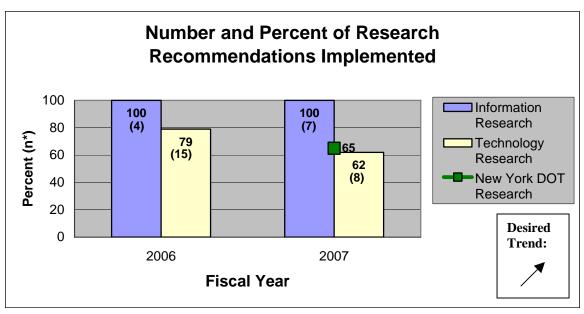
For these research products, the definition of implemented includes all solutions that have been or are being applied. "Percent of research recommendations implemented" is determined by dividing the number of research projects producing implementable results by the total number of research projects completed during the reporting period. While many ideas and technologies are pursued through research and related efforts, not all solutions can be implemented by MoDOT.

For both categories of research projects, the information and policy oriented, as well as the technical, MoDOT's elevated emphasis on strategically focused research and its implementation should result in better and more economical transportation products and services delivered. Data for this measure is collected and analyzed every six months with updates in the January and July Tracker editions.

#### **Improvement Status:**

During fiscal year 2007, MoDOT's research program completed 20 total research projects. Seven projects are categorized as information and policy guidance reports and are considered implemented. Thirteen projects are categorized as technical, product-focused reports. Of the 13 technical reports, eight reports have produced implemented results within the department. This represents a 62 percent implementation rate for the technical report recommendations.

MoDOT's implementation rate for technical projects lags slightly behind the New York DOT implementation rate comparison of 65 percent. MoDOT's Organizational Results continues to aggressively pursue research and innovations focused on addressing pertinent department needs that are closely tied to the 18 Tangible Results. This focus will lead to more usable solutions and better value. While not all research results or solutions can be implemented, MoDOT recognizes the importance and value of conducting a research program driven to make a difference.



<sup>\*(</sup>n) Indicates the number of research recommendations implemented

### Number of external awards received

Result Driver: Mara Campbell, Organizational Results Director

Measurement Driver: Ernie Perry, Organizational Performance Administrator

### **Purpose of the Measure:**

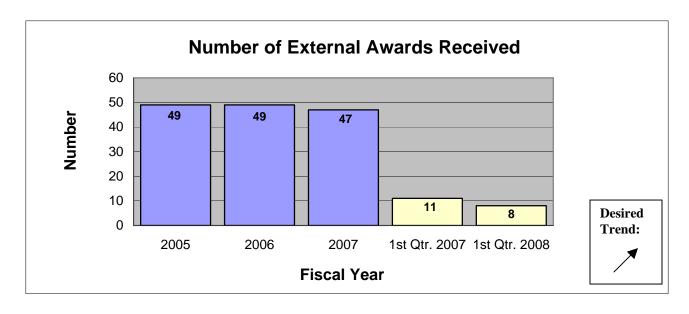
This measure tracks the number of external awards received by the department. These awards display the department's dedication and efforts towards efficiency, innovation and quality throughout the organization. This information enables the department to measure progress and encourage further participation in award programs. It also provides opportunities for the department to increase public awareness of department activities.

#### **Measurement and Data Collection:**

Each district and division office tracks the awards presented to the department by external organizations. This includes all awards presented to individuals, teams, districts, divisions and MoDOT as a whole. Data for this measure is updated quarterly.

### **Improvement Status:**

During the first quarter fiscal year 2008, MoDOT received eight awards. This is three less than the number received in the same quarter last year. A highlight from first quarter 2008 award recipients is the AASHTO Excellence Pathfinder Award won by MoDOT's Risk Management Safety & Health Team. This statewide team dramatically reduced the number of lost workdays per year (see page 15e). MoDOT continues to enter various competitions to have their work judged against the efforts of other organizations.



### Percent of best practices by implementation status

**Result Driver:** Mara Campbell, Organizational Results Director

Measurement Driver: Bill Stone, Organizational Performance Administrator

### **Purpose of the Measure:**

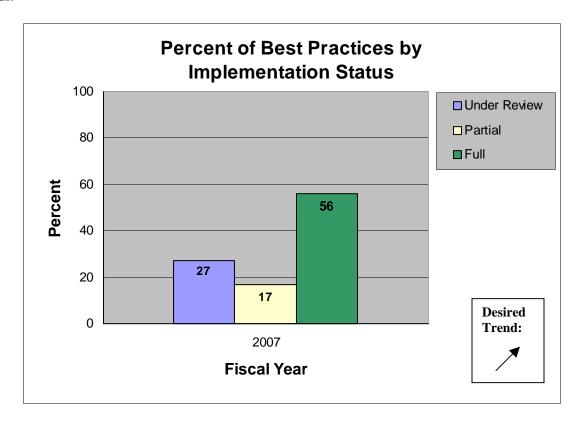
This measure tracks the percent of best practices implemented within MoDOT. Best practices show how MoDOT employees are applying innovation to improve daily operations.

#### **Measurement and Data Collection:**

MoDOT uses a simple five-question submission form for employees to share how they have improved the ways of accomplishing daily work. Submissions are evaluated and verified by managerial and technical staff. Those submissions approved as best practices are shared with MoDOT employees through online and printed publications. Every six months, division and district managers report best practice implementation status. This measure will have updates in the July and January Tracker editions.

### **Improvement Status:**

Since the statewide pilot launch of MoDOT's Solutions at Work in November 2006, 16 best practices have been verified and shared with department employees. Two of those best practices have been shared within the past thirty days and are not included in this quarter's data. Overall 56 percent of the best practices have been fully implemented with 17 percent partially implemented and 27 percent still under review. With 73 percent of best practices partially or fully implemented, MoDOT is aggressively taking advantage of best practices. The 27 percent still under review is partially due to the need to customize some best practices to better fit operational or regional needs.



### Number of dollars saved by increasing MoDOT's productivity

Result Driver: Mara Campbell, Organizational Results Director

Measurement Driver: Jen Harper, Organizational Performance Engineer

### **Purpose of the Measure:**

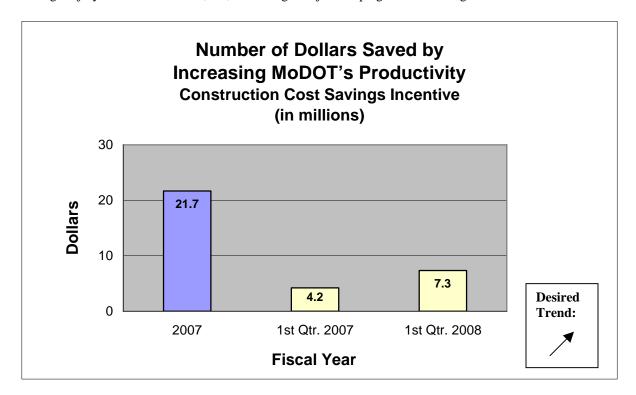
This measure enables MoDOT to assess its productivity by tracking cost savings indicative of practical design, value engineering, Performance Plus and good engineering judgment.

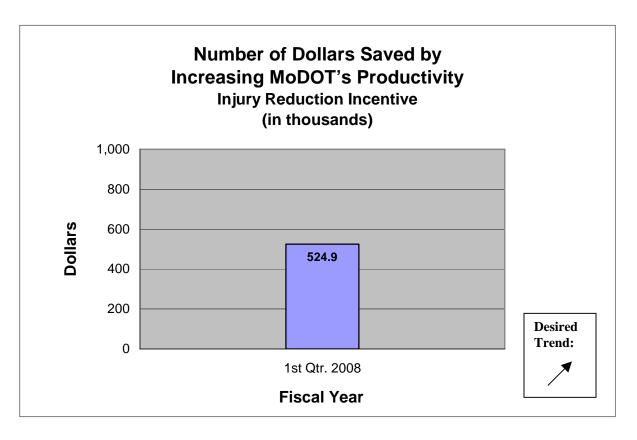
#### **Measurement and Data Collection:**

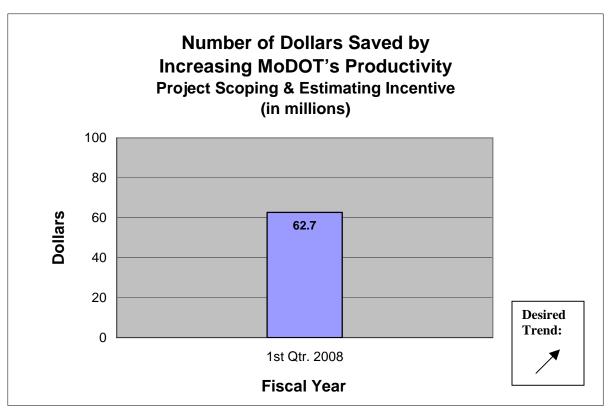
The cost-saving methods used by MoDOT are so broad that this measure focuses on savings measured through the Performance Plus program. In addition to the Construction Cost Savings, the Performance Plus program has added two more incentives (Injury Reduction and Project Scoping and Estimating) in fiscal year 2008. Each of the incentives is audited either quarterly or semiannually. In these audits, the number of dollars saved as well as the amount paid out to eligible employees is calculated for each of the incentives. Note that in the Construction Cost Savings, the savings are calculated based only on those project offices that qualified for the incentive while in the Project Scoping and Estimating and Injury Reduction are based on all of the districts whether or not they qualified. For each of the incentives, the amount paid out is then subtracted from the amount saved to get a final savings. These savings are reported in the fiscal year that the incentives are paid out to the employees. Data for this measure is updated quarterly.

### **Improvement Status:**

During fiscal year 2007, MoDOT saved \$21,664,344 measured by Construction Cost Savings. So far in FY 2008, MoDOT has saved \$7,343,466 for that incentive. In FY 2008, MoDOT has calculated a savings of \$524,911 through Injury Reduction and \$62,661,467 through Project Scoping and Estimating.



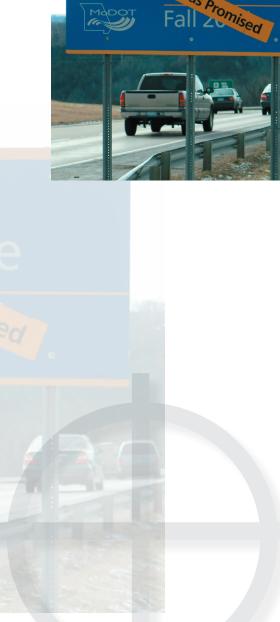






Tangible Result Driver – Dave Nichols, Director of Program Delivery

MoDOT customers expect that transportation projects be completed quickly and provide major improvements for travelers. MoDOT will honor project commitments because it believes in integrity.



### Percent of estimated project cost as compared to final project cost

**Result Driver:** Dave Nichols, Director of Program Delivery

Measurement Driver: Renate Wilkinson, Planning and Programming Engineer

#### **Purpose of the Measure:**

This measure determines how close MoDOT's total program completion costs are to the estimated costs.

#### **Measurement and Data Collection:**

MoDOT determines the completed project costs and compares them to the estimated costs. The completed project costs are reported during the fiscal year in which the project is completed.

Project costs include design, right of way purchases, utilities, construction, inspection and other miscellaneous costs. The estimated cost is based on the amount included in the most recently approved Statewide Transportation Improvement Program. Completed costs include actual expenditures. The costs do not include those that might result from any legal claims, which are rare occurrences, regarding the projects after they are completed. Positive numbers indicate the final (completed) cost was higher than the estimated cost.

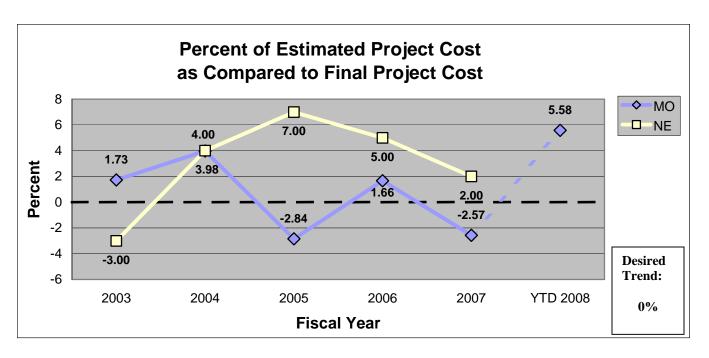
This is an annual measure updated each quarter. In November of each year, this data is provided to the Missouri Legislature through the Report to the Joint Committee on Transportation Oversight.

#### **Improvement Status:**

As of October 15, 2007, for fiscal year 2008, a total of 140 projects were completed at a cost of \$260 million. This represents a deviation of 5.58 percent or \$14 million more than the estimated cost of \$246 million. While most projects have completed costs that vary from the estimated costs, these variations are canceling each other out, except for a single interchange project that is responsible for the \$14 million year-to-date 2008 increase.

The increased cost trend through fiscal year 2004 reflects the increased number of projects awarded in fiscal years 2002 and 2003. The increased work volume resulted in higher awards and overall costs. The decrease in 2005 can be attributed to the lower work volume and increased competition among contractors. The increase in 2006 can be primarily attributed to inflationary pressures. The ideal status is no deviation in the estimated vs. final project cost, or 0 percent.

While a number of states track construction costs, few provide data for total project costs. Fewer still compare estimated total project costs to final total project cost. The following graph shows how MoDOT performance compares with neighboring Nebraska\*. In 2004, the performance of both states was nearly the same. In other years, it varied substantially.



Positive numbers indicate the final (completed) cost was higher than the estimated cost.

<sup>\*</sup>Data from Nebraska Department of Roads one-year schedule of highway improvement projects.

## Average number of years it takes to go from the programmed commitment in the Statewide Transportation Improvement Program to construction completion

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Machelle Watkins, Transportation Planning Director

#### **Purpose of the Measure:**

This measure monitors how quickly projects go from the programmed commitment to construction completion.

#### **Measurement and Data Collection:**

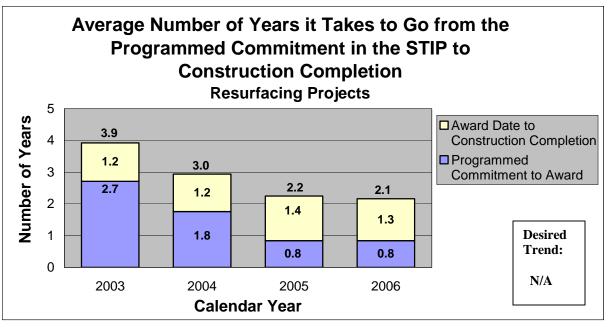
MoDOT compares how long it takes from when the project is added to the Statewide Transportation Improvement Program to when the project is completed. Data is categorized by the type of work, and distinguishes between design and construction stages.

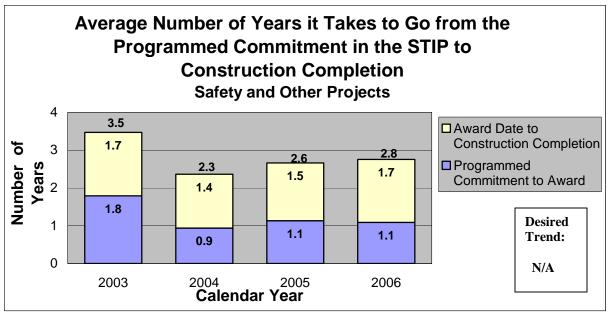
This is an annual measure and data is updated in October.

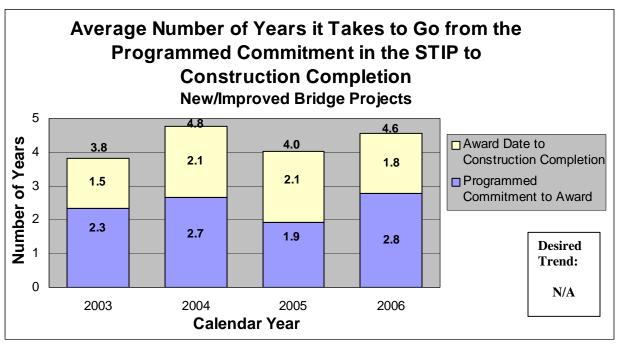
### **Improvement Status:**

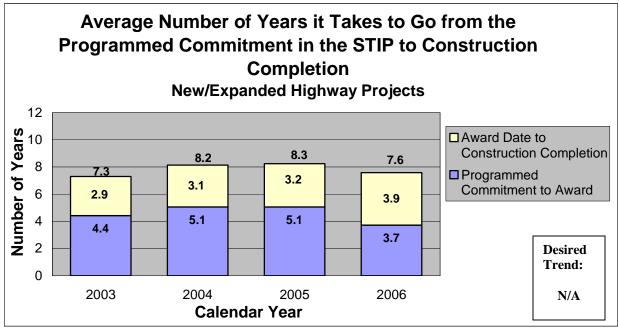
In general, resurfacing and safety projects take the least amount of time to develop and complete, around two years. New or improved bridge projects take more time, around four years. New or expanded highways take yet more time, from five to eight years. Major bridge projects take the most time, from seven to 11 years to develop and complete.

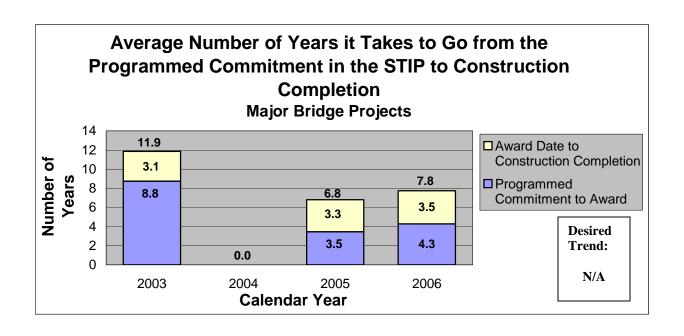
Design time for New/Improved Bridges increased from an average of 1.9 years to 2.8 years. This is due to an ongoing effort to fully program the first three years of the STIP. The construction time average for New/Expanded Highways increased from an average of 3.2 years to 3.9 years. Projects with unusually long construction periods have been identified and are being coordinated with other divisions to pinpoint causes or issues relating to those projects. Data samples for Major Bridges are usually very small, which allows for one to two projects to affect the averages that are reported. In 2005 only two Major Bridge projects were completed, compared with 10 projects in 2006. Year-to-year changes in Major Bridge averages are the result of these small data samples.











### Percent of projects completed within programmed amount

Results Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Dave Ahlvers, State Construction & Materials Engineer

### **Purpose of the Measure:**

The measure tracks the percentage of projects completed within the programmed amount. It includes separate categories for projects over and under one million dollars.

#### **Measurement and Data Collection:**

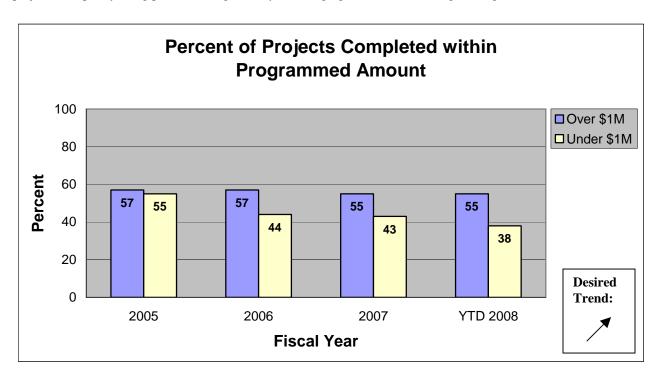
The completed project cost is compared to the estimated cost for each project. The percentage of projects completed within the estimated cost is gathered from across the state.

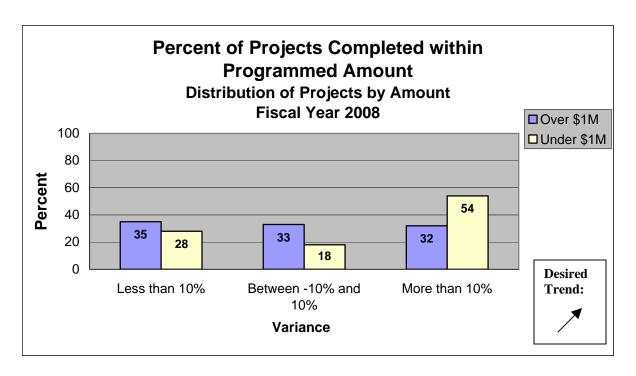
Project costs include design, right-of-way purchases, utilities, construction payments, inspection and other miscellaneous costs.

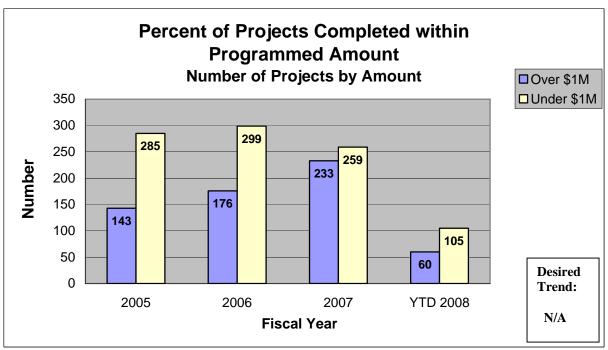
This is an annual measure updated each quarter.

#### **Improvement Status:**

MoDOT would like to see all projects completed within the programmed amount. The goal is to deliver projects at the programmed amount, allowing the greatest number of projects to be built with the funding available. MoDOT's data indicates that there is a great deal of deviation among individual projects with half over and half under budget. In fiscal year 2008, 55 percent of projects programmed over \$1 million were completed within the budgeted amount, while 38 percent of projects under \$1 million came in at or below budget. Emphasis has been placed on scoping projects and developing estimates that represent the true cost of delivering the projects. MoDOT is striving to deliver quality projects cheaper by using practical design and by encouraging the use of value engineering.







### Percent of projects completed on time

Results Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Dave Ahlvers, State Construction & Materials Engineer

### **Purpose of the Measure:**

This measure tracks the percentage of projects completed by the commitment date established in the contract. Adjustments to the completion date are made when additional work is required or for unusual weather occurrences. It indicates MoDOT's ability to complete projects by the agreed upon date.

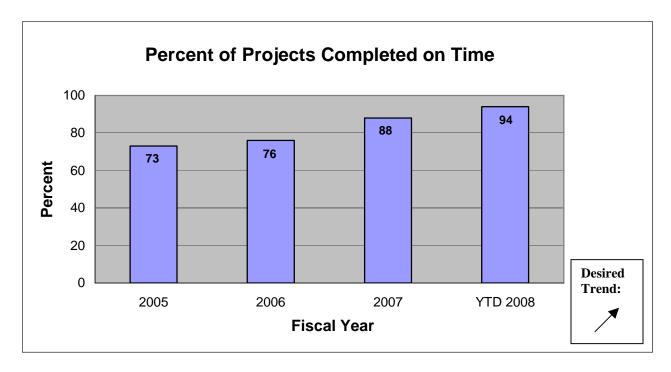
#### **Measurement and Data Collection:**

The project manager will establish project completion dates for each project. They are documented in MoDOT's SiteManager and STIP databases. It will be part of the Plans, Specifications & Estimates submittal. The actual completion date will be documented by the resident engineer and placed in MoDOT's project management system.

This is an annual measure updated each quarter.

#### **Improvement Status:**

The results indicate a 6 percent increase from fiscal year 2007 in the percent of projects completed on time. MoDOT has focused on reducing the number of days available for construction in order to reduce congestion and inconvenience to the traveling public, while stressing the importance of completing projects on time. To achieve timely completion of improvement projects, an emphasis has been placed on reviewing construction schedules and assessing liquidated damages.



### Percent of change for finalized contracts

Results Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Dave Ahlvers, State Construction & Materials Engineer

### **Purpose of the Measure:**

The 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.

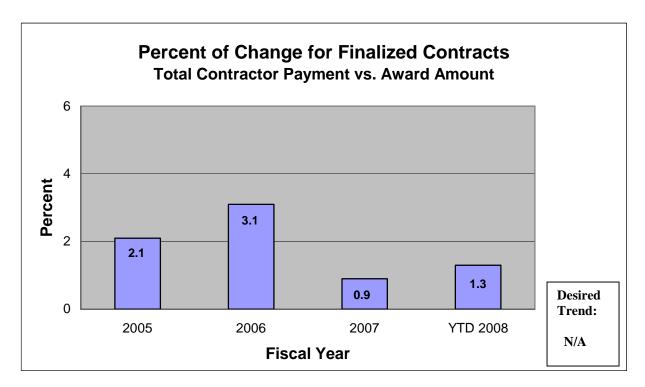
#### **Measurement and Data Collection:**

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.

This is an annual measure updated each quarter.

### **Improvements Status:**

MoDOT's performance of 1.3 percent in the first quarter of fiscal year 2008 was well below the target of 2 percent. The overall improvement is a result of a strong emphasis placed on constructing projects within budget, the use of practical design and value engineering. By limiting overruns on contracts, MoDOT can deliver more projects, leading to an overall improvement of the entire highway system. The Performance Plus employee incentive program has placed additional emphasis on completion of projects within budget.



### Average construction cost per day by contract type

**Results Driver:** Dave Nichols, Director of Program Delivery

Measurement Driver: Dave Ahlvers, State Construction & Materials Engineer

### **Purpose of the Measure:**

This measure tracks the cost per day for project completion to determine the impact to the traveling public, enabling MoDOT to better manage project completion needs.

#### **Measurement and Data Collection:**

This information is gathered by extracting the actual time used for construction from the summary of days used in the SiteManager database and dividing it by the total costs of the project.

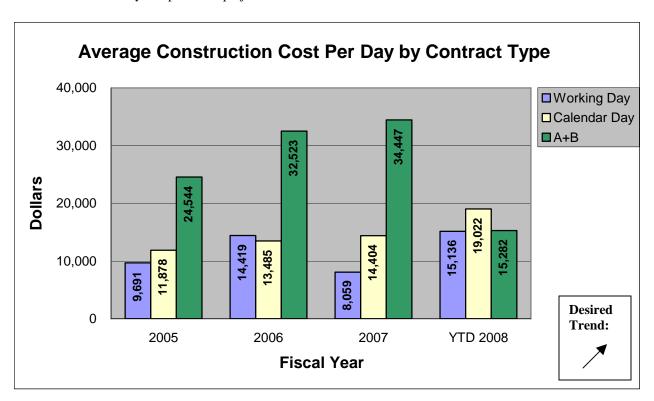
The measurement groups construction contracts into three categories:

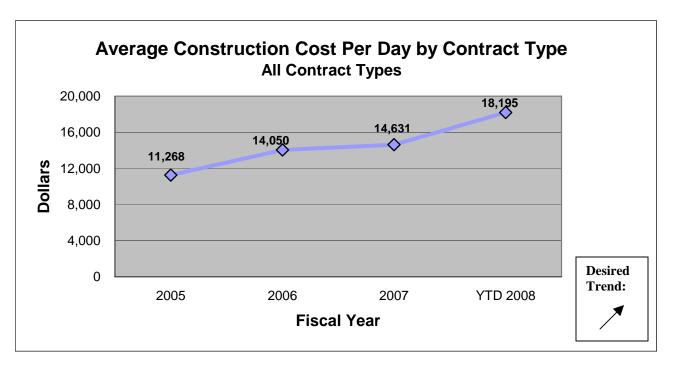
- ➤ **WD** working day contracts
- > CD calendar day contracts and;
- $\bf A + \bf B$  or innovative contracts that provide incentive/disincentives to the contractor for early completion.

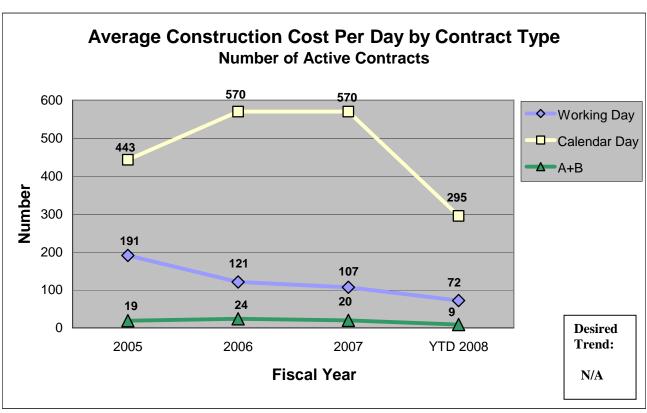
This is an annual measure updated each quarter.

#### **Improvement Status:**

The greater use of A+B and calendar-day contracts resulted in a larger amount paid per calendar day in 2008. MoDOT's strategy of utilizing innovative contracting techniques has resulted in faster contract completion and fewer delays to the traveling public. Contract types are reviewed to make a determination of the most effective use of resources for timely completion of projects.







### Unit cost of construction expenditures

**Result Driver:** Dave Nichols, Director of Program Delivery

Measurement Driver: Travis Koestner, Bid & Contract Services Engineer

### **Purpose of the Measure:**

This measure tracks how MoDOT projects provide great value by comparing the cost of major items of work for MoDOT projects to other state DOTs. MoDOT customers should be able to gain an understanding of what it costs for a DOT to install an item of work. While value should not be defined as MoDOT prices per unit being the lowest as compared to other DOTs, prices can be compared keeping in mind that labor rates, material availability and general project conditions such as urban vs. rural will vary from state to state.

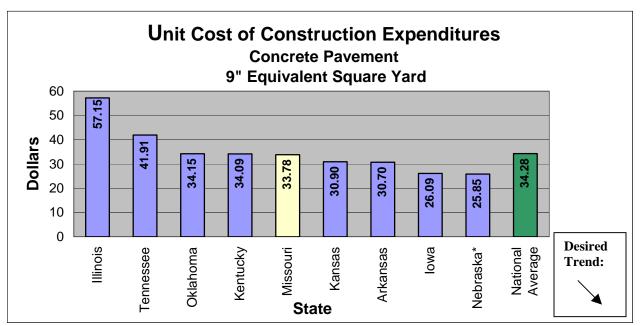
#### **Measurement and Data Collection:**

Value in this measure has simply been related back to dollars per unit of measure. MoDOT staff categorizes raw data from an outside vendor for the unit cost from other states. Identifying the "lowest in the country" is from data produced by FHWA as well as the FHWA national average price. Bridge price data is also from FHWA. The most recent data from FHWA is used for Tracker.

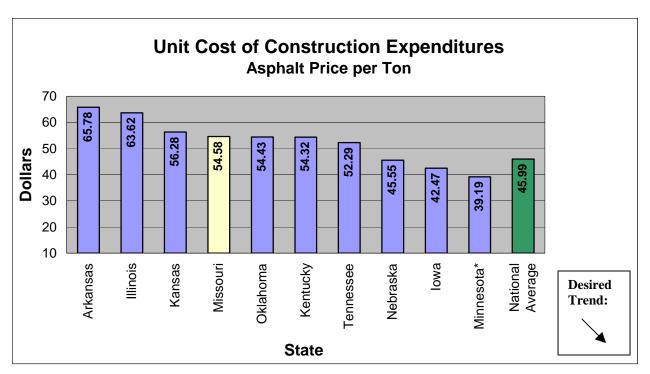
This is an annual measure updated each January. The FHWA comparative data may lag as much as one year.

### **Improvement Status:**

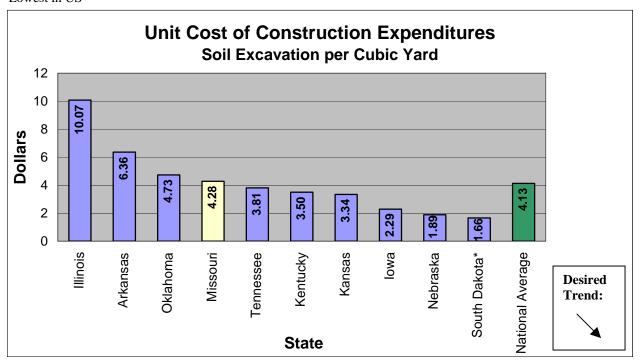
MoDOT prices have remained in the same relative position vs. states surrounding Missouri in the areas of concrete pavement and soil excavation while the average asphalt price for 2006 compares more favorably than in 2005. The percentage increase in price for MoDOT for the items of work in all categories is approximately one-half that of the straight average increase of the states compared. This can be attributed to the increase in competition that MoDOT has seen in the past six to eight months. Examples of strategies to keep the level of competition as high as possible include continued use of alternate and optional pavement, working with the districts when scheduling major projects and the implementation of electronic bidding in January 2007.



<sup>\*</sup>Lowest in US



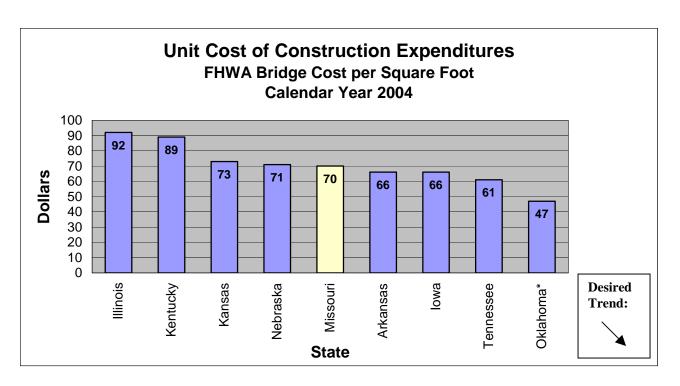
\*Lowest in US



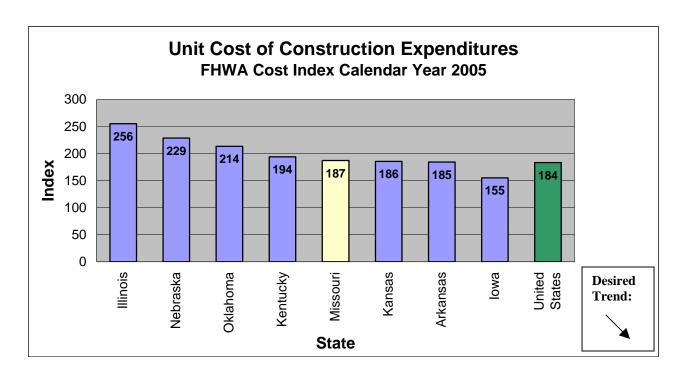
<sup>\*</sup>Lowest in US

Footnote for the charts above:

Source Data for states other than Missouri from Oman Systems Bid Tabs Professional latest data available as of Jan. 1, 2006. Items include common excavation items paid for by the cubic yard. FHWA Data from FHWA "Price Trends for Federal-Aid Highway Construction" First Quarter 2006. Missouri Data from MoDOT bid history.



\*Lowest in US Source data from FHWA memo "Bridge Construction Unit Cost" dated Dec. 7, 2005. FHWA does not publish an average U.S. cost per square foot for bridges.



Source: FHWA "Price Trends for Federal-Aid Highway Construction" Fourth Quarter 2005.

### Annual dollar amount saved by implementing value engineering

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Kathy Harvey, State Design Engineer

### **Purpose of the Measure:**

This measure tracks the amount of money MoDOT saves by implementing value engineering proposals.

#### **Measurement and Data Collection:**

Value engineering (VE) has saved MoDOT over \$329 million since 1988. VE achieves savings at the design phase and at the construction phase of a project. VE utilizes a team approach to refine the purpose and need and then develop innovative and creative ideas, which result in project savings while optimizing project performance. The VE team is usually independent from the project core team and includes participants from various disciplines both from within and outside of MoDOT. VE studies are done on projects at all stages of development, from the concept stage to final design and during construction.

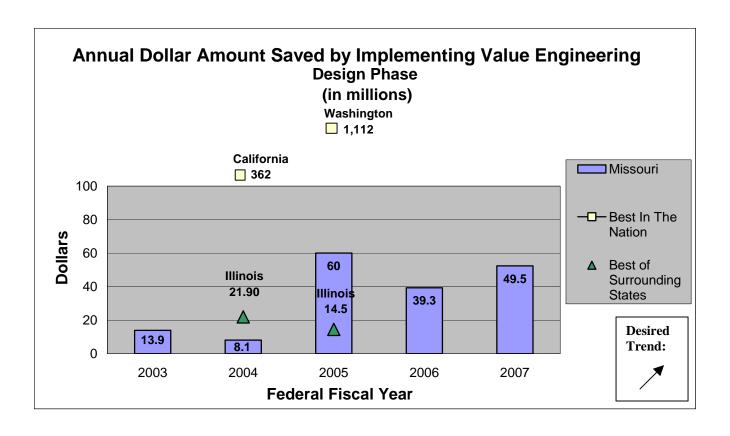
VE savings are reported annually to the Federal Highway Administration by each state and the national results are available for Federal Fiscal Year 2005. For design phase savings, Washington is the best in the nation showing \$1.112 billion implemented. For construction phase savings, Georgia is the best in the nation showing \$5.6 million implemented. When compared to states similar to Missouri in program size, Illinois reported \$14.5 million saved during design and Michigan reported \$1.6 million saved during construction. Direct comparison to other states is challenging because of differences in construction program size and project development processes.

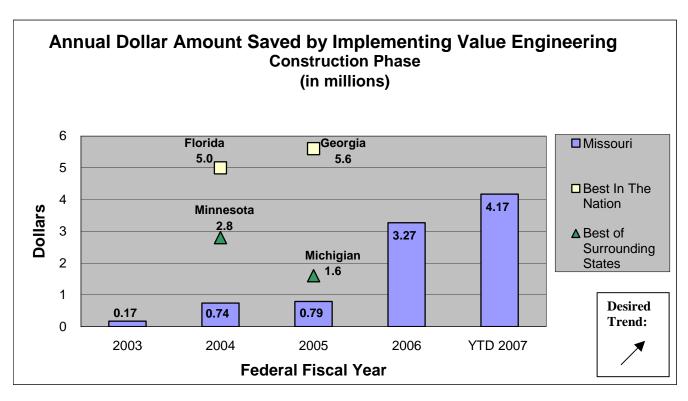
This is an annual measure using a federal fiscal year, running from October 1 to September 30. New updates are reported in the December Tracker edition, however the year-to-date total for the current fiscal year is included in each of the other editions.

#### **Improvement Status:**

Traditionally, VE studies during the design phase of a project were a five-day formal event that required a tremendous amount of organization and facilitation. As a result, VE studies were only done on the significant few projects where large savings could be realized. In an effort to increase the number of VE studies being done and thus increase the potential for cost savings, the format of the study has been revised to be more flexible. VE studies now match the size and needs of the project, ranging from four hours to five days. Any trained staff can conduct studies, but the documentation goes through the VE administrator. This change has increased the number of VE studies being done during the design phase of the projects. Practical design influenced the 2005 VE program. As expected, 2006 was lower, but there was an increase for 2007.

On the construction side, the implementation of the Performance Plus program has increased the interest in VE studies by contractors and MoDOT staff. In addition, there has been a large effort to educate resident engineers on what VE studies are and their importance. Better reporting associated with the change order process has been encouraged. In 2007, MoDOT construction savings from VE studies were \$4.17 million: 63 out of 84 VE proposals submitted were approved.





## Percent of customers who feel completed projects are the right transportation solutions

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Kathy Harvey, 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:**

MoDOT districts identified 30 projects – three per district – in three different categories (large – major route listed as or funded through major project dollars; medium – district-wide importance; and small – only local significance). These projects were completed within the previous year and are open to traffic. The Truman School of Public Affairs at the University of Missouri, in collaboration with MoDOT, developed a survey that was directed to the users of each specific facility. A sample of residents was drawn from zip code areas adjoining the roadway where the project was recently completed. The sample included 400 addresses per project area for a total of 12,000 surveys sent. Nearly 2,900 surveys were returned.

This measure is reported annually. Districts will continue to identify one project in each of the three categories to be surveyed, although it is recognized that it might not be possible for every district to have three projects that meet the criteria each year.

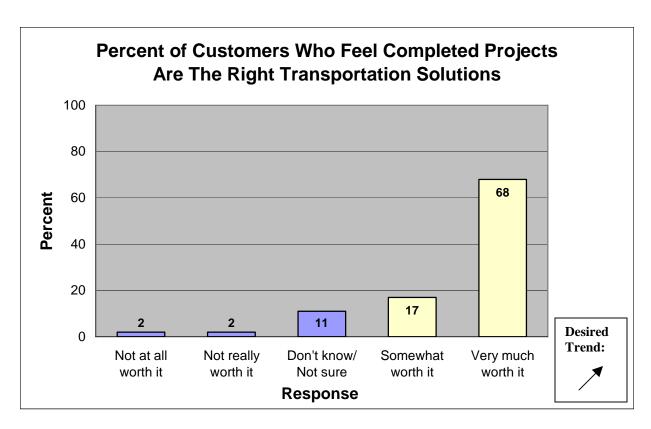
#### **Improvement Status:**

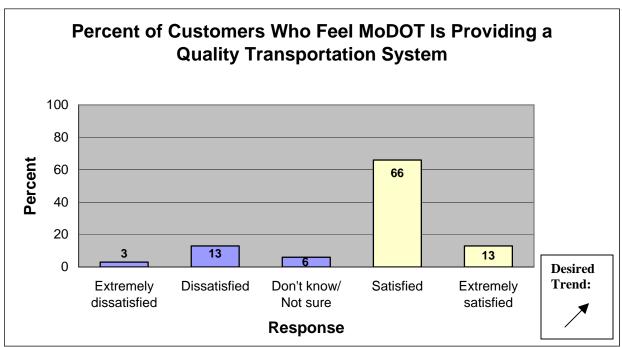
Project-specific questions were asked of MoDOT customers and each showed a high level of satisfaction with important goals such as safety, convenience, less congestion, handles traffic efficiently, easy to navigate, easy to understand, and well marked. The lowest percent on the favorable side of any question was less congestion, and yet about 70 percent either agreed or strongly agreed that the road now has less congestion.

However, an important component of MoDOT's Tangible Result is the concept of "great value." Clearly, customers may enjoy the fine features of an expensive luxury vehicle, but not consider it a great value. Likewise, it is important to assess whether the Missourians, who appear to see many great features of the projects, also see them as the right transportation solution. Therefore, the questionnaire asked the respondent whether it was the right transportation solution, and it offered a set of responses from "not at all worth it" to "very much worth it."

The overall perception of the projects in this survey is extremely positive. More than two-thirds of Missourians said the local project was "very much worth it," and an additional 17 percent said it was "somewhat worth it." The two positive responses combined for a value of about 85 percent of respondents who felt that the project in their area was the right transportation solution. About 11 percent were not sure, but less than five percent felt that the project was "not really worth it" or "not at all worth it."

Overall, 79 percent of the respondents said they were satisfied with the quality of the system, but only 13 percent said they were extremely satisfied. This was virtually the reverse of the opinions expressed about their local projects, although the overall percentage was about the same. This strongly supports the long-held notion that people are most interested in the projects that benefit them directly.





Note: Numbers in the charts are rounded to the nearest whole percent.

# Environmentally Responsible Tangible Result Driver – Dave Nichols,

Director of Program Delivery

MoDOT takes great pride in being a good steward of the environment, both in the construction and operation of Missouri's transportation system and in the manner in which its employees complete their daily work. The department strives to protect, conserve, restore and enhance the environment while it plans, designs, builds, maintains and operates a complex transportation infrastructure.



### **Environmentally Responsible**

### Percent of projects completed without environmental violation

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Kathy Harvey, State Design Engineer

### **Purpose of the Measure:**

This measure tracks environmental violations. MoDOT projects must comply with several environmental laws and regulations. To be in compliance, MoDOT makes commitments throughout the project development process that must be carried forward during construction and maintenance. In addition, the various permits obtained for projects also contain specific requirements for compliance. MoDOT must also comply with the environmental laws and regulations as it conducts its daily work in all areas of the organization.

If a violation is noted, it can result in either a Letter of Warning (LOW) or a Notice of Violation (NOV) to MoDOT. Letters of Warning can also be received as simply that, a warning to MoDOT of a special circumstance to be aware of, or for a situation that needs to be monitored so that a violation does not occur. For that reason, LOWs will never be eliminated, but should be kept to a minimum. However, it is unacceptable to the department to have an NOV.

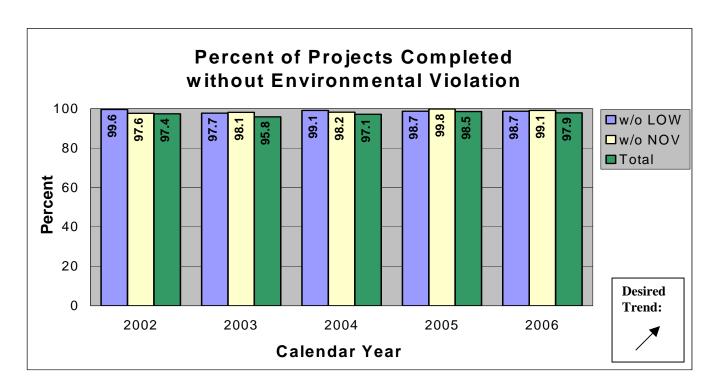
#### **Measurement and Data Collection:**

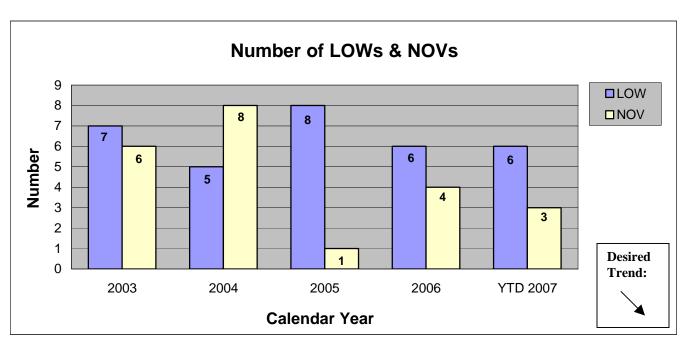
Both LOWs and NOVs are written correspondence to MoDOT or MoDOT's contractors from regulatory agencies, which are tracked in a MoDOT database by location or project number, as appropriate. Where tracked by project, the project with violations received may span several years. The first chart is based on a calendar year of construction projects reported to be completed during that year and the number of violations received on those projects over the life of the project. The second chart is a report by calendar year of the LOWs and NOVs received by the department for any activity and the data is updated quarterly.

#### **Improvement Status:**

The percentage of projects completed without environmental violation shows a relatively level trend line for the past five years. However, the number of LOWs for the first nine months of 2007 is equal to the total for 2006, while the NOVs are trending similar to 2006.

In the third quarter of 2007, a MoDOT contractor received a NOV for failure to abate asbestos prior to demolition, while MoDOT received one LOW and a MoDOT contractor received one LOW. MoDOT's LOW was for a violation of the U.S. Corps of Engineers permit related to rock in the Missouri River at the Christopher S. Bond Bridge near Hermann. The MoDOT-contractor LOW was for improper disposal of construction and demolition waste.





Note: There is no benchmark data presented with this measure. MoDOT has a zero-tolerance policy towards NOVs, but recognizes LOWs will never be eliminated due to their nature. Therefore, regardless of what other states are doing, MoDOTs desired results are zero NOVs.

## Number of projects MoDOT protects sensitive species or restores habitat

**Result Driver:** Dave Nichols, Director of Program Delivery

Measurement Driver: Gayle Unruh, Environmental & Historic Preservation Manager

#### **Purpose of the Measure:**

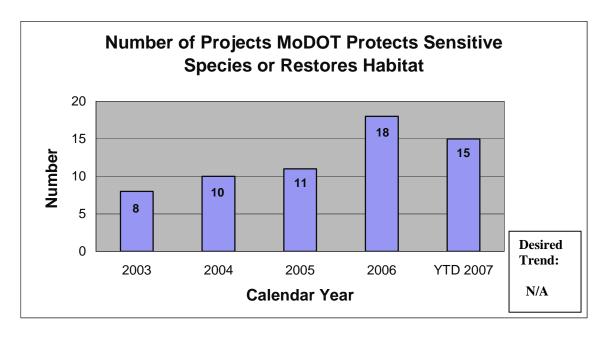
Missouri is home to many rare species of plants and animals, some of which are on the federal endangered species list. The Endangered Species Act of 1973 prohibits harm or harassment of these species. Avoiding or minimizing harm to these species and protecting or restoring their habitat is a fundamental obligation of this organization. Avoidance and/or protection are the first goals of MoDOT's efforts, but under circumstances where avoidance cannot be achieved, restoration of habitat is a minimum acceptable result.

#### **Measurement and Data Collection:**

On all MoDOT projects, the department investigates and informs the U.S. Fish and Wildlife Service (FWS) of any activity in the vicinity of a known threatened or endangered species or critical habitat. Through consultation with FWS MoDOT has the data to report on this measure. Because this measure focuses on projects that protect or restore sensitive habitats that could not initially be avoided, most MoDOT projects are not included in this data. This measure is tracked by calendar year with quarterly updates. Annual data are finalized and shown in the January Tracker. There is no desired trend with this measure. The number reported will fluctuate depending on the size of MoDOT's construction program each year, type of projects being constructed, location and the ability to make adjustments to avoid impacts on sensitive species or their habitat.

#### **Improvement Status:**

MoDOT has protected sensitive species or restored their habitat on 14 construction projects and one emergency winter storm clean-up project through the first three quarters of 2007. These species and topics included the Indiana bat (nine projects), Niangua darter (one project), Ozark cavefish (three projects), Virginia sneezeweed (one project), pallid sturgeon (two projects), gray bat (one project), Hine's emerald dragonfly (one project) and migratory birds. MoDOT participated in the Endangered Species Act (ESA) administrative solutions workshop sponsored by AASTHO this last quarter. The group formulated a set of solutions to remedy ESA administrative bottlenecks to project completion. The environmental section continues educating the southern tier of districts concerning maintenance practices and their effect on ground water in areas of caves and karst topography.



# Ratio of acres of wetlands created compared to the number of acres of wetlands impacted

**Result Driver:** Dave Nichols, Director of Program Delivery

Measurement Driver: Gayle Unruh, Environmental & Historic Preservation Manager

#### **Purpose of the Measure:**

Wetlands are a valuable resource in Missouri, having beneficial functions such as wildlife habitat, flood storage and water quality improvement. In addition to these benefits, it is required in the Clean Water Act that impacts to wetlands are avoided, minimized or that wetlands are recreated when a wetland is destroyed during a transportation project.

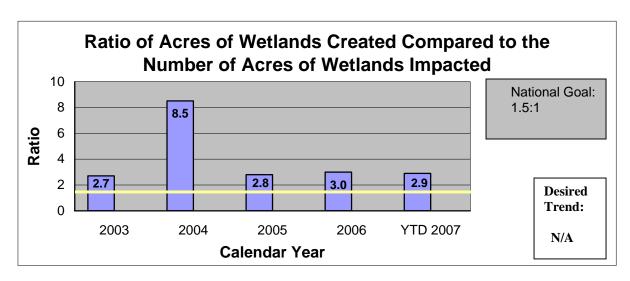
#### **Measurement and Data Collection:**

Data for this measure is calculated by comparing acres of project impacts taken from Clean Water Act permits to acres of wetland constructed, as shown in roadway design plans or by calculating the actual wetland areas recreated by MoDOT, or wetland mitigation purchased from a commercial wetland bank. Impacts may occur in a different year from the mitigation, so for the purposes of this measure, the timeframe for the reporting is when the mitigation construction is complete based on a calendar year. The national goal set by the FHWA for recreating wetland is to construct 1.5 acres of wetland for every 1.0 acre of wetland impacted. Recreating wetlands at this ratio helps to offset the lost beneficial functions during the time it takes for a wetland to develop. This measure helps ensure that MoDOT is doing its part to maintain wetlands in Missouri.

Since this measure is also tracked by FHWA for the nation, MoDOT contacted state DOTs that are successful at meeting the 1.5-to-1 ratio. Most of the states queried said that the biggest factor in meeting the ratio is in the use of wetland mitigation banks. They had greater control over achieving their target ratios and more ecologically successful wetland mitigation. MoDOT has a statewide umbrella wetland mitigation banking agreement. This is an annual measure and the data is updated quarterly.

#### **Improvement Status:**

MoDOT secured 50.38 acres of mitigation for impacts to 17.35 acres of wetland, a ratio or 2.9:1, for YTD 2007. MoDOT mitigated in the traditional style of constructing replacement wetlands for all but one project where MoDOT had the unique opportunity to purchase a fen wetland. In this case, 21 acres of fen will be protected for the 2.69 acres of wetland impact. Although this makes the ratio go over the 1.5:1 benchmark, having mitigated in this style not only protects a habitat uncommon in Missouri from future impacts but also streamlines the process for MoDOT. Negotiations with the Missouri Department of Conservation are underway to deed the fen to them for permanent protection.



# Percent of air quality days that meet Environmental Protection Agency standards by area

**Result Driver:** Dave Nichols, Director of Program Delivery

Measurement Driver: Eric Curtit, Long-Range Transportation Planning Coordinator

#### **Purpose of the Measure:**

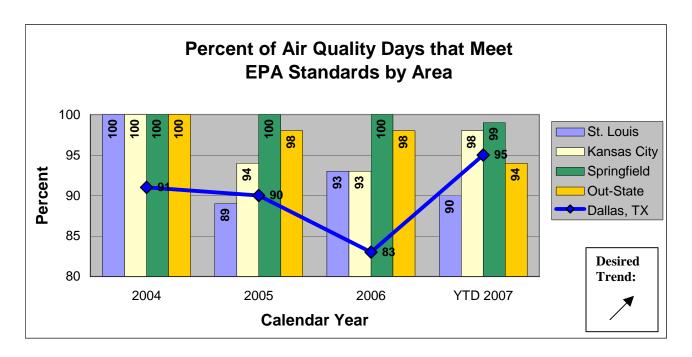
This measure tracks MoDOT's role in improving air quality in Missouri. The Environmental Protection Agency approves state plans to improve air quality. MoDOT makes every effort to design and build roads that improve air quality in affected areas.

#### **Measurement and Data Collection:**

The EPA establishes air quality standards for the United States. The ground level ozone standard affects Missouri and is measured with the last three years of data. Ozone readings are collected in Kansas City, St. Louis, Springfield and the out-state areas during the ozone season – April through October. The data contained in the table below reflects the available percentage of days, by area, that met the EPA's ground-level ozone standard. The data for the 2007 ozone season year-to-date is included. MoDOT compares ozone exceedances to Dallas, Texas, because of its similar pollutants and distance from other cities that affect its air quality.

#### **Improvement Status:**

MoDOT's efforts coupled with milder than normal weather in 2004 contributed to 100 percent positive air quality days as measured by EPA standards. Changes to more strict EPA standards and warmer-than-normal weather during the 2006 and 2007 ozone seasons contributed to a reduction in the percentage of positive air quality days. MoDOT continues to serve on the Air Quality Forum Committee in Kansas City and the Air Quality Advisory Committee in St. Louis. MoDOT staff attends monthly meetings to review these committees' programs and ensure that these organizations continually work to improve the air quality for Missouri citizens. MoDOT is committed to improving the regions' air quality by modifying daily operations, modifying employee action and education, providing information to the public, being a leader in air quality improvement, managing congestion to reduce emissions, providing alternative choices for commuters, and promoting the use of environmentally friendly fuels and vehicles.



## Percent of alternative fuel consumed

**Result Driver:** Dave Nichols, Director of Program Delivery

Measurement Driver: Jeannie Wilson, Central Office General Services Manager

#### **Purpose of the Measure:**

This measure tracks the use of alternative fuels. It shows MoDOT's contribution toward environmental responsibility and conservation of resources.

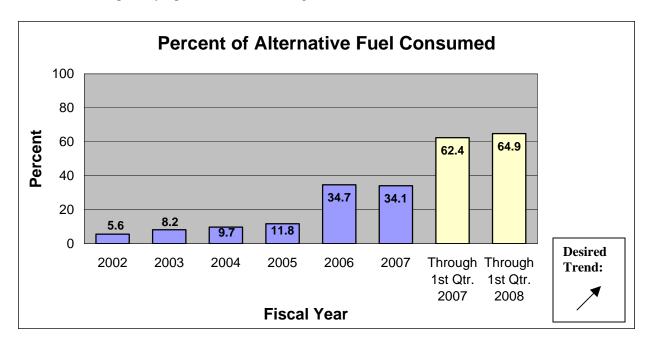
#### **Measurement and Data Collection:**

Alternative fuel is E-85 and biodiesel. When a user pumps fuel into a MoDOT vehicle or piece of equipment, that usage by gallon and by fuel type is captured in the statewide financial accounting system. Reports are generated to extract the number of gallons used from that system.

#### **Improvement Status:**

The use of all alternative fuel consumed in the first quarter of fiscal year 2008 (64.9 percent) was slightly more than in the first quarter of FY 2007 (62.4 percent). Through the first quarter, the use of biodiesel and E-85 increased 3.83 percent and 164 percent compared to FY 2007.

Though not displayed in the chart, the overall use of all fuel decreased by 3.92 percent in the first quarter of fiscal year 2008 compared to first quarter 2007. These results could be early indications of the statewide initiative to reduce fuel consumption by 2 percent without reducing level of service.



## Number of historic resources avoided or protected as compared to those mitigated

**Result Driver:** Dave Nichols, Director of Program Delivery

Measurement Driver: Bob Reeder, Historic Preservation Coordinator

#### **Purpose of the Measure:**

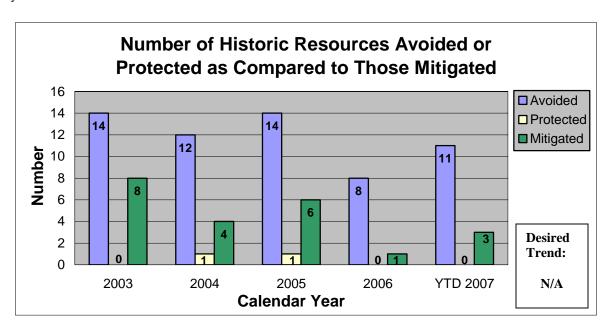
Federal historic preservation laws relating to federally funded projects, gaining public and agency support for particular projects, and general environmental stewardship require MoDOT to avoid, minimize or mitigate project impacts to historic buildings and bridges whenever feasible. Compiling information about project impacts to important cultural resources provides a measure of MoDOT's success at avoiding, protecting or mitigating project impacts to important cultural resources.

#### **Measurement and Data Collection:**

Data collection begins at the approved conceptual plans stage for projects. As project design plans and right of way plans are prepared by the district, department staff track the number of historic resources in project footprints and the number of resources that can be avoided or protected by revising the design of a project versus the number of resources MoDOT can not avoid and must be mitigated. The data includes only historic resources identified as potentially affected by projects after the conceptual plan stage. The data does not include historic resources avoided during early project planning or those avoided during consideration of different alignments during National Environmental Policy Act studies. This measure has no overall desired trend. For any year, data for the measure will vary due to the number of projects in the MoDOT program and the specific nature of those projects. This is an annual measure with quarterly updates.

#### **Improvement Status:**

Through early project design, MoDOT avoided impacts to all but three historic resources during the first three quarters of 2007. Of the 11 historic properties identified at the conceptual plan stage as being impacted by projects, MoDOT was able to modify the project in the final stages of design to avoid impacts to all but three of the historic resources. The only significant historic resources that could not be avoided were three historic bridges that had project impacts mitigated through the preparation of detailed photographic and historical documentation. While there is no desired trend, the overall effectiveness of MoDOT's historic preservation efforts is reflected by all of MoDOT's activities during the first three quarters of 2007 resulting in the required mitigation of project impacts to only three historic resources.



## Number of tons of recycled/waste materials used in construction projects

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Joe Schroer, Field Materials Engineer

#### **Purpose of the Measure:**

This measure tracks MoDOT's efforts to be environmentally conscious through the use of recycled/waste material when applicable.

#### **Measurement and Data Collection:**

The number of tons of recycled/waste material used in construction projects is measured through MoDOT's construction management database, which tracks material incorporated into projects. Data is collected on an annual basis due to the seasonal nature of the construction.

#### **Improvement Status:**

Recycled materials comprise 17 percent of all hot mix asphalt (HMA) used to date in 2007. Specification changes that will allow unlimited use of recycled asphalt pavement (RAP) in HMA are under review. Contractor use of higher RAP amounts is primarily limited by additional testing required to ensure the mixture will meet performance specifications for the asphalt liquid.

It has been found that more widespread use of recycled materials would occur if not for a lack of knowledge by those producing materials capable of being used in construction applications and by those designing construction projects. As a result, training has begun for transportation project managers on methods of recycling asphalt pavements. The Central Laboratory has worked with several private companies to test and approve material for construction applications. Another hindrance to use of recycled materials is the abundance of quarries in Missouri. Generally, it is less expensive to use virgin materials close to the project rather than haul recycled material to the project.





Tangible Result Driver – Brian Weiler, Multimodal Operations Director

Missouri's location in the nation's center makes it a major cross-roads in the movement of goods. Transportation infrastructure must be up to the task so that as the flow of freight becomes more efficient, businesses and communities share the economic benefits.



## Freight tonnage by mode

Result Driver: Brian Weiler, Multimodal Operations Director

Measurement Driver: Eric Curtit, Long-Range Transportation Planning Coordinator

#### **Purpose of the Measure:**

This measure tracks trends and indicates diversification of freight movement on Missouri's transportation system.

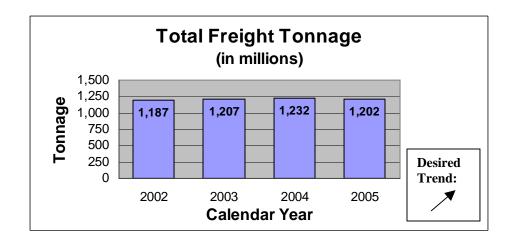
#### **Measurement and Data Collection:**

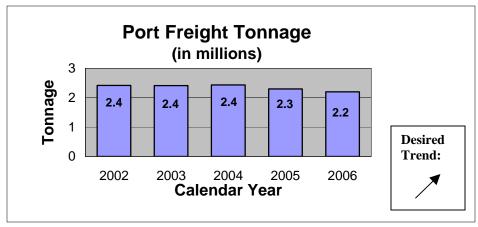
This is an annual measure. Port tonnage is reported to MoDOT from public ports. Air cargo data is collected via mail survey to commercial airports with known cargo activity. Rail tonnage is obtained from the Association of American Railroads. MoDOT calculates motor carrier freight movement using commercial vehicle miles traveled, trip length per shipment and average truck cargo weight.

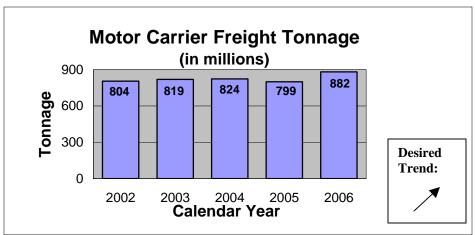
#### **Improvement Status:**

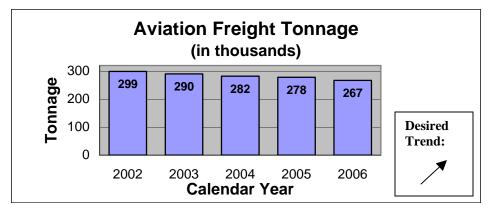
Total freight tonnage for all modes exceeds 1.2 billion tons. Port tonnage has remained relatively steady since 2002 despite low flows on the Missouri River. The amounts for 2006 show a slight decrease due to continued industry impacts from Hurricane Katrina and a shortened navigation season on the Missouri River (see measure 12e). Long-term growth of river transportation is hampered by an inadequate lock and dam system on the Upper-Mississippi River above St. Louis. MoDOT supports a federal proposal to update and expand this system. Motor carrier data indicates a 10 percent increase in tonnage amounts for 2006, but this spike could be partially impacted by changing variables used in MoDOT's data calculation. It may not directly reflect exact industry tonnage amounts and should only be used to indicate general industry trends.

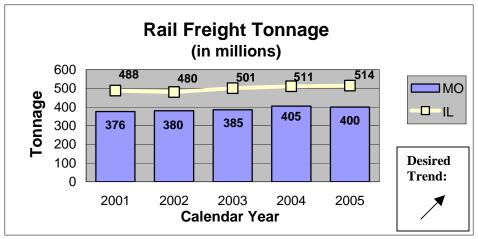
Aviation tonnage continues to be impacted by a downturn in the aviation industry from 9/11 and the resulting financial impacts to airlines, which carry a significant portion of air cargo. Commercial airports are under the jurisdiction of the Federal Aviation Administration. However, MoDOT's Aviation Advisory Committee helps identify ways to better support the commercial aviation industry. Rail freight tonnage declined 1 percent in 2005 despite strong demand. Railroads continue to struggle with system capacity and labor shortage issues. MoDOT is funding a capacity analysis through the University of Missouri to identify specific rail infrastructure projects that will improve both freight flow and passenger rail reliability on Union Pacific's mainline between St. Louis and Kansas City. 2006 data for rail tonnage is not expected until late 2007.











## Average travel speeds for trucks on selected roadway sections

Result Driver: Brian Weiler, Multimodal Operations Director

Measurement Driver: Michelle Teel, Assistant Motor Carrier Services Director

#### **Purpose of the Measure:**

This measure tracks average truck travel speeds on selected roadway sections. MoDOT recognizes the efficient movement of trucks is critical to the economy. Timely, reliable goods movement allows businesses to reduce manufacturing and inventory costs and improve responsiveness to rapidly changing markets. The desired trend is for the average truck speeds to approach the posted speed limit (the average speed limit on I-70 in Missouri is 67 mph).

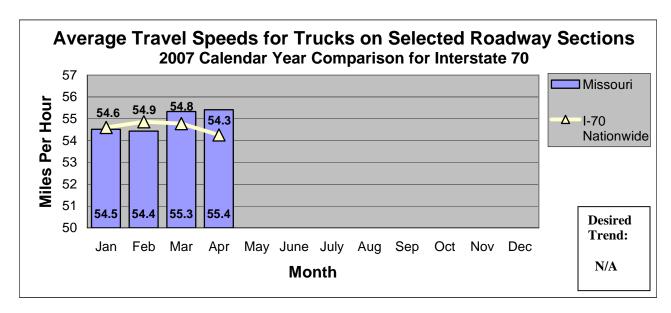
#### **Measurement and Data Collection:**

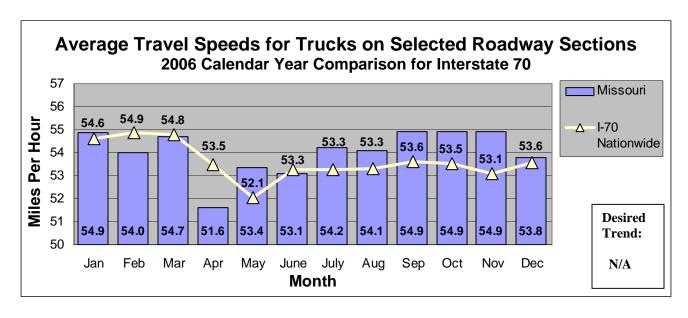
The Federal Highway Administration launched the Freight Performance Measure initiative to monitor truck travel speeds in freight-significant corridors, including Interstate 70. In 2002, the FHWA established a partnership with the American Transportation Research Institute to determine whether and how information from communication technologies used by the freight industry could provide data to support freight performance measures. ATRI worked with technology vendors and commercial carriers to demonstrate that after removing all information except time and location data, communication technologies can be used to derive travel speeds measures. Preliminary research data, including truck travel speeds on I-70 nationwide, is available from FHWA. This data allows MoDOT to measure Missouri's truck performance on I-70 compared to I-70 nationwide. Additional Missouri routes may be added in the future, including Interstates 55, 57, 35 and 44. This measure is updated each month that new data is available from FHWA.

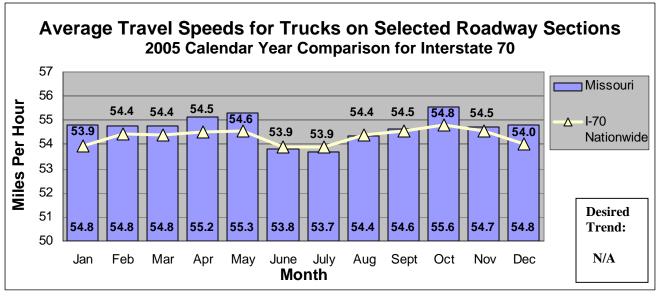
#### **Improvement Status:**

In this quarter, no new data has been provided by FHWA.

Live traffic data for three Missouri metro areas is available on MoDOT's Web site. Motorists use Kansas City Scout, St. Louis' Gateway Guide and Springfield's Ozarks Traffic Web pages to check conditions on their planned and alternate routes. Motorists also base decisions on information found on work zone and road condition maps found on MoDOT's Web site. In the Kansas City area estimated travel times now appear on dynamic message signs, while behind the scenes, a new incident management coordinator works to improve MoDOT's response to traffic interruptions. In the St. Louis area, an interactive 511 service gives callers up-to-the-minute condition reports on requested highways. A new Web tool, "Map My Trip," helps travelers navigate to St. Louis destinations.







## Percent of trucks using advanced technology at Missouri weigh stations

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Barbara Hague, Special Projects Coordinator

#### **Purpose of the Measure:**

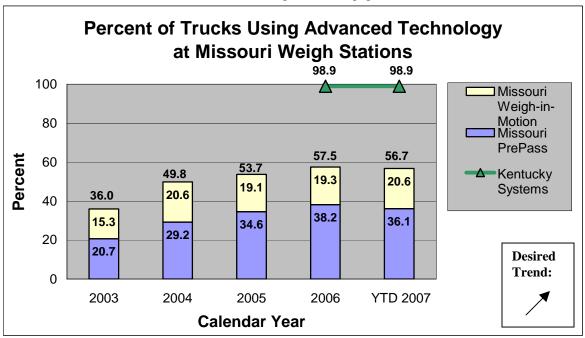
This measure indicates motor carriers' acceptance of tools designed to improve the flow of freight traffic on Missouri highways.

#### **Measurement and Data Collection:**

For this quarterly measure, data is collected by HELP, Inc.'s PrePass system computers which scan transponder-equipped vehicles as they approach 19 Missouri weigh stations. Pavement sensors check the vehicle's weight while computers review MoDOT's records to determine the carrier's compliance with safety, insurance and other state and federal regulations. Drivers are notified to stop or are allowed to continue without delay. Carriers that comply with state and federal regulations save time and money. The Missouri State Highway Patrol provides a quarterly measure of the number of trucks that use Missouri's weigh-in-motion scales located at Mayview and Foristell. These scales measure weight as trucks pass over them at 40 mph. Using ramp scales rather than verifying weight on fixed scales that require a full stop saves both time and money. The benchmark state of Kentucky uses Ramp Sorter weigh-in-motion scales as its primary weighing tool and participates in Norpass, a mainline verification system. Kentucky's mainline verification numbers are much lower than Missouri's because their use of fixed scales is limited.

#### **Improvement Status:**

This measurement shows a slight decrease in the percent of trucks using advanced technology due to equipment problems, weather or a resurfacing project at PrePass high-speed sites. Repair equipment has been ordered and work permits are approved or requested. The PrePass site at Mayview, which will get a complete replacement, has a large volume of truck traffic. When the PrePass weigh-in-motion scale is down at that location, vehicles are diverted to lower speed WIM equipment or fixed scales.



## Interstate motor carrier mileage

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Joy Prenger, Accounting Services Supervisor

#### **Purpose of the Measure:**

This measure reports the fluctuations of motor carrier freight movement in Missouri. MoDOT uses the information to monitor freight movement trends.

#### **Measurement and Data Collection:**

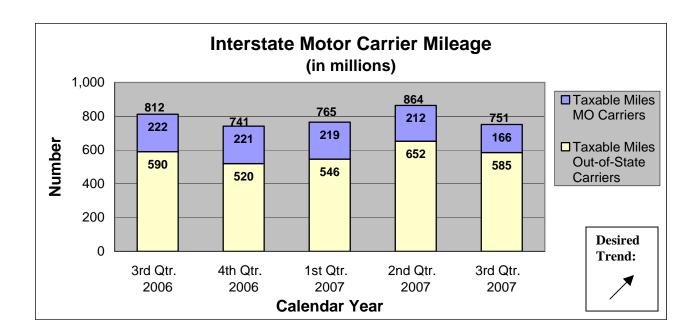
Data is collected quarterly. International Fuel Tax Agreement tax returns filed by member states and provinces and monthly reports of mileage data by the members are used to monitor the number of taxable miles traveled in Missouri by all motor carriers.

#### **Improvement Status:**

Interstate miles traveled in Missouri decreased 13 percent from last quarter.

During the third quarter of 2007, motor carriers traveled 7.33 percent fewer miles in Missouri than in the third quarter of 2006. Compared to the same time last year, out-of-state carriers traveled less than 1 percent fewer miles here and Missouri-based companies drove 25 percent fewer miles in their home state.

Trucking industry news media report that the national truck tonnage index fell .08 percent in August, after a .03 percent increase in July. Compared with this time last year, tonnage is up .09 percent, making the first increase since May of this year. News media report this slight increase relates to the weight of goods shipped, the slow start of the 2007 fall freight season and a sluggish August 2006.



## Percent of satisfied motor carriers

**Results Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** DeAnne Rickabaugh, Outreach Coordinator

#### **Purpose of the Measure:**

This measure tracks MoDOT's progress toward the goal of expeditiously meeting the needs of the motor carrier industry and facilitating freight movement. MoDOT's Motor Carrier Services team uses the data to identify opportunities to improve customer satisfaction.

#### **Measurement and Data Collection:**

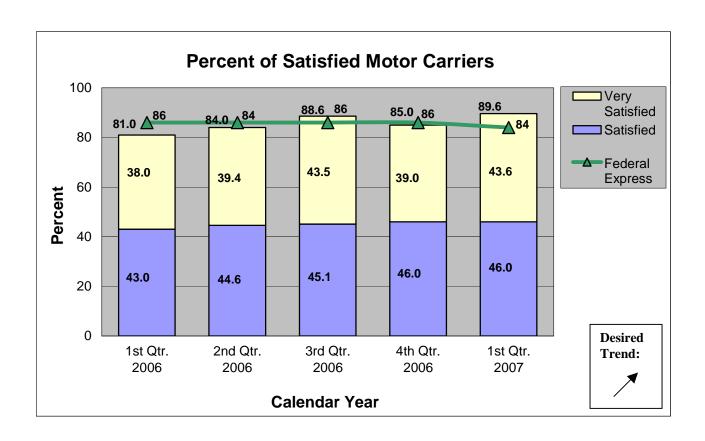
MCS personnel, working with its university partners, developed a survey to collect customer satisfaction data. A single survey addressed all four MCS program divisions, International Registration Plan/International Fuel Tax Agreement, Overdimension/Overweight Permitting, Safety and Compliance and Operating Authority. Survey respondents identified the services they use when doing business with MCS, then indicated their level of satisfaction with 12 customer service factors such as "timely response," "friendly," "respectful," and "outcome." They also gave an "overall satisfaction" score. Customers used a four-point scale: 4 = Very Satisfied, 3 = Satisfied, 2 = Dissatisfied and 1 = Very Dissatisfied.

Federal Express is the benchmark for this measure that also mirrors measure 5a, Percent of Overall Customer Satisfaction. The American Customer Satisfaction Index recently updated its reports that Federal Express has the highest customer satisfaction rate – 84 percent – which is a decrease compared to previous year data of 86 percent out of 200 companies and government agencies it scores.

#### **Improvement Status:**

No new data is available for this measure because Motor Carrier Services adjusted the timing of the survey. Until now, survey periods did not cover calendar quarters. Instead, for example, responses from customers who worked with MCS in December, January and February were reported as first quarter results. It led to misunderstandings and difficulty aligning survey results with the events that influenced those results.

The next Tracker will report survey results for the third calendar quarter of 2007.



## Customer satisfaction with timeliness of Motor Carrier Services' response

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** DeAnne Rickabaugh, Outreach Coordinator

#### **Purpose of the Measure:**

This measure tracks motor carriers' satisfaction with MoDOT Motor Carrier Services' speed of response.

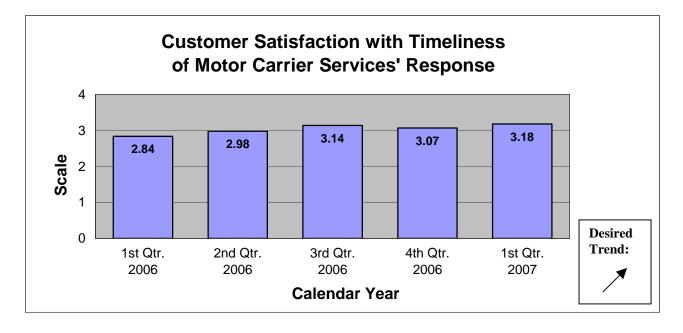
#### **Measurement and Data Collection:**

Each quarter, MoDOT's university partners survey a pool of motor carriers who contacted MCS in the previous three months. These customers are asked to evaluate their satisfaction with 12 customer service factors across the four MCS program divisions, International Registration Plan/International Fuel Tax Agreement, Safety and Compliance, Over-dimension/Overweight Permitting and Operating Authority. "Timely Response" is one factor carriers evaluate with a four-point scale: 4 = Very Satisfied, 3 = Satisfied, 2 = Dissatisfied and 1 = Very Dissatisfied.

#### **Improvement Status:**

No new data is available for this measure because Motor Carrier Services adjusted the timing of the survey. Until now, survey periods did not cover calendar quarters. Instead, for example, responses from customers who worked with MCS in December, January and February were reported as first quarter results. It led to misunderstandings and difficulty aligning survey results with the events that influenced those results.

The next Tracker will report survey results for the third calendar quarter of 2007.



Tangible Result Driver – Brian Weiler, Multimodal Operations Director

MoDOT has an active role in all modes of transportation, including rail, air, water, and transit. Transportation is more than highways and bridges. Every day millions of tons of goods move through the state by rail. Thousands of passengers use Missouri's airport facilities. And hundreds of barges navigate state waterways. All of these modes combine to keep Missouri's economy robust and vital.



## Number of airline passengers

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Joe Pestka, Administrator of Aviation

#### **Purpose of the Measure:**

This measure tracks the number of passengers boarding airplanes at Missouri's commercial airports. It helps determine the viability of Missouri's commercial airline industry. This number is also used by the Federal Aviation Administration to help determine airports' capital improvement funding levels.

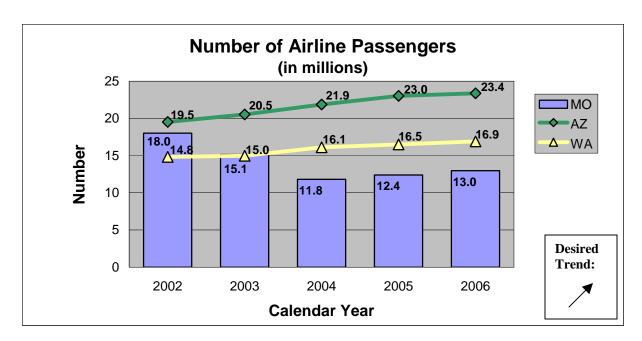
#### **Measurement and Data Collection:**

The data is collected annually from FAA. Comparison data has been collected from the same source for the states of Arizona and Washington. These two states were selected based on similar populations in 2004. The annual passenger boardings' data provided by the FAA is normally published in October for the preceding year. Airline passengers are defined as passengers boarding airplanes.

#### **Improvement Status:**

The significant decrease in flights by American Airlines at St. Louis Lambert International Airport (approximate reduction of 200 flights per day in November 2003) and the effects of 9/11, in part, have contributed to the decrease in airline passengers from 2002 to 2004. The reduction in American's flights at Lambert has negatively impacted growth in passenger boardings in St. Louis and in Missouri as a whole. Also, increases in airline operational costs, fluctuations in airline performance and scheduling, and airline bankruptcy filings pose challenges to communities seeking enhanced air carrier service. Airline passengers have increased approximately 4.7 percent in Missouri from 2005 to 2006.

MoDOT is participating with the Federal Aviation Administration, Illinois Department of Transportation and East-West Gateway Council of Governments in a St. Louis Area System Plan study. The study will assess the region's aviation assets and develop a regional approach for the future development of the assets. The cities of Joplin and Springfield are constructing new terminal buildings to accommodate airline passengers.



## Number of daily scheduled airline flights

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Joe Pestka, Administrator of Aviation

#### **Purpose of the Measure:**

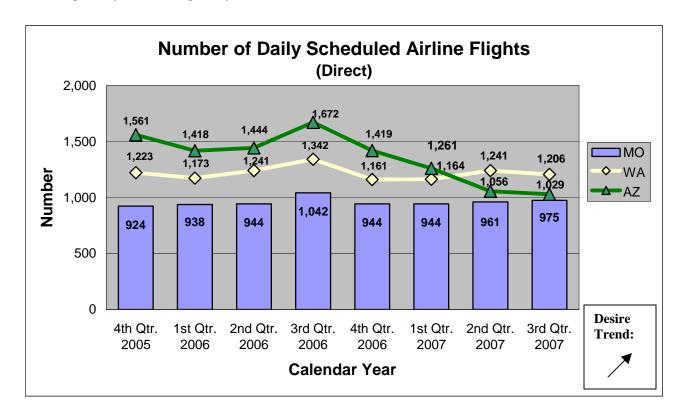
This measure tracks the number of airline flights. The data assists in determining options available to the traveling public. It provides an indication of the airline industry's economic stability in Missouri.

#### **Measurement and Data Collection:**

A direct scheduled airline flight is a take-off by a scheduled commercial air carrier. A direct flight has the same flight number and is flying to one or more destinations. Data is being collected from seven airports in the state that presently accommodate scheduled airline flights. These airports are: St. Louis Lambert International, Kansas City International, Springfield-Branson, Joplin, Columbia, Waynesville and Cape Girardeau. Comparison data has been collected for the commercial airports in Arizona and Washington. These two states were selected based on similar populations in 2004. The data is collected from the Official Airline Guide. The flights are tracked on a monthly basis with a daily snapshot collected for each month and are then averaged on a quarterly basis.

#### **Improvement Status:**

The number of daily scheduled airline flights in Missouri peaked in the third quarter of 2006 at 1,042. (The third quarter includes the summer travel months of July, August and September.) Daily scheduled airline flights in Missouri have increased slightly from the second quarter of 2007 (961) to the third quarter of 2007 (975), while there has been a decrease in flights experienced for the same time period in Washington and Arizona. MoDOT is participating with the Federal Aviation Administration, Illinois Department of Transportation and East-West Gateway Council of Governments in a St. Louis Area Aviation System Plan study. The study will assess the region's aviation assets and develop a regional approach for the future development of the assets. MoDOT is also conducting a study to review regulatory issues related to air service.



## Number of business-capable airports

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Joe Pestka, Administrator of Aviation

#### **Purpose of the Measure:**

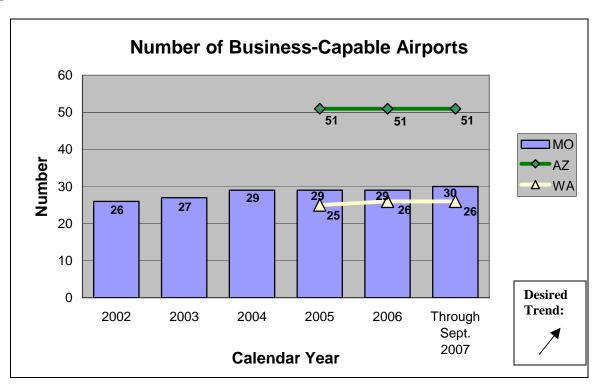
This measure tracks the number of airports capable of handling business aircraft. Local communities and economic development agencies can use airports to assist in increasing a community's economic viability for business retention and development.

#### **Measurement and Data Collection:**

The graph shows the number of business-capable airports. A business-capable airport is defined as accommodating business- or corporate-type aircraft with a runway length of 5,000 feet or more. Since 2002, four additional airports in Missouri have either extended or constructed runways of 5,000 feet or greater. This increase allows additional communities and an increased population area greater exposure to business-capable airports. Comparison data starting in 2005 has been collected from the states of Washington and Arizona. These states have a population similar to Missouri. Geographically, Washington is similar to Missouri while Arizona is approximately 65 percent larger than Missouri. Data is collected annually by monitoring airport developments and Federal Aviation Administration records.

#### **Improvement Status:**

The State Airport System Plan Update and the annual development of MoDOT's Statewide Transportation Improvement Plan identify airports that meet the demand criteria and would support the development of a 5,000-foot runway. A new business-capable airport is under construction in Branson West, and the city of Marshall is extending the runway at the Marshall Memorial Municipal Airport to 5,000 feet. The city of Dexter recently completed a runway extension to 5,000 feet at the Dexter Municipal Airport bringing the total of business-capable airports in Missouri to 30.



## Number of transit passengers

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Steve Billings, Administrator of Transit

#### **Purpose of the Measure:**

This measure gauges the use of public transit mobility services in Missouri. It also provides an historical perspective and trend of public transit service use in Missouri.

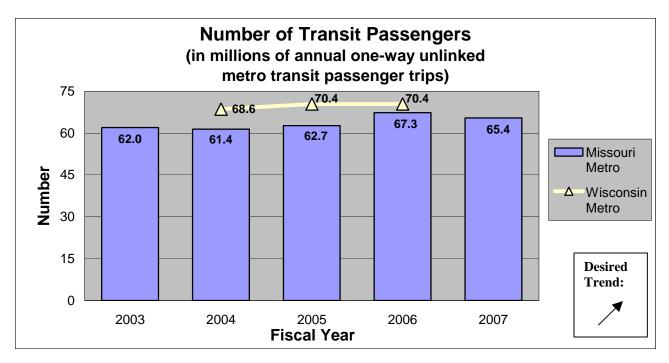
#### **Measurement and Data Collection:**

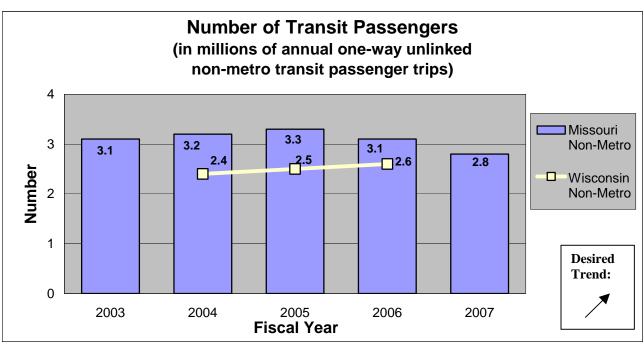
The total number of transit passengers is measured by the annual total of one-way unlinked transit trips taken by passengers on public transit vehicles. Data is obtained from urban and rural providers of general public transit services. The 2004-2006 measures are benchmarked to Wisconsin, which has a comparable total statewide population. This is an annual measure with Missouri data updated in October. Wisconsin's 2007 fiscal year data is by the calendar year, so this data is not available until mid-2008.

#### **Improvement Status:**

In 2007, metro ridership statewide decreased by 1.9 million trips as compared to 2006. However, riders took more annual transit trips in all of Missouri's metro transit systems, except St. Louis and Joplin. In St. Louis, the ridership gains from the opening of the MetroLink cross-county light rail extension were more than offset by the decline in ridership on MetroBus due to a system-wide fare increase. Non-metro (rural) ridership decreased from 3.1 million trips in 2006 to 2.8 million trips in 2007. Of the 28 rural transit systems in Missouri, 12 of the systems experienced ridership gains, and the remainder experienced reductions in ridership. Virtually all of the net loss in rural transit use came as a result of curtailed services for work-related trips cut as a consequence of decreased funding to Missouri in the federal Job Access and Reverse Commute Program.

Missouri compared favorably to Wisconsin's rural transit ridership in 2004-2006. Wisconsin's transit ridership statewide increased in 2006, largely due to greater transit use in Milwaukee. For 2008, the Missouri Legislature appropriated an additional \$150,000 to Springfield to partially offset a decrease of federal transit operating assistance. In September 2007, the Missouri Highways and Transportation Commission approved a general revenue transit funding increase for 2009 to help replace the reduced federal funds in the Job Access and Reverse Commute Program. MoDOT continues working with transit providers in developing a second Missouri Rural Transit Marketing Campaign. Marketing development meetings began in December 2006. Marketing videos were shot in June 2007, and the advertising materials were distributed to rural transit systems in October 2007.





## Average number of days per week rural transit service is available

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Steve Billings, Administrator of Transit

#### **Purpose of the Measure:**

This measure identifies the average existing public transit service in rural Missouri by indicating the availability of rural mobility services for employment, medical appointments and necessary shopping.

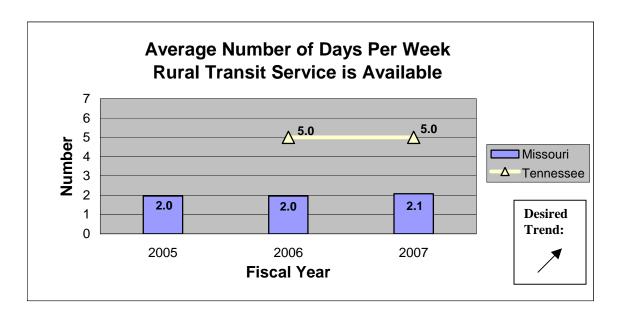
#### **Measurement and Data Collection:**

To calculate the statewide average number of days per week rural transit service is available, MoDOT reviews published transit service schedules for each rural Missouri county and averages these daily frequencies within a week's schedule for available county-wide transit service. Rural transit agencies operate on an annual budget and customarily make transit service changes with the start of a new budget year. This is an annual measure with updates occurring in April. The measure is benchmarked to Tennessee, which has a comparable statewide population and some amount of transit service in every rural county as does Missouri.

#### **Improvement Status:**

Rural transit service at a statewide average of two days per week is not sufficient to support full-time employment for its riders. For 2007, Tennessee deployed more days of rural transit service with five-day-a-week service, subject to available seating. Tennessee directs more state funding annually to rural public transportation (\$7 million vs. \$1.1 million in Missouri). Tennessee's transit providers also use pure demand-response dispatching compared to designated daily routes used by OATS and other Missouri providers. However in 2005, Missouri's rural transit providers together delivered 3.3 million trips compared to 1.4 million rural transit trips provided in Tennessee.

MoDOT has worked with rural transit systems to produce a second rural transit marketing campaign with advertising tools distributed in October 2007. MoDOT also procured rural transit intelligent transportation system design services to increase service through scheduling efficiencies. Meetings to identify specific ITS technologies and quantities took place in early October 2007. In September 2007, the Missouri Highways and Transportation Commission approved a \$12 million 2009 budget request to increase rural transit service average to three days a week.



## Number of intercity bus stops

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Steve Billings, Administrator of Transit

#### **Purpose of the Measure:**

This measure tracks the number of intercity bus stops. Intercity bus stops represent access points to intercity bus services provided by Greyhound, Jefferson Lines , Burlington Trailways, and most recently, Megabus. More stops among Missouri's 114 counties means greater access. Fewer stops create a barrier by requiring greater traveling distances in order to board an intercity bus.

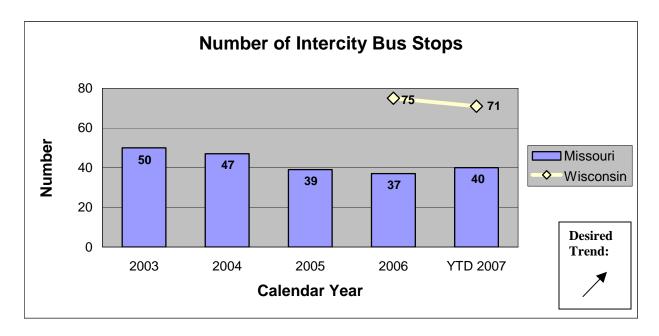
#### **Measurement and Data Collection:**

Data on the number and location of intercity bus stops is obtained annually from the national and regional intercity bus carriers. This is an annual measure with quarterly year-to-date updates of the most recent calendar year. The 2006 and 2007 measures are benchmarked to Wisconsin, which has a comparable total statewide population.

#### **Improvement Status:**

The number of Missouri's intercity bus stops has stabilized after a decline due to changes in Greyhound service. Bus stops were added in Kansas City and St. Louis in April 2007 with the start of Megabus service. However, the Megabus stop locations do not allow for direct transfers to other intercity bus carriers. Also, the Megabus route makes no intermediate stops between Kansas City and St. Louis. During the last quarter, Jefferson Lines added a stop in Warrensburg.

Wisconsin has seen a loss of four additional Greyhound stops in the past quarter. MoDOT worked with Jefferson Lines to procure two buses that were delivered in December 2006 and awarded a grant in August 2007 for a third Jefferson Lines bus for service in Missouri.



## Number of rail passengers

Result Driver: Brian Weiler, Multimodal Operations Director Measurement Driver: Rod Massman, Administrator of Railroads

#### **Purpose of the Measure:**

This measure tracks the number of people using the Amtrak train service in Missouri. This includes those taking a train trip in Missouri at any point within the state, which counts those riding on the state-supported passenger rail trains between Kansas City and St. Louis, the national trains that run through the state and the St. Louis-to-Chicago trains, which are partly supported by the state of Illinois.

For comparison purposes, the state of Washington's train data is shown based on the state's similar size, population and the fact that Washington has both national- and state-supported trains. Washington's "Cascades" train service is a model for the nation because the state invests millions of dollars in both infrastructure and operations every year.

#### **Measurement and Data Collection:**

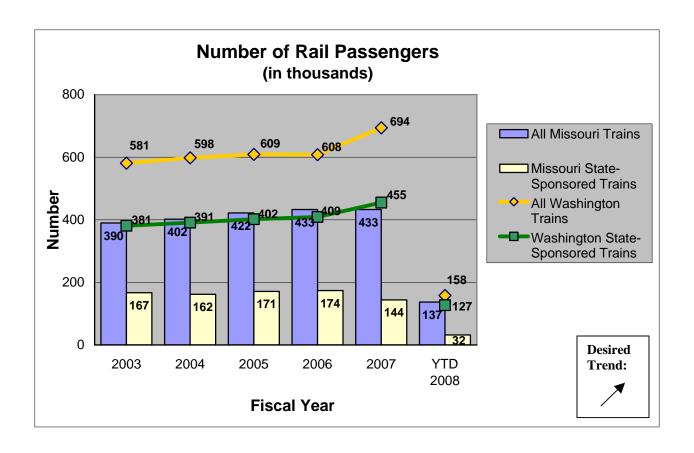
Amtrak provides the number of passengers per train in Missouri on a monthly basis. MoDOT's Multimodal Operations Division's Railroad Section then tabulates the numbers. Data is updated quarterly.

#### **Improvement Status:**

The first three months of fiscal year 2008 showed a decrease of about 23 percent over the same months in the previous year and continues a decline that began in May 2006 on the St. Louis-to-Kansas City route. The increased freight rail congestion explains the decrease from an external viewpoint, and the difficulty of maintaining a reliable on-time performance is another huge factor. Internally, MoDOT increased publicity efforts through new roadside signs, news releases, a wide-ranging distribution of train schedules, a focus on college students. These efforts, along with a variety of other new publicity efforts such as combining appearances at rail safety fairs with Amtrak information and ticket giveaways, and the use of portable message signs at rest areas, will continue to be implemented in efforts to raise passenger numbers.

A major track work program by Union Pacific during the summer of 2006, and another that began in April 2007 and ended in July 2007 on the St. Louis-to-Kansas City route is the major cause of poor on-time performance. During the track work program, a lack of track to pass trains caused major tie-ups. In response to this continual problem, MoDOT commissioned a study for possible freight and passenger capacity improvements on the Union Pacific line between St. Louis and Kansas City. This study was completed in July 2007 and contained many options for infrastructure improvements along the line to improve fluidity. The Missouri Highways and Transportation Commission approved the September 2007 request to ask the Missouri Legislature to fund some of the study's components as part of a multimodal funding package.

The proposal contains a three-step approach to improving passenger rail service in Missouri: 1) targeted track infrastructure improvements to increase fluidity and decrease delays; 2) promotional efforts to increase overall awareness in the state that the service is available; and 3) an LED-signage program at every station to inform passengers of current train status in order to decrease uncertainty to passengers in terms of arrival and departure times. This proposal, along with Union Pacific's ongoing infrastructure improvements at the Gasconade and Osage Rivers' bridges, could have a profound impact on the reliability of the service's future.



## Number of passengers and vehicles transported by ferryboat

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Sherrie Martin, Waterways Program Manager

#### **Purpose of the Measure:**

This measure tracks information regarding use of ferryboat services in Missouri.

#### **Measurement and Data Collection:**

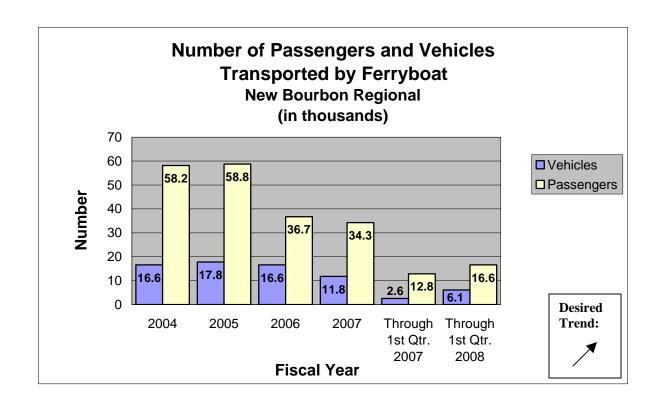
Missouri's two ferry services submit a monthly report that includes information on the number of passengers and vehicles, the cost for providing the service and the reasons for any service disruption. This measure is updated on a quarterly basis.

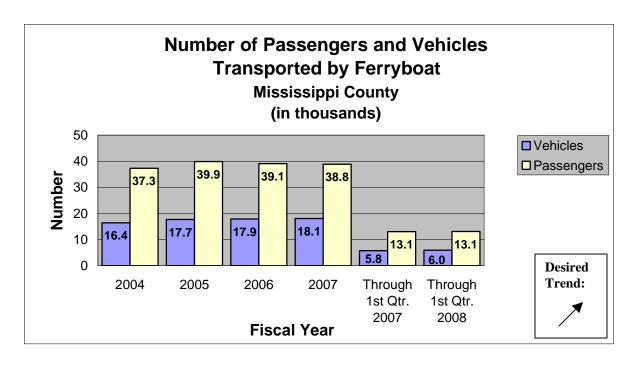
#### **Improvement Status:**

The New Bourbon ferryboat started fiscal year 2008 with a much-improved first quarter. In the first quarter of 2007, the service carried 2,559 vehicles compared to 6,094 in 2008 for a 138 percent increase. The number of passengers for first quarter 2007 was 12,839 compared to 16,585 in 2008 for a 29 percent increase. The service operated seven more days in first quarter 2008 than in 2007. The ferry service collected statistical data by survey from August 25 through September 25 as to ridership by state. This data will be used to request financial participation from the state of Illinois as matching funds for the state of Missouri.

The Mississippi County ferryboat started the 2008 fiscal year with a modest 3 percent increase in vehicle traffic since fiscal year 2007. In 2007, the service carried 5,769 vehicles compared to 5,954 in 2008. The number of passengers increased from 13,069 in 2007 to 13,088 in 2008. The service operated the same number of days.

MoDOT submitted applications to the Federal Highway Administration for the Federal Ferry Boat Discretionary Program to increase the capacity of both services. However, the applications were not funded.





## State funding for multimodal programs

Result Driver: Brian Weiler, Multimodal Operations Director

Measurement Driver: Lisa Hueste, Senior Resource Management Analyst

#### **Purpose of the Measure:**

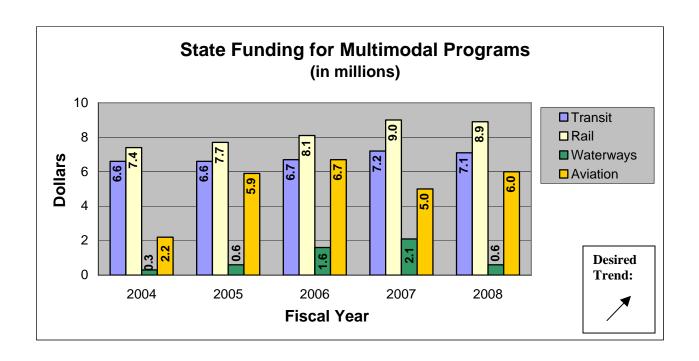
This measure provides the history of state funding appropriated by the Missouri state legislature for multimodal programs that include transit, rail, air and waterways.

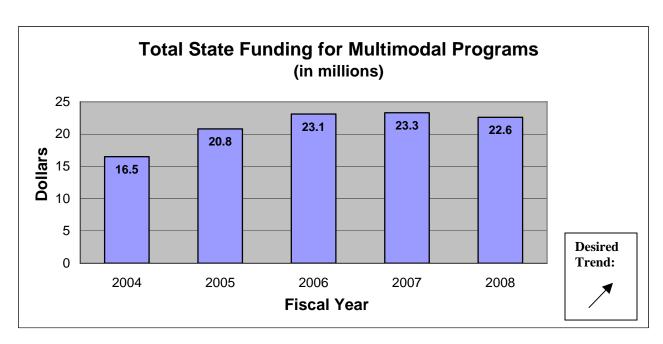
#### **Measurement and Data Collection:**

State funding for multimodal programs is determined by the amount of revenue the state of Missouri collects each year. MoDOT has several funds, including the General Revenue Fund, dedicated to multimodal programs for assisting Missouri citizens. The state legislature must authorize the use of funds for spending throughout the fiscal year. MoDOT must request these appropriated funds each year. They are not automatically approved at the same or at an increased level. This is an annual measure updated each July.

#### **Improvement Status:**

The transit program was drastically cut in fiscal year 2003 and has not been restored. As a result, many local entities have seriously reduced their transit services. The rail program has seen increased funding from fiscal year 2002 through fiscal year 2008 due to the increased cost to run twice-a-day AMTRAK trains. The waterways program includes ferryboats and port capital improvements, which received no state funding for fiscal year 2008. Support for ferryboats has remained constant for several years at \$150,000; this amount was increased to \$160,000 in fiscal year 2008. In fiscal years 2006 and 2007, the legislature appropriated state funds used for capital improvements in and around ports. The aviation program receives collections from the sale of jet fuel in Missouri. As with each fiscal year, MoDOT included substantial increases for the multimodal programs that provide needed services for as many citizens as possible.





## Percent of customers satisfied with transportation options

**Result Driver:** Brian Weiler, Multimodal Operations Director **Measurement Driver:** Matt Cowell, Railroad Operations Manager

#### **Purpose of the Measure:**

This measure provides information about the public's perception of MoDOT's performance in providing transportation options.

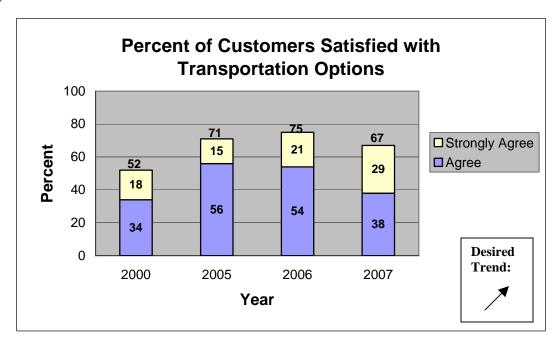
#### **Measurement and Data Collection:**

This is an annual measure. Data is collected from interviews with over 3,500 randomly selected adult Missourians each May. This survey encompassed Missouri adults with an overall margin of error of +/- 2 percent.

#### **Improvement Status:**

Sixty-seven percent of MoDOT's customers are satisfied with transportation options in Missouri. While this measure saw an 8 percent decrease from last year's results, there was an 8 percent increase in the percent of customers who strongly agreed that they are satisfied with transportation options. Customers in Missouri's urban areas continue to strongly agree that they are satisfied with transportation options. While MoDOT continues to improve in the strongly agree category, issues such as rising fuel costs and capacity limits on the state highway system suggest that MoDOT has a responsibility to continuously explore alternative transportation options.

MoDOT has asked Missouri's regional planning commissions and metropolitan planning organizations to help determine Missouri's highest transportation investment priorities. Investment scenarios are being created that will represent alternate mode priorities, along with highway and bridge priorities. This collaborative process will provide information for sharing with Missouri legislators during the 2008 legislative session and with others who are seeking to understand transportation needs and discussing increased investments in Missouri's transportation system.





# **Customer Involvement in Transportation Decision-Making**

Tangible Result Driver – Dave Nichols, Director of Program Delivery

MoDOT seeks out and welcomes any idea that increases its options, because the department doesn't have all the answers. The department creates and preserves a transportation decision-making process that is collaborative and transparent, involving its customers in the determination of needs right through to the development, design and delivery of projects.



## **Customer Involvement in Transportation Decision-Making**

## Number of customers who attend transportation-related meetings

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Bob Brendel, Outreach Coordinator

#### **Purpose of the Measure:**

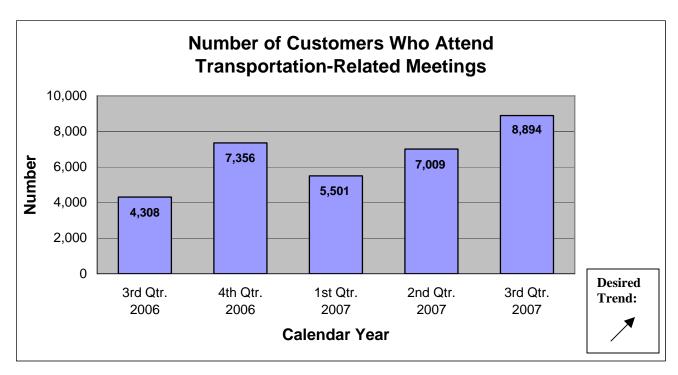
This measure gauges MoDOT's public involvement success – both in terms of public meetings and hearings that are held to make collaborative decisions with the general public, communities, elected officials, stakeholders, and in terms of public informational events scheduled by MoDOT to keep its customers advised of project status and potential impacts that could be experienced.

#### **Measurement and Data Collection:**

Attendance is determined by analyzing sign-in sheets used at public meetings or by head counts conducted by MoDOT staff. This measure is updated quarterly.

#### **Improvement Status:**

The nearly 9,000 persons who attended transportation-related meetings in the third quarter of 2007 represent the highest total for any quarter since the Tracker debuted in 2005. The record total also came in the quarter that traditionally is the year's lowest. The biggest reason for the increase was MoDOT's proactive approach to preparing persons in St. Louis for the impending closure of I-64. Almost 2,800 persons attended I-64 related presentations during July-August-September. Other projects with high local interest also held public meetings/hearings during the last quarter – Glasgow Bridge, Route 5 Shared 4-Lane, Route 17 bridge over the Gasconade River and South Metro Connector in Kansas City. MoDOT continues to emphasize customer involvement in the decision-making process and in providing the information that drivers need to cope with the impacts of construction. MoDOT Community Relations managers meet quarterly to review this measure and to share best practices that help improve performance.



## **Customer Involvement in Transportation Decision-Making**

# Percent of customers who are satisfied with feedback they receive from MoDOT after offering comments

**Result Driver:** Dave Nichols, Director of Program Delivery **Measurement Driver:** Bob Brendel, Outreach Coordinator

#### **Purpose of the Measure:**

This measure tracks MoDOT's responses to its customers. MoDOT routinely asks people who attend public meetings/hearings to submit comments that will be examined by the project team and will become part of the project's official record. It is important that people who avail themselves of this opportunity know that their comments are taken seriously.

#### **Measurement and Data Collection:**

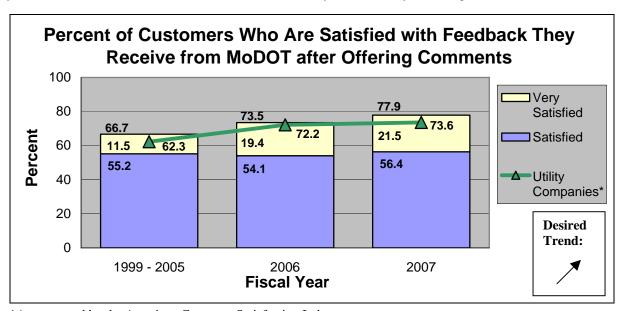
MoDOT routinely coordinates a survey in cooperation with university partners for persons who attend project-specific meetings and hearings. The initial survey was sent to more than 4,500 persons who attended meetings in a five-year period. A survey process continues, with contacts made each time a project reaches the official public hearing milestone. This is an annual measure based upon a fiscal year, and data is analyzed twice each year.

## **Improvement Status:**

The fiscal year 2007 results reflect surveys of persons who attended public hearings associated with 33 projects in eight of MoDOT's 10 districts. The overall results were very positive and continue to trend upward from the results of previous surveys in 2005 and 2006. Overall satisfaction with how MoDOT handled questions and comments rose to 77.9 percent. Seven projects had 100 percent satisfaction rates.

Improvements were also seen on the other two primary survey questions. More people than ever before thought MoDOT explained the projects clearly (90.3 percent) and that the decision-making process was open, transparent and fair (77.1 percent).

Quarterly discussions and reviews of Tracker measures with MoDOT managers across the state continue to enhance performance in the area of public involvement and proactive communication with MoDOT customers. MoDOT's satisfaction rate compares favorably with that of energy utility companies whose customer satisfaction is evaluated by the American Customer Satisfaction Index, coordinated by the University of Michigan.



<sup>\*</sup>As measured by the American Customer Satisfaction Index.

## **Customer Involvement in Transportation Decision-Making**

# Percent of customers who feel MoDOT includes them in transportation decision-making process

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Sue Cox, Transportation Planning Special Projects Coordinator

#### **Purpose of the Measure:**

This data helps determine the effectiveness of MoDOT's project planning outreach efforts.

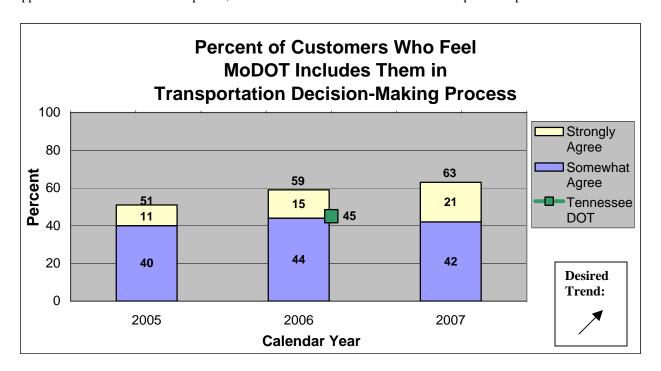
#### **Measurement and Data Collection:**

This is an annual measure, and this year's data, gathered from a statewide random telephone survey of approximately 3,500 Missourians, was collected in May 2007. Survey data originally collected for MoDOT's long-range planning initiative called Missouri Advance Planning in May 2005 provides the original baseline for comparison of future data.

#### **Improvement Status:**

MoDOT learned in the 2007 customer survey that 63 percent of the survey sample feels MoDOT considers customer concerns and needs when developing transportation decisions, up from 59 percent in 2006. This means satisfaction with MoDOT's efforts to include citizens has increased by 4 percent from 2006 to 2007. The Tennessee Department of Transportation also measures customers' perceptions regarding involvement in transportation decision-making, and a comparison is being made in the following chart between MoDOT's 2007 performance and Tennessee's 2006 performance, which is the most recent available data.

To continuously improve in this area, MoDOT identifies additional opportunities to use techniques as outlined in the planning framework decision-making and public involvement process with local officials, planning partners, community leaders, elected officials and the general public. Media interviews, Web site publicity, news releases, newsletters, specific project surveys, public involvement surveys and community meetings continually provide new opportunities to interact with the public, share MoDOT's direction and discuss transportation priorities.



## **Customer Involvement in Transportation Decision-Making**

# Percent of positive feedback responses received from planning partners regarding involvement in transportation decision-making

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Sue Cox, Transportation Planning Special Projects Coordinator

#### **Purpose of the Measure:**

This measures MoDOT's efforts to include statewide planning partners (members of metropolitan planning organizations and regional planning commissions) in transportation-related decision-making.

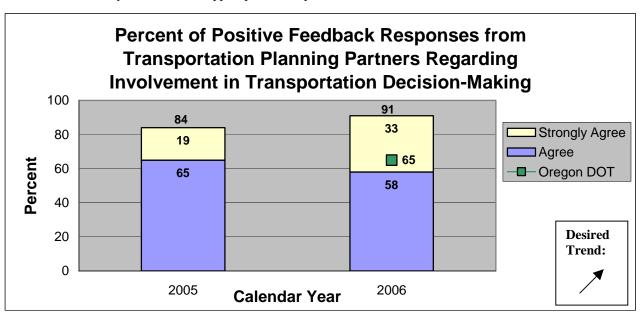
#### **Measurement and Data Collection:**

MoDOT Transportation Planning works with university partners to administer a survey measuring planning partners' involvement in the transportation decision-making process. The survey answers are based on a scale that measures those who strongly agree, agree, disagree and strongly disagree. This measure has changed from a quarterly measure to an annual measure. Previously, survey data evaluating MoDOT's outreach efforts was collected from planning partners following each public involvement activity or outreach effort and summarized for a quarterly report. Planning partners indicated a survey following each public outreach activity was excessive, and it resulted in a decline of survey participation and feedback.

## **Improvement Status:**

The 2006 annual survey received 80 responses from 155 distributed e-mails resulting in a 51.6 percent response rate as compared to the 2005 quarterly response rate of 34.7 percent. The 2006 results indicate a 91 percent satisfaction rate demonstrating an improvement from 84 percent satisfaction in 2005. The new annual survey focuses on feedback regarding the overall involvement of planning partners in the planning process rather than on individual MoDOT outreach activities. A comparison can be made to the Oregon Department of Transportation, which measures similar public involvement efforts. In 2006, which is the most recent data available, the Oregon DOT shows 65 percent of all respondents involved in transportation planning feel their involvement in decision-making was effective.

To continuously improve in this area, MoDOT implements effective communication, and public involvement tools and techniques based on the survey respondents' written comments. MoDOT's planning framework, which is a process used to ensure planning partners are able to influence transportation decisions regarding how transportation funds will be spent in their areas, is based on achieving informed consent. Informed consent means that planning partners have an opportunity to be a part of the decision-making process and understand the outcomes even if solutions do not entirely reflect their desires. By listening to planning partners, MoDOT is learning news ways to get better involvement, fine-tune communication and try out ideas that support positive improvements.





Tangible Result Driver – Don Hillis, Director of System Management

Many Missouri motorists depend on roadside parks and rest areas during their travels for the opportunity to rest and refresh themselves in a safe environment. Providing safe, clean and convenient accommodations allows motorists to travel more safely and comfortably.





# Percent of customers satisfied with rest areas' convenience, cleanliness and safety

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Jim Carney, State Maintenance Engineer

#### **Purpose of the Measure:**

This measure helps MoDOT understand customer expectations concerning the convenience, cleanliness and safety of its rest areas. This information will provide insight to rest area location, lighting and security as well as the overall cleanliness expectations.

#### **Measurement and Data Collection:**

MoDOT measures this attribute with both internal and external data collection. MoDOT receives information from a survey card offered at all rest areas. The survey cards ask a variety of questions with three of the questions specifically asking if the rest area is convenient, clean and safe. This provides direct input from our customers and is considered our external source. All comments from the cards are sent to the districts and sheltered workshop contractor to ensure concerns are addressed in a timely manner.

To ensure the customer satisfaction, all rest areas are inspected using an attribute list developed and based on an industry-wide literature review. The attribute list includes characteristics rest-area users identified as what they consider convenient, clean and safe. MoDOT maintenance employees inspect all rest areas and the work of the sheltered workshop contractor at least two times per month using this list and are considered our internal source.

MoDOT works with Extended Employment Sheltered Workshops to provide the cleaning at all 19 rest areas in the system. The sheltered workshop employees provide this service 365 days a year, many from early morning (6 a.m.) to late in the evening (10 p.m.). This measure is updated quarterly.

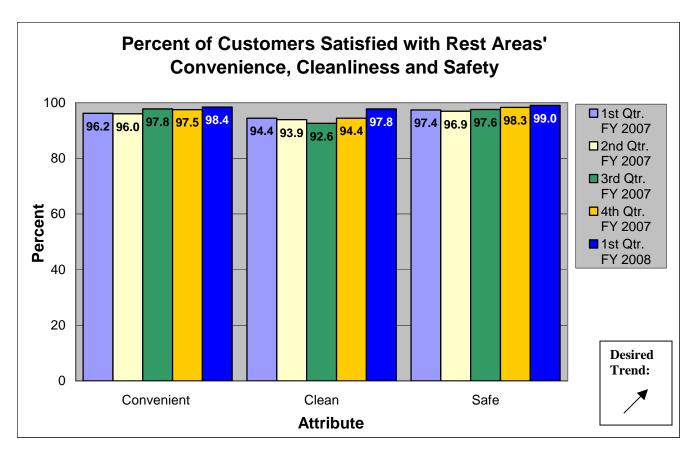
## **Improvement Status:**

The rest area survey cards were made available in May 2005. The increase in the number of returned cards corresponds with the seasonal increase in visitors to the rest areas. A total of 8,054 cards were returned in fiscal year 2006 compared to 8,178 in FY 2007. In the first quarter of FY 2008, 4,653 cards were returned. This is the largest number of returned surveys to date and over half of the surveys returned in each of the past two years.

- First Quarter FY 2007, 3,125 surveys received
- Second Quarter FY 2007, 1,489 surveys received
- Third Quarter FY 2007, 788 surveys received
- Fourth Quarter FY 2007, 2,776 surveys received
- First Quarter FY 2008, 4,653 surveys received

Customer satisfaction for all three attributes is higher than the previous quarter. MoDOT implements actions to improve the cleanliness at rest areas with lower satisfaction ratings by direct contact with the contractor. Based on the cards returned from 49 states, Canada, Ireland, the United Kingdom, Switzerland, Mongolia, China and Spain, MoDOT is meeting the needs of its customers.

The internal rest area inspections started in May 2005. MoDOT is doing extremely well at meeting the customers' expectations for convenient, clean and safe facilities, largely in part to these inspections conducted a minimum of two times per month. The inspection scores had decreased the past two quarters but rebounded to 95.2 percent for the first quarter of 2008, slightly higher than the same time period of 2007. MoDOT takes care of maintenance concerns in a timely manner to keep the rest areas open for use.



Note: Rest area customer satisfaction benchmarks are limited. Florida's 2004 rest area customer survey results found: 90 percent said the rest areas were clean, 83 percent said there were enough rest areas and 88 percent said the rest areas were safe.



## Percent of customers satisfied with commuter lots' convenience, cleanliness and safety

Result Driver: Don Hillis, Director of System Management

Measurement Driver: Tim Chojnacki, Maintenance Liaison Engineer

#### **Purpose of the Measure:**

This measure will help the department understand customer expectations concerning commuter lot convenience, cleanliness and safety. This information will provide insight to location, lighting and security at commuter lots as well as their overall cleanliness.

#### **Measurement and Data Collection:**

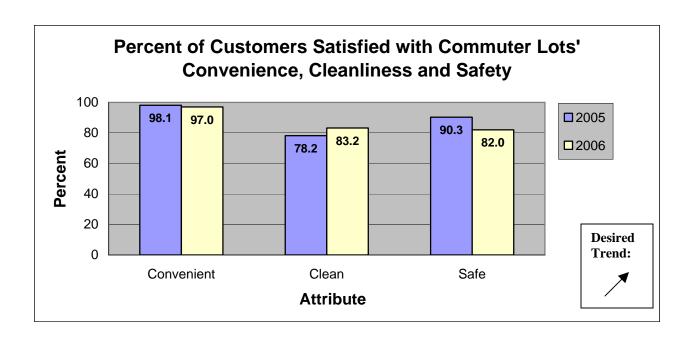
MoDOT receives information in the form of survey cards distributed by MoDOT employees at 20 commuter lots. The survey contains a variety of questions, three of which specifically ask if the commuter lot is convenient, clean and safe. This is a baseline measure that provides direct input from the department's customers and is considered an external source. This is an annual measure updated each January.

To further assess condition and ensure customer satisfaction with the commuter lots, all lots are inspected based on attributes identified in an industry-wide literature review as to what commuter lot customers consider convenient, clean and safe. MoDOT maintenance employees inspect all commuter lots each quarter. This measure is updated quarterly.

#### **Improvement Status:**

Commuter lot survey cards were distributed to 1,134 customers in December 2006 and the department received 446 replies. Ninety-seven percent of the customers thought the lots were convenient with 66 percent using them five days per week. Sixty-eight percent cited saving fuel costs as the most important reason to use the lot. Eighty-three percent of the customers were satisfied with cleanliness. MoDOT received many comments about litter and the need for trash cans. Eighty-two percent of customers were satisfied with safety at the lots with several customers expressing the need for additional lighting and almost 9 percent reporting theft and property damage concerns. Other frequent comments included the need for better surface maintenance on the gravel and asphalt lots and in a few lots expansion to provide more parking spaces.

MoDOT established a quarterly internal inspection process in May 2006 to be performed at all commuter lots to identify maintenance needs. The quarterly inspections provide input to district maintenance supervisors on work needed at the commuter lot for condition of signs, parking lot surface, litter, and vegetation management. The August 2006 inspection indicated a statewide average condition score of 78 percent. The November 2006 and February 2007 condition scores were both 80 percent. The May 2007 condition score improved slightly to 82 percent and the August 2007 condition score was 84 percent, continuing the positive trend. MoDOT staff continues to improve their efforts working with law enforcement agencies to more closely monitor the lots that have reported concerns with theft and property damage complaints to improve safety.





## Number of users of commuter parking lots

Result Driver: Don Hillis, Director of System Management

Measurement Driver: Tim Chojnacki, Maintenance Liaison Engineer

## **Purpose of the Measure:**

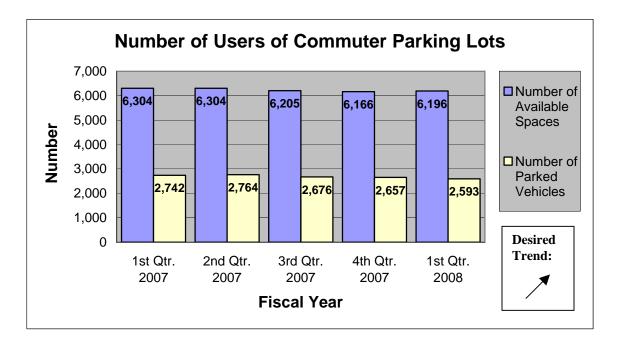
This measure tracks the number of commuter parking lot users. It will help the department determine whether its commuter parking lots are adequate at current locations and whether lots are fulfilling the needs of the traveling public.

#### **Measurement and Data Collection:**

District maintenance personnel count the number of vehicles parked in each commuter lot in conjunction with the quarterly condition inspections. Data is collected from every district to create a statewide report. This measure is updated quarterly.

## **Improvement Status:**

There was a slight decrease in the number of vehicles parked in the commuter lots from the previous quarter. A total of 2,593 vehicles were parked at the lots this quarter compared to 2,657 vehicles parked last quarter. This represents a decline of 2.4 percent. Since the last quarter, one lot has opened containing 30 spaces, bringing the total number of available spots to 6,196. MoDOT will continue to encourage motorists to use these lots through news releases and the recently developed commuter parking lot brochure. MoDOT is currently working with DNR to advertise the week of October 22-26, 2007 as "Share the Ride Statewide".



## Number of users of rest areas

Result Driver: Don Hillis, Director of System Management

Measurement Driver: Stacy Armstrong, Roadside Management Supervisor

## **Purpose of the Measure:**

This measure tracks the number of vehicles visiting rest areas. This information helps MoDOT better understand the peak days and times visitors use rest areas, impacting staffing decisions. MoDOT estimates the rest areas have over 24 million visitors each year.

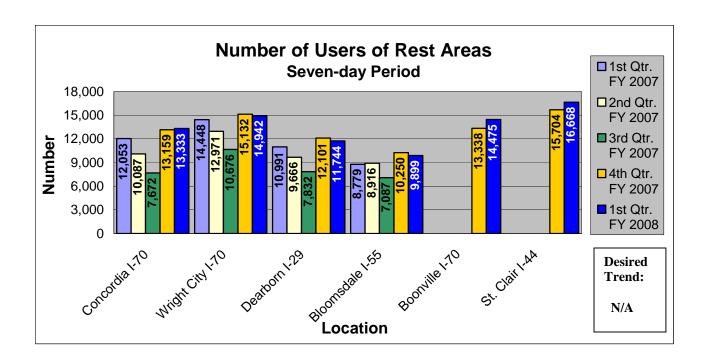
#### **Measurement and Data Collection:**

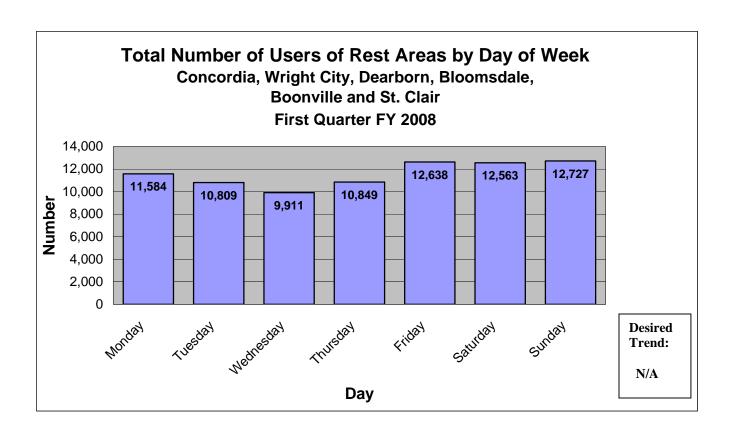
Rest areas at Bloomsdale Interstate - 55, Concordia Interstate - 70, Wright City Interstate - 70, Dearborn Interstate - 29, Boonville Interstate - 70 and St. Clair - Interstate 44 have permanent counters providing data daily. Pavement sensors send data from a solar-powered wireless transfer station. All permanent counter locations have two counters for a total of twelve counts. Five additional sites will have permanent counters installed in 2008. All data is from permanent counters beginning this quarter. The counts are for the seven-day period between July 1 and July 7, 2007, the Independence Day week. This data is updated quarterly.

## **Improvement Status:**

Joplin and Coffey (Eagleville) welcome center construction is in progress. Joplin is currently closed and scheduled to open November 2007. Eagleville is scheduled to open early 2008. Permanent counters will be installed at Rockport on Interstate 29, Lathrop on Interstate 35, Eagleville on Interstate 35, Steele on Interstate 55 and Joplin on Interstate 44 in 2008. Joplin will provide counts for the new welcome center and the westbound Interstate 44 truck parking only area.

The count period includes the Wednesday Independence Day holiday, which had the lowest total visitors for the week. Normally a holiday has a higher traffic count, but rest area visitation was low because the holiday was in the middle of the week. The Friday thru Sunday traffic remained steady and relatively high.





## Number of truck customers that utilize rest areas

Result Driver: Don Hillis, Director of System Management

Measurement Driver: Tim Jackson, Maintenance Liaison Engineer

## **Purpose of the Measure:**

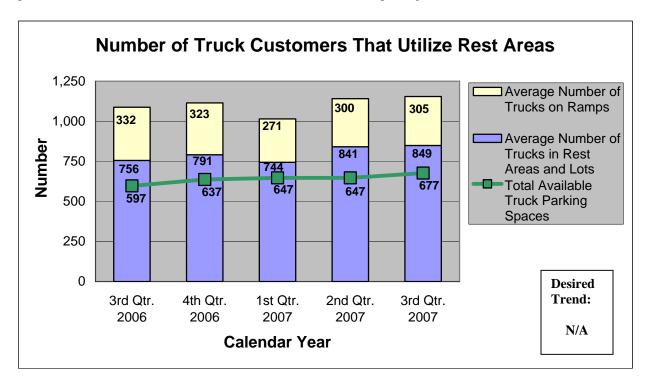
This measure tracks the number of trucks at rest areas. The number of trucks using the rest areas and the nearby ramps could be used to help determine how many spaces are needed to provide convenient parking facilities at each rest area.

#### **Measurement and Data Collection:**

On a monthly basis, district maintenance personnel count the number of trucks parked at rest areas, on nearby ramps within 15 miles of the rest areas and at abandoned weigh stations that have been converted to truck parking facilities. The count is done between 4 and 6 a.m., which is typically the busiest time. Data is collected from every rest area and truck parking facility to create a statewide report and updated quarterly.

## **Improvement Status:**

The third quarter of calendar year 2007 showed an increase of 8 in the average number of trucks using the rest areas and other truck parking facilities from the previous quarter. This increase continues the overall trend over the last five quarters. The average number of trucks parked in the rest areas increased 93 from the third quarter of 2006, while the number of truck parking spaces increased by 80 during the same time period. The northbound Interstate 57 weigh station near Charleston was converted into a truck parking facility in July, providing an additional 16 spaces. Converting abandoned weigh stations into truck parking facilities continues to be a way to add parking spaces across the state to accommodate the need for additional truck parking.

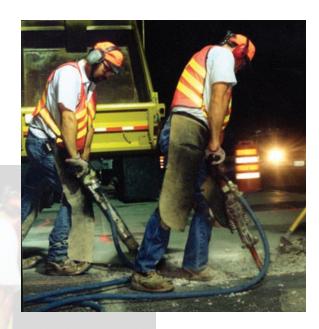




# Best Value For Every Dollar Spent Tangible Result Driver – Roberta Broeker,

Chief Financial Officer

Providing the best value for every dollar spent means MoDOT is running its business as efficiently and effectively as possible. A tightly managed budget means more roads and bridges can be fixed. That keeps Missouri moving. This is one of MoDOT's values because every employee is a taxpayer too!



## Number of MoDOT employees (converted to full-time equivalency)

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Micki Knudsen, Human Resources Director

## **Purpose of the Measure:**

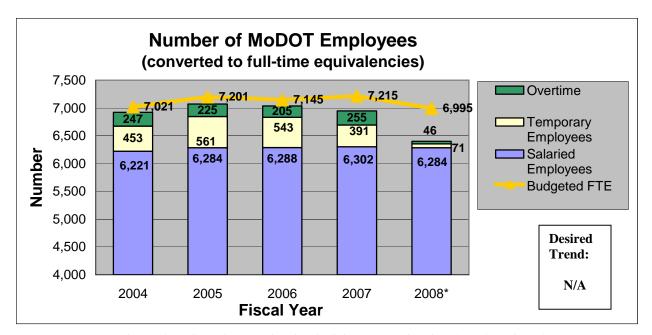
This measure tracks the growth in the number of employees within the department. This measure converts salary dollars paid to temporary and salaried employees, as well as the amount paid for overtime worked, to full-time equivalency. In order to convert these numbers to FTEs, the total number of hours worked is divided by 2080. Overtime includes both salaried and wage employees.

#### **Measurement and Data Collection:**

The data is collected and reported each quarter of the fiscal year. The data is a high-level view of overall staffing at MoDOT in relation to authorized positions that could be filled.

## **Improvement Status:**

The chart for this measure has changed beginning fiscal year 2008. MoDOT managers now have increased flexibility in how they spend personal services dollars and are no longer forced to keep salaried employees within an authorized headcount. Therefore, the chart will now compare actual expenditures to budgeted FTEs. Comparing the first quarter of FY 2008 to the first quarter of FY 2007, the number of salaried employees is relatively the same. However, MoDOT has utilized fewer FTEs for wage employees (71 from 184) and less FTEs for overtime (46 from 66) compared to one year ago.



\* For FY 2008, the "Salaried Employees" data has had the FTE used to date for salaried employees converted to an annual number (by multiplying by four) for ease in comparison to previous years. This could not be reasonably accomplished for wage employees or for overtime.

## Percent of work capacity based on average hours worked

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Micki Knudsen, Human Resources Director

## **Purpose of the Measure:**

The purpose of this measure is to track how many hours the average employee works on an annual basis. It can assist management in determining staffing and productivity levels.

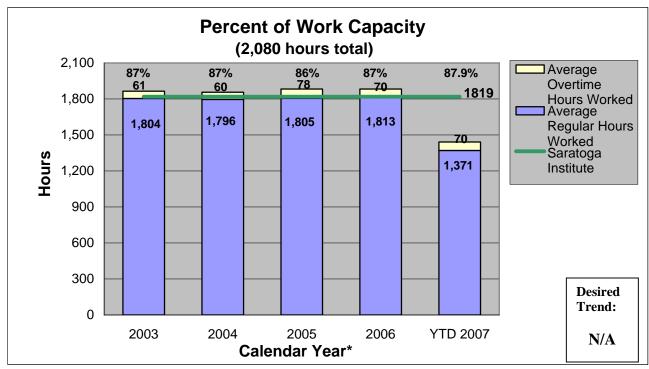
#### **Measurement and Data Collection:**

MoDOT measures organizational work capacity based on average regular hours worked and average overtime hours worked by employees. This measure also displays the percentage of regular hours available that are worked.

The average regular hours worked does not include seasonal or wage employees. The average overtime hours worked does not include exempt, seasonal, or wage employees. Benchmark data is from Saratoga Institute report, "Key Trends in Human Capital – Global Perspective," indicating average hours worked per person in the United States.

## **Improvement Status:**

In the July 2007 Tracker, MoDOT reported a year-to-date work capacity of 88.6 percent. Although work capacity has fallen to 87.9 percent, this is typical considering the number of employees who take vacation during the third quarter of the calendar year. The department has increased year-to-date work capacity slightly over 2006 when it was 87.3 percent. However, this slight increase (7 hours per employee) reflects the equivalent of 21 additional FTEs. The increase in work capacity is directly linked to the reduction in employees' use of sick leave. For calendar year 2007 to date, MoDOT employees have used 51,767 fewer hours than in 2006, and over 71,000 fewer hours than the same time period in 2005. In addition, during the most recent quarter, MoDOT staff reduced the average hours of overtime to 15 hours compared to 21 hours during the same quarter in FY 2007.



<sup>\*</sup> Percentage does not include overtime hours.

## Rate of employee turnover

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Micki Knudsen, Human Resources Director

#### **Purpose of the Measure:**

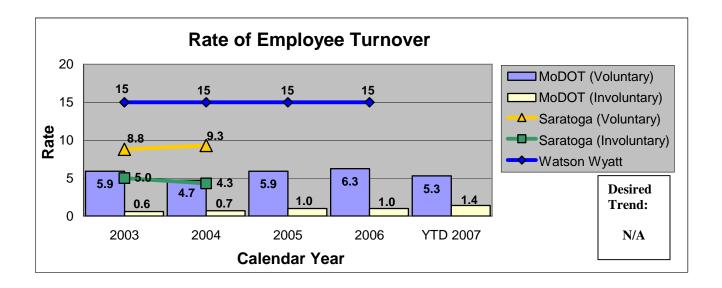
This measure tracks the percentage of employees who leave MoDOT annually and compares the department's turnover rate to benchmarked data. Voluntary turnover includes most resignations and retirements. Involuntary turnover includes dismissals. Beginning with calendar year 2007, it also includes retirements and voluntary resignations of employees who were rated as needs improvement or had a disciplinary history. Turnover rates include voluntary separations, involuntary separations, and deceased employees.

#### **Measurement and Data Collection:**

The data is collected statewide to assess employee overall turnover. Comparison data is collected from various sources annually. For benchmarked data, Saratoga Institute surveyed 288 organizations representing a wide variety of industries. In addition, the Watson Wyatt study determined the optimum turnover rate by analyzing turnover rate compared to organizational financial performance.

## **Improvement Status:**

Through September 2007, there were 421 separations compared to 389 during the same period in 2006. Of the 360 voluntary separations, 50 percent were due to retirements, which is slightly higher than one year ago. The 179 resignations to date in 2007 are down nearly 6 percent from 190 at this time last year. There were 22 employees dismissed during the most recent quarter and 10 employees with conduct or performance issues resigned. MoDOT continues to see a reduction in turnover rate of employees in civil engineering positions compared to the same time period in the previous year. At this time last year, 67 employees in civil engineering positions had separated from the department; in 2007, only 45 employees in these positions have left employment. Turnover of professionals in the information technology area have again become a source of concern. During the most recent quarter, 6 information technology professionals left employment with MoDOT, bringing the total for the year to 15. This compares to only six for all of 2006.



## Level of job satisfaction

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Micki Knudsen, Human Resources Director

## **Purpose of the Measure:**

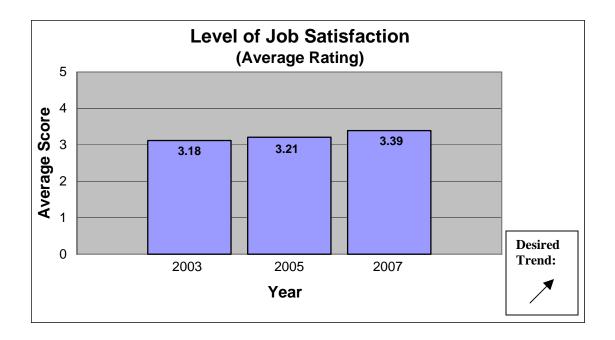
This measure tracks the level of employee satisfaction throughout the department at specific points in time. The first chart indicates the level of department employees' job satisfaction and changes in their satisfaction over time. The second chart shows the percentage of MoDOT employees who are satisfied compared to the organization that scored the best in employee satisfaction using the same survey instrument.

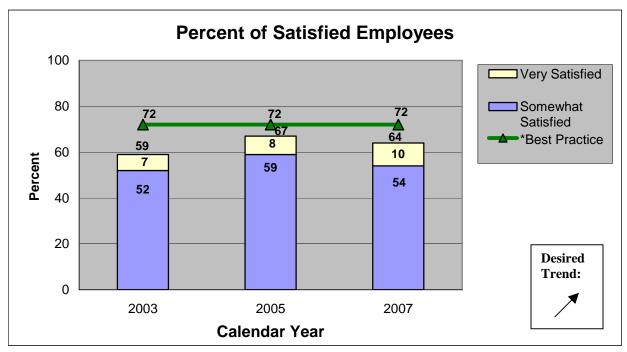
#### **Measurement and Data Collection:**

Employee satisfaction is measured using 18 items from a biennial employee survey. Best practice data for an anonymous company was provided by the vendor contracted to conduct the employee survey in 2003 and 2005.

#### **Improvement Status:**

During this quarter, a draft report of the results of MoDOT's employee satisfaction survey was completed and will be released in November. This year's report includes an action plan for addressing employee concerns. The employees' written comments were shared with the district engineer at each location in order to develop action items to address employee concerns specific to each location. This year, a larger number of employees rated their satisfaction at the highest level. However, only 64 percent of employees rated their job satisfaction above neutral, compared to 67 percent in 2005. The average scores on 16 of the 18 individual components, which make up job satisfaction, increased over the scores in 2005. Scores decreased on the ratings related to knowledge of the grievance process and fair application of discipline. Although there was significant improvement in scores on questions related to rewards, employee comments indicated their biggest concern centers on pay issues. Those pay issues include: (1) lack of within grade increases, (2) lack of differences in pay between poor performers and high performers, (3) lack of promotion opportunities for non-graduates in engineering and others in non-engineering professions, and (4) new employees making as much as more experienced employees.





<sup>\*</sup> Best practice data for an anonymous company was provided by the vendor contracted to conduct the employee survey in 2003 and 2005.

## Number of lost workdays per year

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Jeff Padgett, Acting Risk Management Director

## **Purpose of the Measure:**

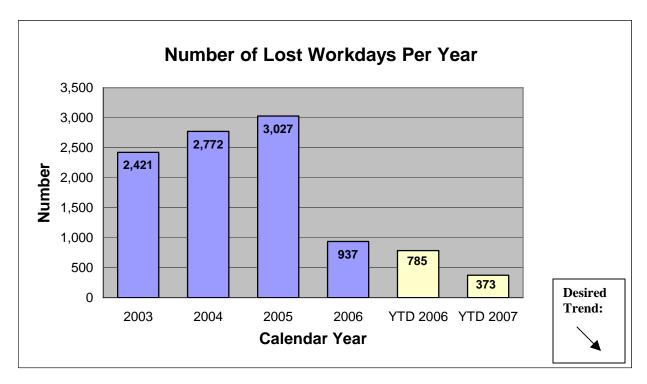
This measure tracks the actual number of days that employees cannot work due to work-related injuries sustained during the reporting period. Note that the results do not include lost workdays for injuries that occurred during previous reporting periods. (Example: an employee that is injured on Dec. 31, 2006 and is off during January of 2007 will not show up as lost time in 2007 because the incident occurred during the previous reporting period.)

#### **Measurement and Data Collection:**

The data is collected from Riskmaster, the risk management software, and reported quarterly.

#### **Improvement Status:**

The number of lost workdays for the first three quarters of 2007 is 52 percent lower than last year's total, declining from 785 in 2006 to 373 lost workdays in 2007. Though not illustrated in the chart, the number of lost-time incidents decreased by 34 percent for the same period. MoDOT continues to develop and implement new safety-related initiatives to further reduce lost workdays including the Performance Plus Injury Reduction Incentive, a work simulation physical exam and a fitness for duty program. Risk Management personnel now direct all medical care for work-related injuries. MoDOT continues to identify and provide light-duty assignments for injured workers with restrictions in an effort to get them back to work quickly



## Rate and total of OSHA recordable incidents

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Jeff Padgett, Acting Risk Management Director

## **Purpose of the Measure:**

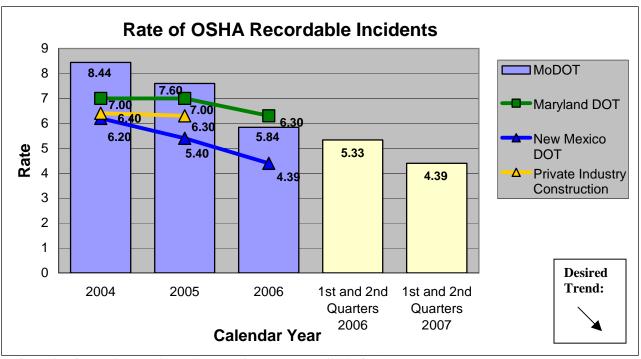
This measure tracks the number of recordable injuries, as defined by OSHA, in total and as a rate of injuries per 100 workers. The calculation for incidence rate is the number of recordables times 200,000 divided by the number of hours worked. The 200,000 used in the calculation is the base for 100 full-time workers (working 40 hours per week, 50 weeks per year). OSHA defines a recordable incident as a work-related injury or illness that results in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. MoDOT defines medical treatment beyond first aid as work-related injuries requiring two or more doctor visits.

#### **Measurement and Data Collection:**

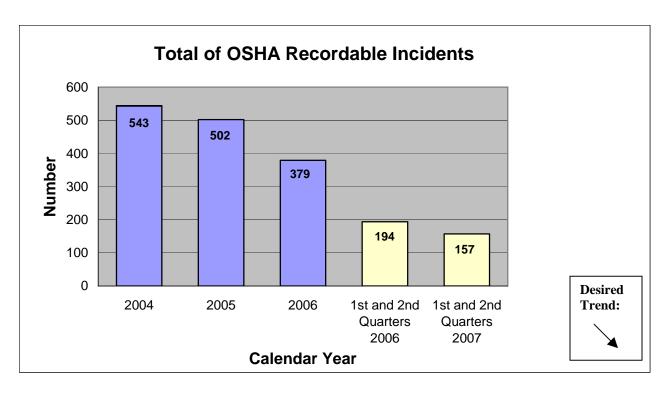
MoDOT reports on the measure quarterly, one quarter in arrears, and collects the injury data from Riskmaster, a claims administration software. The number of hours worked is taken from MoDOT's payroll data.

## **Improvement Status:**

The number of OSHA recordables and the incidence rate has declined over the reporting periods noted. The incident rate has declined by 18 percent for the first and second quarters of 2007 over the same time period in 2006, dropping from 5.33 to 4.39. The number of recordables has declined by 19 percent over the same period, demonstrating a reduction from 194 to 157 OSHA recordables. The department has reduced its injury rate by successfully implementing numerous safety-related initiatives.



(Information from Private Industry Construction was not available for 2006.)



## Number of claims and total claims expense for general liability

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Jeff Padgett, Acting Risk Management Director

#### **Purpose of the Measure:**

General liability claims arise from allegations of injuries/damages caused by the dangerous condition of MoDOT property and the injury/damage directly resulting 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. This measure tracks the number of general liability claims filed and claims expense incurred during the reporting period. The claims expense includes cash paid and adjustments to claim reserves.

#### **Measurement and Data Collection:**

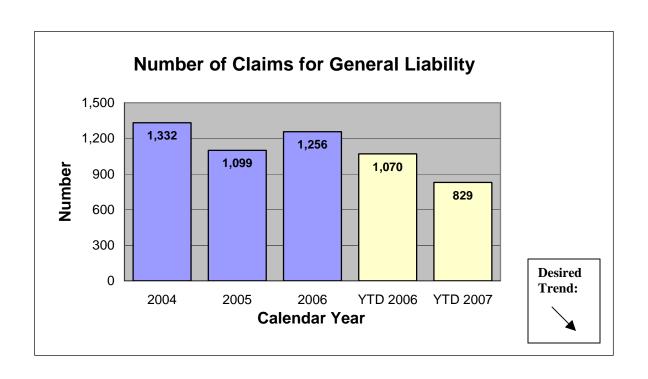
MoDOT reports on the measure quarterly and collects the claims data from Riskmaster, a claims administration software. The claims expense is collected from the self-insurance plan financial statements.

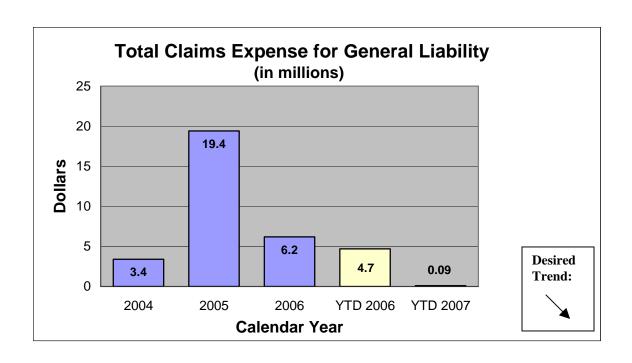
## **Improvement Status:**

The number of claims for general liability and the total claims expense for general liability have declined over the reporting periods noted. The number of claims has declined by 23 percent through 2007 over the same time period in 2006, dropping from 1,070 to 829. The total claims expense also declined through 2007, from \$4.7 million to \$90,000, or 98 percent.

The decrease in number of claims filed between 2004 and 2005 is largely attributable to a substantial reduction in pothole claims in the urban areas as SRI began. The number of claims filed in 2006 increased over 2005 because of a chip seal job in the Springfield area, which resulted in over 400 claims. The number of claims has decreased year to date, partly due to better results with chip seal projects.

The claims expenses increased substantially in 2005 as MoDOT received approximately 70 additional lawsuits immediately prior to the effective date of tort reform legislation. The expense represents the best estimate of the future liability attached to each claim and has been and will continue to be adjusted over the life of the claims. Our actual claims expenses have decreased significantly due to settlement of cases below their reserves and the dismissals of lawsuits.





## Unit cost per square foot of buildings

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Chris DeVore, General Services Manager - Facilities

## **Purpose of the Measure:**

This measure tracks the cost of operating department buildings, building capital improvements and capital asset preservation projects.

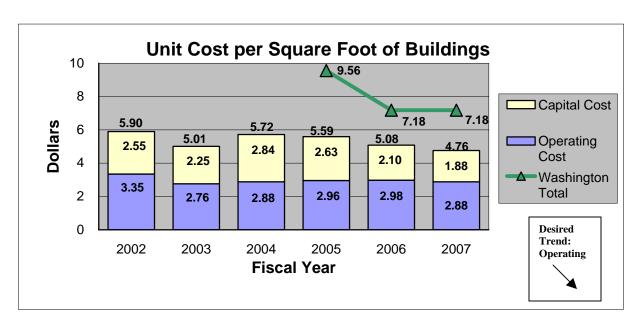
#### **Measurement and Data Collection:**

The data is collected based on expenditures recorded in the statewide financial accounting system. The following expenditures are included in the analysis: the cost of labor, benefits, and materials for central office facilities management and facilities maintenance. It does not include the employer's share of Social Security/Medicare taxes and the department's match for deferred compensation. Operating expenditures, including repair supplies, custodial supplies, janitorial and other services, maintenance and repair services, building and storage leases, and utilities have been included. Capital expenditures include new construction and asset preservation projects. This is an annual measure updated each July.

## **Improvement Status:**

Between 2006 and 2007, capital costs (actual expenditures) as shown indicate a decrease of approximately 11 percent, however a transfer of funds from the CIP to the STIP for the state match of federal enhancement funds does not show up as an expenditure at this time. Operating cost per square foot has decreased by 3 percent. This overall decrease is the result of a decrease in routine maintenance and repairs of 2.5 percent, a decrease in lease cost of 0.46 percent, a decrease in Central Office administrative costs of 2.6 percent and a reduction in utility cost of 4.7 percent. The net result is a \$524,465 reduction in cost. This reduction in operating cost is attributable to placing more emphasis on preserving MoDOT's capital assets, thus reducing routine maintenance cost and targeting needs that reduce energy consumption.

The benchmark is from the Washington DOT. Based on its budget the approximate capital expenditures for 2006-2007 were \$0.46 per square foot and the approximate operating expenditures were \$6.72 per square foot.



## Fleet expenses

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Jeannie Wilson, Central Office General Services Manager

## **Purpose of the Measure:**

This measure tracks costs for MoDOT's fleet, as well as its condition. The first chart compares repair cost and acquisition expenditures. The second chart provides an overall fleet condition status based on actual fleet age and meter compared to maximum life-cycle thresholds.

#### **Measurement and Data Collection:**

The expenditures are collected from the statewide financial accounting system. All costs associated with repairs, supplies and maintenance for all fleet items are included in the analysis. The fleet expenses chart is updated annually. New information will be available in July 2008.

Age and meter thresholds were established based on maximum life usefulness. Units are identified as either exceeding their primary life cycle for either its age or meter, reaching maximum primary life in the next three years; and not exceeding the threshold within the next three years.

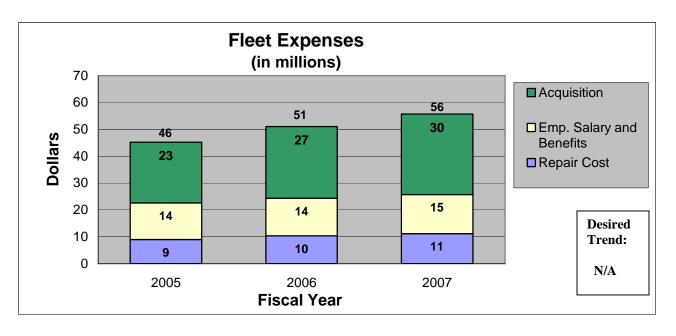
#### **Improvement Status:**

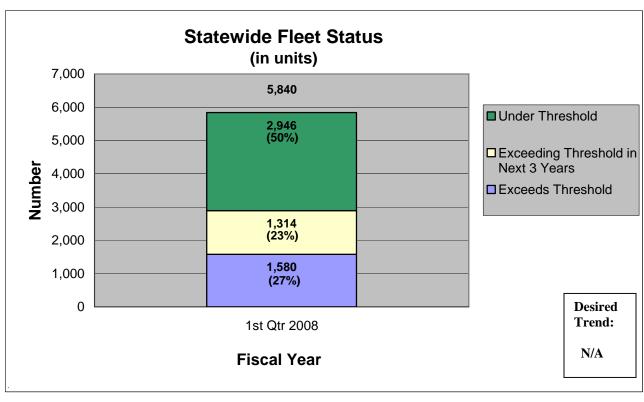
The repair costs to MoDOT's fleet increased from \$10 million to \$11 million from fiscal year 2006 to FY 2007, while salary and benefit costs for fleet employees increased from \$14 million to \$15 million in FY 2007. Acquisition costs increased from \$27 million to \$30 million from FY 2006 to FY 2007. Severe winter storms and the rising cost of steel are major factors in the increases. Beginning with the first quarter of 2008, the criteria for the statewide fleet status has been modified to provide a more accurate accounting of MoDOT's fleet status. The criteria includes all active units in lieu of the previous criteria that required all fleet units to be active for a minimum of 12 months.

Fifty percent of the MoDOT fleet is either beyond the established replacement criteria or will reach the criteria within the next three years. Fifty percent of the MoDOT fleet is under the replacement threshold.

MoDOT is reviewing all "dedicated" (single use) equipment to identify potential units that could be eliminated by acquiring equipment that performs more than one function. For example, a nurse truck has been designed that will be used for striping operations, spraying herbicides, and plowing snow.

A statewide equipment inspection policy has been implemented to ensure all fleet units are assessed on an annual basis. The inspection process has identified potential cost saving opportunities, allowing equipment technicians to become more proactive in maintaining the fleet before major breakdowns occur.





## Percent of vendor invoices paid on time

**Result Driver:** Roberta Broeker, Chief Financial Officer **Measurement Driver:** Debbie Rickard, Controller

## **Purpose of the Measure:**

This measure tracks the department's timeliness in processing vendor payments.

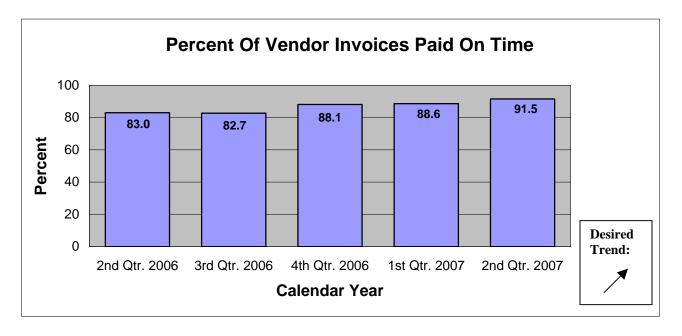
#### **Measurement and Data Collection:**

The check date determines if invoice payment is timely. Timely is defined as a check issued less than 31 days from the date of the invoice.

#### **Improvement Status:**

Vendors age their receivables based on the date of invoice. This measure indicates there has been consistent improvement, but there are still opportunities to ensure vendors consider the department a good customer. The steps to further improve are: (1) identify specific vendors experiencing delayed payment and work with those vendors to obtain timely, accurate invoices, (2) determine if delayed payments are common to a particular division within the Central Office or a district, (3) identify processes contributing to the delayed payment, and (4) identify innovative solutions to receive invoices from the customer.

Analysis tools have been developed to assist in identifying areas where improvements can be made.



## Distribution of expenditures

**Result Driver:** Roberta Broeker, Chief Financial Officer **Measurement Driver:** Debbie Rickard, Controller

## **Purpose of the Measure:**

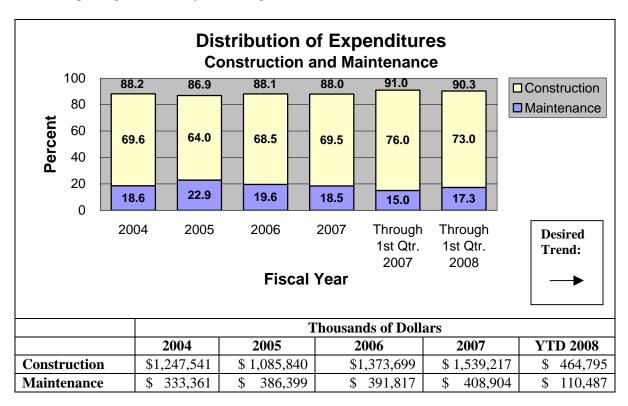
The purpose of the measure is to demonstrate a responsible use of taxpayers' money, with the emphasis of spending on the construction and maintenance of our transportation system.

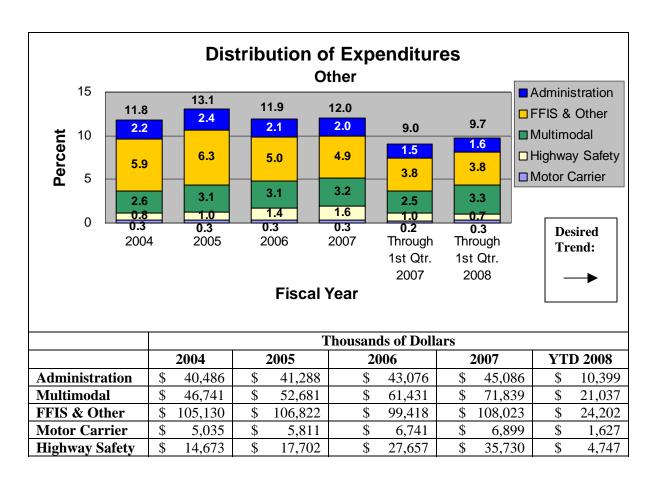
#### **Measurement and Data Collection:**

The data collection is based on cash expenditures by appropriation on a quarterly basis. Construction and maintenance expenditures are defined as expenditures from the construction and maintenance appropriations. Other expenditures include: administration, multimodal, fleet, facilities, information systems, and other services (FFIS & Other) appropriations.

## **Improvement Status:**

The department's emphasis is on expenditures for routine maintenance of the system (maintenance appropriation) and rehabilitation and construction of the system (construction appropriation). Construction expenditures have decreased from the same period for Fiscal Year 2007, percentage and dollars, as a result of reduced bond proceeds and a reduced construction program. Expenditures from administration, FFIS, and Motor Carriers as a percent of total expenditures remain constant, which is consistent with the desired trend. Highway Safety and Multimodal fluctuate depending on availability of federal grants.





## Percent variance of state revenue projections

**Result Driver:** Roberta Broeker, Chief Financial Officer **Measurement Driver:** Ben Reeser, Finance Manager

#### **Purpose of the Measure:**

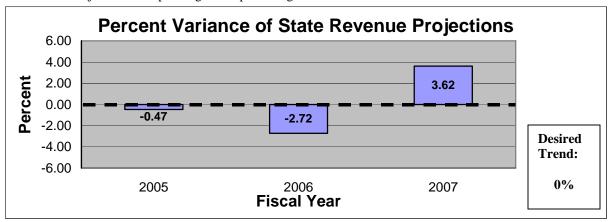
The measure shows the precision of state revenue projections. Projections are used to adjust the budget that funds MoDOT's operations and capital program.

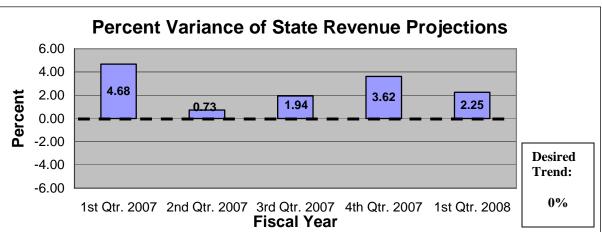
## **Measurement and Data Collection:**

State revenue includes three major components of taxes and fees paid by highway users: motor fuel taxes, motor vehicle and driver licensing fees, and motor vehicle sales and use taxes. This measure does not include interest earnings and miscellaneous revenue, which are also considered state revenues. The measure provides the cumulative, year-to-date percent variance of actual state revenue versus projected state revenue. Projections are based on the current financial forecast. The forecast is updated at the beginning of each fiscal year. This measure is updated quarterly.

## **Improvement Status:**

The actual state revenue was greater than projected through the first quarter of fiscal year 2008. The projected revenue was \$261.9 million. However, the actual receipts were \$267.8 million, a difference of \$5.9 million and a positive variance of 2.25 percent. The desired trend is for the actual revenue to match projections with no variance. MoDOT staff adjusts future operating and capital budgets to account for these variances.





## MoDOT national ranking in revenue per mile

**Result Driver:** Roberta Broeker, Chief Financial Officer **Measurement Driver:** Ben Reeser, Finance Manager

## **Purpose of the Measure:**

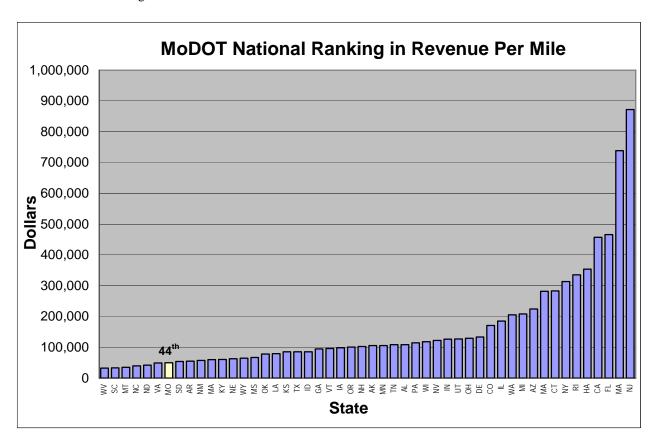
This measure shows Missouri's national ranking in the amount of revenue per mile that is available to spend on the state highway system.

#### **Measurement and Data Collection:**

Revenue is the total receipts less bonds as reported in the Federal Highway Administration's annual highway statistics report entitled "Revenues Used By States For State-Administered Highways." The mileage is the state highway agency miles as reported in the Federal Highway Administration's annual highway statistics report entitled "Public Road Length – Miles By Ownership." Resource Management collects this information from the Federal Highway Administration. This annual measure is updated each January.

## **Improvement Status:**

Missouri's revenue per mile of \$50,099 currently ranks 44<sup>th</sup> in the nation. Missouri has a very large state highway system, consisting of 32,464 miles, which is the seventh largest system in the nation. New Jersey's revenue per mile of \$872,389 ranks first. However, its state highway system contains only 2,321 miles. MoDOT staff continues to communicate the need for additional transportation funding to the public. Missouri's transportation needs greatly exceed current available funding.





## **Attractive Roadsides**

Tangible Result Driver – Don Hillis, Director of System Management

An enjoyable transportation experience includes more than a smooth surface – motorists expect to see roadsides free of litter and debris, well-managed and maintained grass and other vegetation and other attractive enhancements. MoDOT works to meet and exceed expectations for roadsides. Beautiful roadsides are visible proof that MoDOT takes pride in everything it does.



## **Attractive Roadsides**

## Percent of roadsides that meet customers' expectations

**Result Driver:** Don Hillis, Director of System Management **Measurement Driver:** Jim Carney, State Maintenance Engineer

## Purpose of the Measure:

This measure tracks the percent of MoDOT's roadway system that meets customers' expectations for attractiveness.

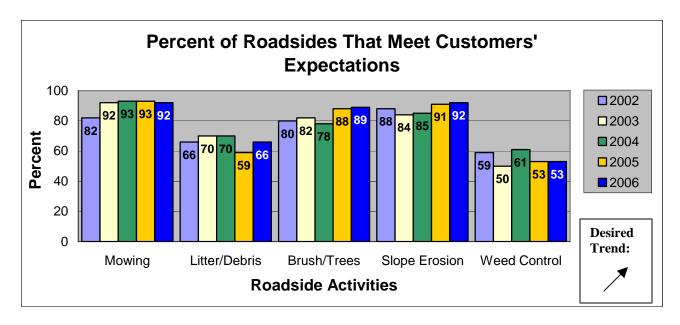
#### **Measurement and Data Collection:**

A list of roadside quality indicators was developed and approved based on an industry-wide literature review. The activities selected for this measure were used to develop a quality assurance checklist for roadside attractiveness. Data collection for this measure is based on a yearly inspection of a number of randomly selected sample sites located throughout the state. The random sites are inspected yearly for each activity.

This is an annual measure updated each January.

#### **Improvement Status:**

Over the past five reporting years, the five roadside activities referenced below have shown varying trend lines. MoDOT shifts resources to improve in all categories. Over the last year, only a minor improvement in litter/debris has been shown. MoDOT staff continues to shift more resources to improve their efforts in litter/debris pickup and weed control.



### **Attractive Roadsides**

### Number of miles in Adopt-A-Highway program

Result Driver: Don Hillis, Director of System Management

Measurement Driver: Stacy Armstrong, Roadside Management Supervisor

#### **Purpose of the Measure:**

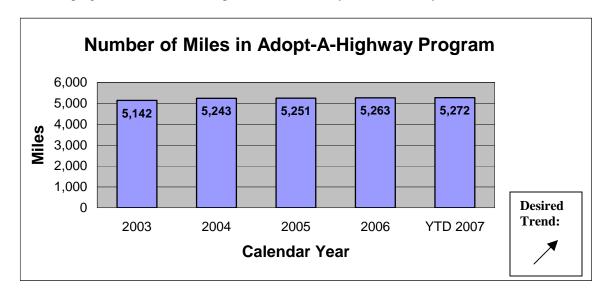
This measure tracks public involvement in taking care of Missouri's roadsides through the Adopt-A-Highway program. Missouri has one of the largest and oldest Adopt-A-Highway programs in the nation. The volunteers learn about litter awareness and some of the challenges MoDOT faces, while allowing maintenance crews to do more critical activities.

#### **Measurement and Data Collection:**

Adopters agree to pick up litter on a designated roadway section for a minimum of four times a year and report their results. Adopters commit to a three-year agreement when they join the program. Urban adoptions are for a minimum of one-half mile and rural adoptions are for at least two miles. Miles are measured by the centerline, however, volunteers are responsible for both sides of the roadway. Adopter-related information is maintained in an Adopt-A-Highway database using the Transportation Management System. This is an annual measure updated quarterly.

#### **Improvement Status:**

In recent years, the number of miles adopted has increased. Recent growth may be due to increased public awareness through No MOre Trash!, a litter–prevention campaign coordinated by MoDOT and the Department of Conservation. Total miles increased in 2007 with 268 new adoptions. Simplified Adopt-A-Highway rules and regulations became effective Aug. 30, 2006. Adopt-A-Highway information is now easier to find on the MoDOT Web site. The program will continue to be promoted at Earth Day, state and county fairs, and other events.





Tangible Result Driver – Pete Rahn, Director of MoDOT

Transportation issues can be extremely diverse and complex. An efficient transportation system requires leadership and, most importantly, a champion to ensure the resources support projects that will help the department fulfill its responsibilities to the taxpayers. MoDOT will be an advocate for transportation.





# Percent of minorities and females employed

Result Driver: Pete Rahn, Director of MoDOT

Measurement Driver: Brenda Treadwell-Martin, Equal Opportunity and Diversity Director

#### **Purpose of the Measure:**

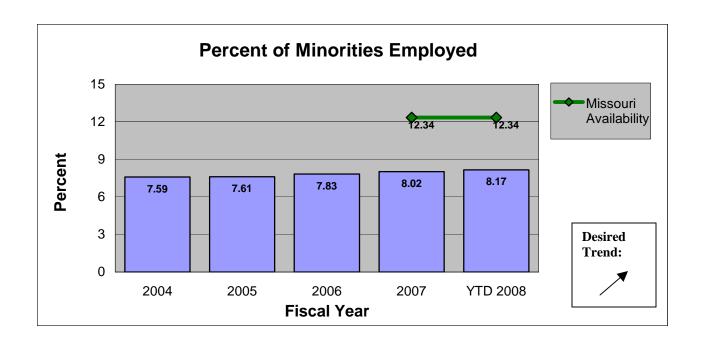
This measure tracks minority and female employment in MoDOT's workforce and compares it with availability data from the Missouri 2000 Census report. Efficient use of people resources provides opportunities for the department to leverage transportation resources with available human capital. By placing the right people in the right place, the department can better serve its customers and help fulfill its responsibilities to taxpayers.

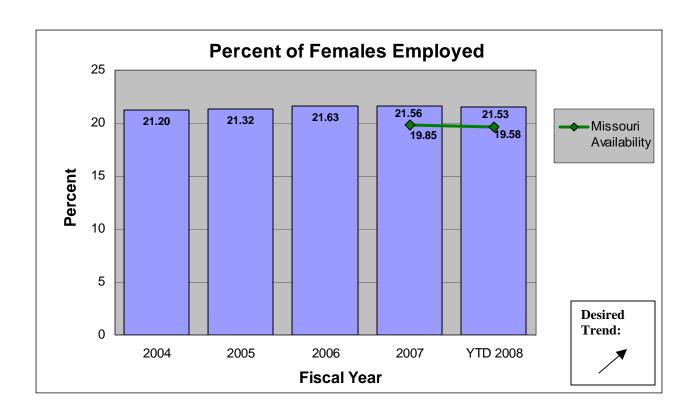
#### **Measurement and Data Collection:**

MoDOT's Affirmative Action software database and Missouri 2000 Census Report are used to collect data. Private sector, departments of transportation, Missouri state agencies, and Missouri 2000 Census Data were researched to determine a benchmark for this measurement. Due to the significant variations for some of these entities (such as pay incentives, number of employees, geographic locations), it was determined Missouri 2000 Census Data, based on jobs used by the department, would be the benchmark for this measurement.

#### **Improvement Status:**

Overall employment decreased by 0.34 percent (6,335 to 6,313). Minority employment increased by 1.57 percent (508 to 516), while female employment decreased by 0.51 percent (1,366 to 1359). Steps taken to improve this measure included: placing a co-op student within a district Human Resources office to assist with recruitment activities, conducting co-op supervisor orientation to further educate individuals about the co-op program, and expanding outreach initiatives to include predominantly Hispanic universities.





# Percent of transportation-related pieces of legislation directly impacted by MoDOT

Result Driver: Pete Rahn, Director of MoDOT

Measurement Driver: Lisa Lemaster, Senior Governmental Relations Specialist

#### **Purpose of the Measure:**

This measure tracks the department's impact on the total number of transportation-related bills filed by the General Assembly as well as the department's progress on its own legislative agenda.

#### **Measurement and Data Collection:**

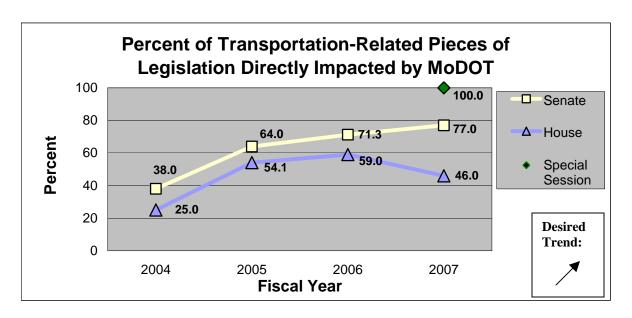
Data is obtained by reviewing both the Senate and House Web sites for legislation in the transportation subject categories. Each bill is reviewed for department impact. A percentage is determined from the total number of bills the department impacted in each category divided by the total number of bills in each category. This percentage of impact is noted on the first chart.

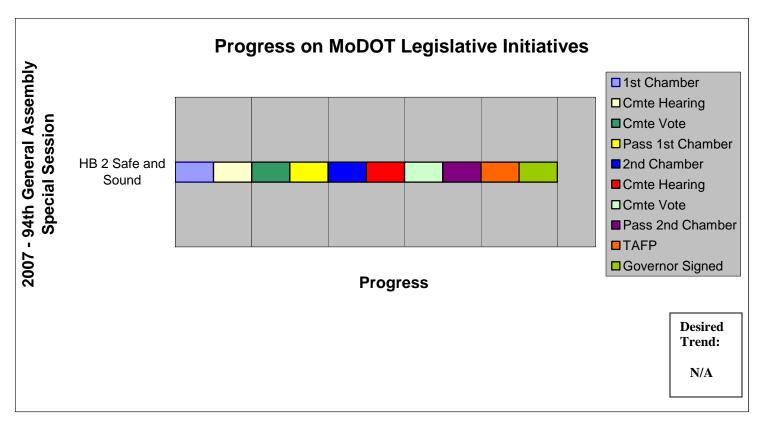
Each fall, potential legislative proposals are submitted to the Missouri Highways and Transportation Commission for review and approval. The second chart tracks each approved legislative proposal through the legislative process.

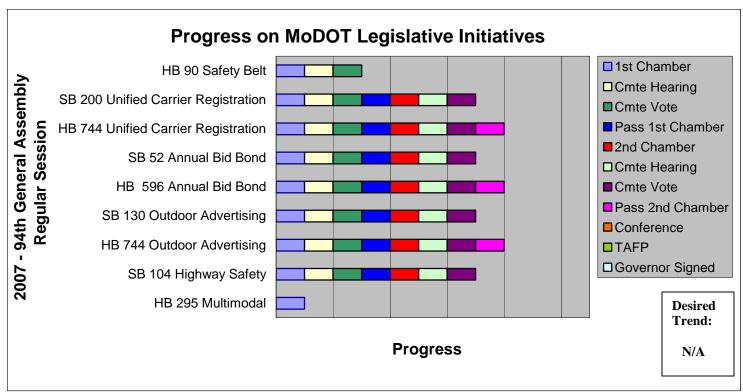
#### **Improvement Status:**

To fast track the Safe and Sound Bridge Improvement Program, Governor Matt Blunt called a special session of the 94<sup>th</sup> General Assembly. During the special session, MoDOT was successful in the passage of HB 2, sponsored by Rep. Neal St. Onge (R-Ballwin), which included the safe and sound proposal.

MoDOT's ability to impact transportation-related pieces of legislation was one hundred percent (100%) during the special session.







### Percent of federal earmarked highway projects on the state highway system

Result Driver: Pete Rahn, Director of MoDOT

Measurement Driver: Kent Van Landuyt, Assistant to the Director

#### **Purpose of the Measure:**

Missouri's support for transportation on the national level is demonstrated by the impact of federal legislation on Missouri's ability to address transportation needs. The percent of federal earmarks on the state highway system, that are also identified as Missouri needs, is representative of the department's success as an advocate of the state's transportation needs.

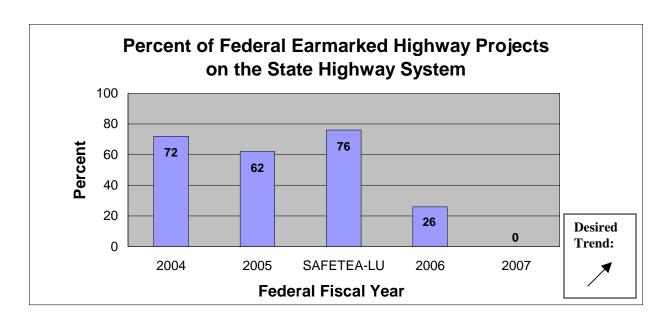
#### **Measurement and Data Collection:**

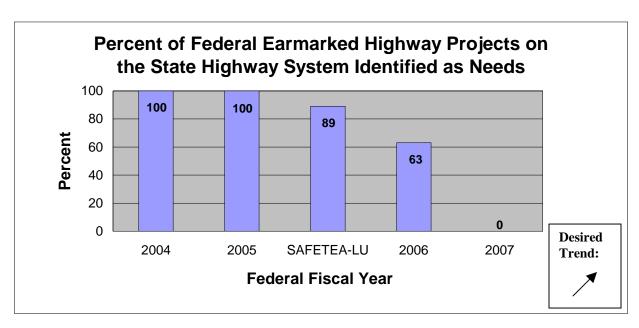
This is an annual measure. The data represents the percent of federal earmarked highway projects on the state highway system and the percent of federal earmarked state highway system projects that are identified as needs. The percent of federal earmarked individual projects on the state highway system represents the department's success in working with Missouri's Congressional delegation and the percent of state system earmarks the department has identified as needs demonstrates MoDOT has provided adequate information to the Missouri Congressional members that these needs are the same needs recognized by their constituents. The identified needs for this measure are projects on the state highway system that are included in the STIP or projects ready to be added to the STIP as soon as funding becomes available.

#### **Improvement Status:**

The charts show Missouri did not receive any earmarked funds for highway projects in federal fiscal year 2007, as Congress did not approve funds for specific earmarks in the federal fiscal year 2007 appropriations legislation. Missouri believes Congress will restore earmarked funds for projects in the federal fiscal year 2008 appropriations legislation. Therefore, MoDOT continues to meet with the staff of each member of Missouri's U. S. Congressional delegation on a regular basis and continues to provide information on transportation issues, urging them to support programs, and projects that address Missouri's transportation needs. In calendar year 2007, MoDOT staff has continued to meet with all of our Congressional offices and provide them with details on highway, transit and aviation projects for federal fiscal year 2008 appropriations.

MoD)T is striving for more than 75 percent of the earmarked projects to be on the state highway system and more than 85 percent of the state highway system earmarked projects to be identified needs. The department continues to communicate directly with Congressional staff members to increase the number of earmarked projects that are identified needs on the state transportation system.





### Percent of customers who view MoDOT as Missouri's transportation expert

Result Driver: Pete Rahn, Director of MoDOT

Measurement Driver: Jay Wunderlich, Governmental Relations Director

#### **Purpose of the Measure:**

This measure tracks whether our customers feel the department is a leader and expert in transportation issues. The measure shows the department how effectively MoDOT conveys its expertise to the traveling public.

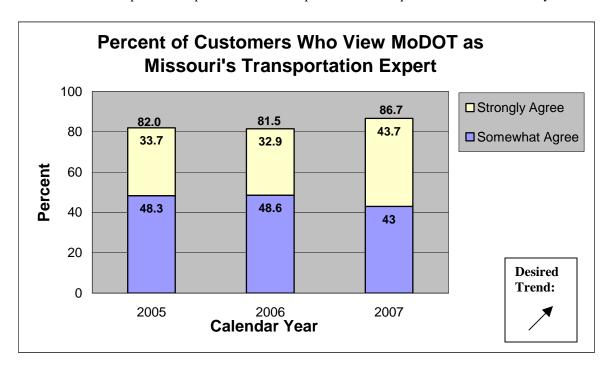
#### **Measurement and Data Collection:**

This is an annual measure updated each July. Data is collected from interviews with over 3,500 randomly selected adult Missourians each May. Each year, MoDOT surveys public opinion to collect information that will tell the department whether or not the public views MoDOT as the primary transportation expert in Missouri.

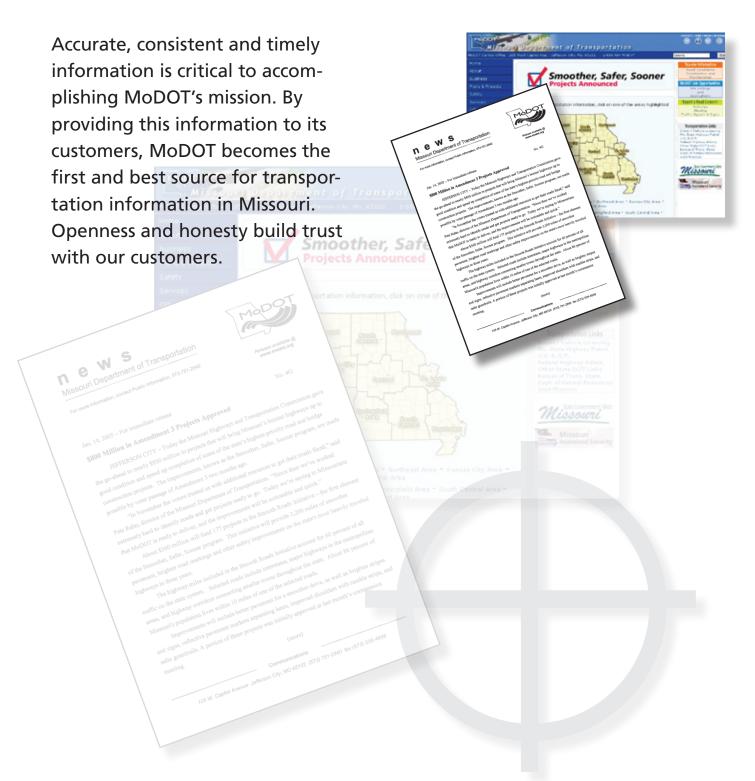
#### **Improvement Status:**

The current information shows that 86.7 percent of respondents indicate MoDOT is the transportation expert they rely upon. This represents a 5.2 percent increase since last surveyed in 2006. Through a questioning approach identical to the 2006 survey, the 2007 numbers reflect a 10 percent increase in the strongly agree responses thus reflecting a lower percent of individuals that disagreed with this statement than previously (13.3 percent in 2007 vs. 18.5 percent last year). MoDOT must continue to work on improving partnerships with citizens, legislators and special interest groups promoting MoDOT as a transportation expert. Ways to accomplish this include increasing awareness of MoDOT's responsibilities to and services for the traveling public.

A recent partnering survey (that corresponds with 13d) asked MoDOT's planning partners who they believe is Missouri's transportation expert. Of the 78 surveys returned, 50 responded to this question. Of those, 16 listed MoDOT, and 11 listed Pete Rahn, which gives hope that individuals in this customer group are beginning to define MoDOT as their transportation expert. Another 23 respondents left the question blank or stated they didn't know.



Tangible Result Driver – Shane Peck, Community Relations Director



### Number of public appearances

Result Driver: Shane Peck, Community Relations Director

Measurement Driver: Sally Oxenhandler, Community Relations Coordinator

#### **Purpose of the Measure:**

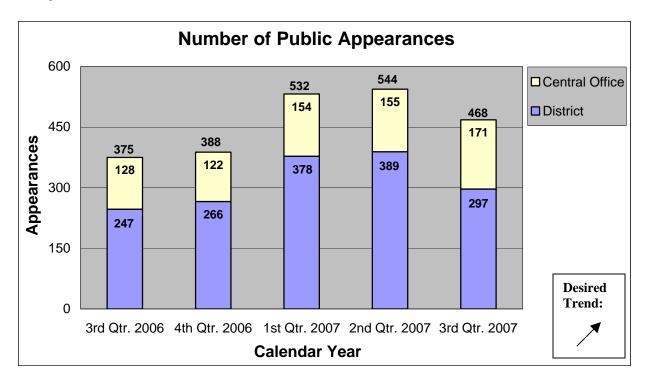
This measure tracks and encourages regular, personal contact with MoDOT customers. A public appearance is defined as any single, public event attended by one or more MoDOT representatives to provide transportation related information. Examples include speeches, presentations, conferences, exhibits, fairs and ribbon cuttings.

#### **Measurement and Data Collection:**

This is a quarterly measure. District Community Relations managers collect appearance information from their administrators on a quarterly basis and send it to Central Office Community Relations where it is combined with data from divisions and business offices to create a statewide report. The numbers change from quarter to quarter because certain events and other public appearance opportunities are seasonal, such as school visits and fairs.

#### **Improvement Status:**

MoDOT's districts and Central Office reported a total of 468 public appearances during the third quarter of 2007, a decrease from last quarter but almost a 25 percent increase over the same quarter last year. MoDOT staff reached more than 176,608 people through these public appearances. MoDOT's presence at the 11-day Missouri State Fair had a significant impact on the number of people reached during this quarter. Outreach activities associated with The New I-64 project remained strong, and Motor Carrier Services showed a notable increase in outreach and training.



# Percent of customers who feel MoDOT provides timely, accurate and understandable information

Result Driver: Shane Peck, Community Relations Director

Measurement Driver: Sally Oxenhandler, Community Relations Coordinator

#### **Purpose of the Measure:**

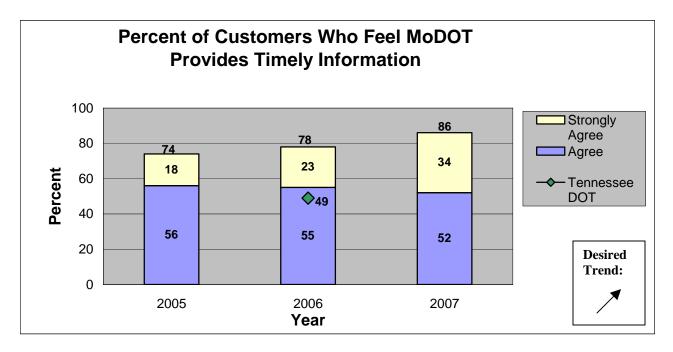
This measure tracks whether customers feel MoDOT provides timely, accurate and understandable information they need and use.

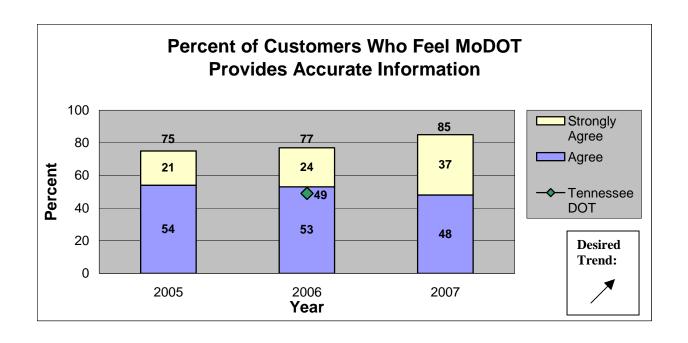
#### **Measurement and Data Collection:**

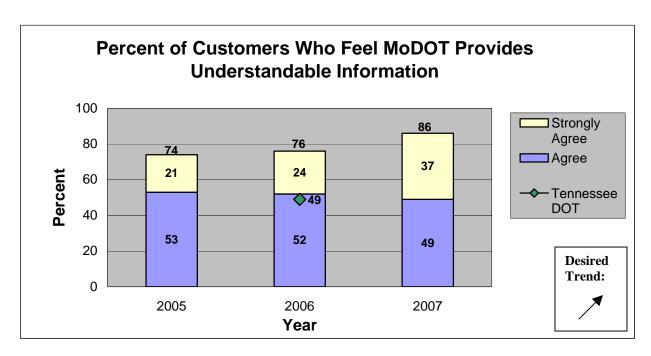
This is an annual measure. Data is collected from interviews with over 3,500 randomly selected adult Missourians each May As a comparison, the Tennessee Department of Transportation reported in September 2006 that 49 percent of residents surveyed said they were satisfied or very satisfied with the agency's efforts to keep them informed about transportation-related issues.

#### **Improvement Status:**

MoDOT saw a strong increase in the number of people who feel the agency provides timely, accurate and understandable information. The increase in the percentage of those who strongly agree was even greater: 12 percent. MoDOT's efforts to be a more transparent agency and the department's stepped up outreach activities have likely contributed to the positive increase in these numbers. Communicating information about major initiatives, including the early completion of SRI; the Better Roads, Brighter Future program; the Safe & Sound Bridge Improvement Plan and the New I-64 also likely had a positive impact.







### Number of contacts initiated by MoDOT to media

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Manager

#### **Purpose of the Measure:**

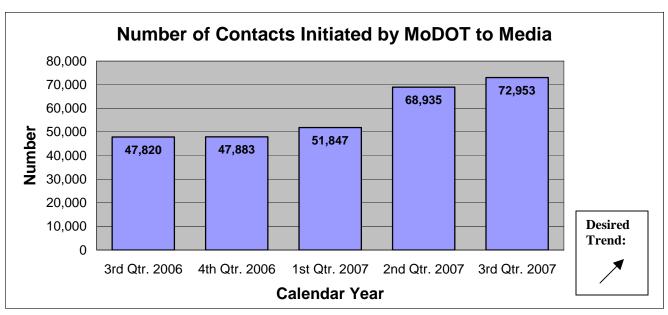
This measure tracks how well MoDOT staff is "reaching out" to reporters to tell them about the good work MoDOT does.

#### **Measurement and Data Collection:**

All contacts (news releases, e-mail, phone and correspondence) initiated by MoDOT staff are included. Central Office Community Relations collects quarterly results, including submissions from districts.

#### **Improvement Status:**

Contacts increased 6 percent over the previous quarter, and 53 percent over this time last year. A very busy construction season has generated numerous project updates. All the bridge inspection activity, as well as Safe & Sound information, has generated many media contacts as well. Continued emphasis on non-traditional media outreach such as MoDOT's electronic newsroom, web site promotion and the e-update system is furthering MoDOT's reach.



### Percent of MoDOT information that meets the media's expectations

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Manager

#### **Purpose of the Measure:**

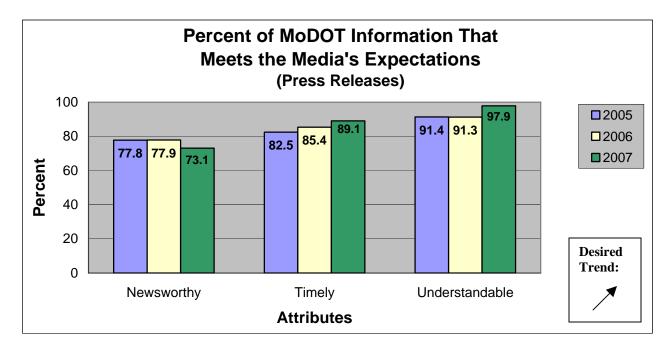
This measure tracks how MoDOT is meeting the media's needs by providing appropriate information.

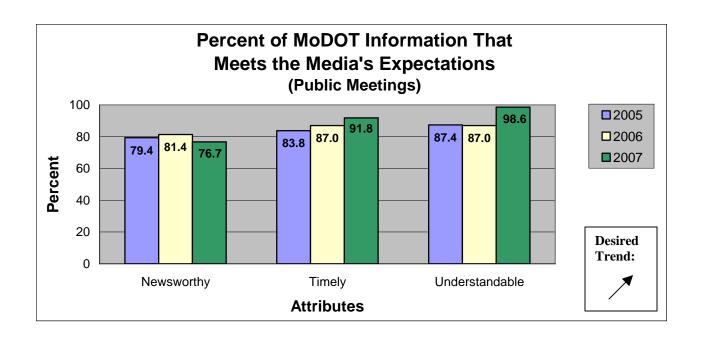
#### **Measurement and Data Collection:**

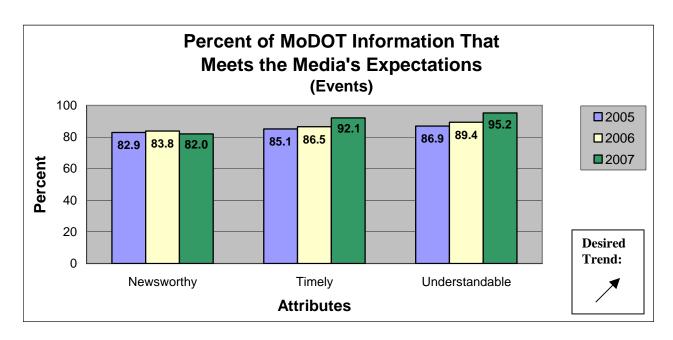
MoDOT sends out an annual survey asking statewide media if MoDOT's outreach efforts meet their expectations. They are asked to rate their level of satisfaction in the areas of press releases, public meetings and events. Each area is further rated in newsworthiness, timeliness, and how understandable it is.

#### **Improvement Status:**

The 2007 annual survey was completed in July, with 94 media outlets rating our performance. Generally, newsworthiness declined while timeliness and understanding grew. Newsworthiness remains relatively high while media contacts have grown more than 50 percent in the past year. MoDOT is monitoring releases to make sure increased frequency doesn't mean a decline in news value.







### Percent of positive newspaper editorials

**Result Driver:** Shane Peck, Community Relations Director **Measurement Driver:** Jeff Briggs, Community Relations Manager

#### **Purpose of the Measure:**

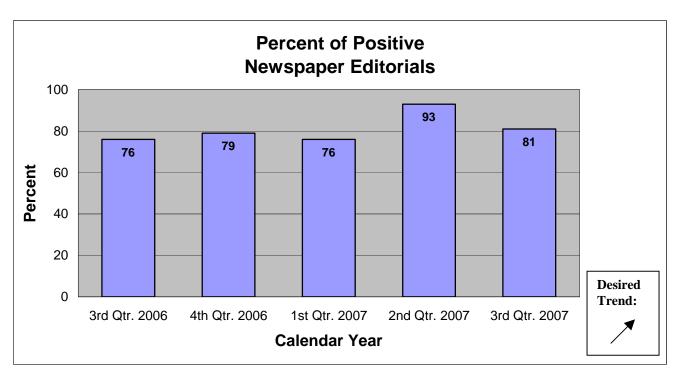
This measure tracks how MoDOT is perceived by the media, and by extension the public.

#### **Measurement and Data Collection:**

Using a newspaper clips database, MoDOT staff reviews statewide newspaper editorials and determines whether they're positive or negative toward MoDOT and/or the issues it advocates. Only editorials written by newspaper staff are included; guest editorials and letters to the editor are not. Results are charted quarterly.

#### **Improvement Status:**

Newspapers were eager to share their opinions on transportation this quarter, with 72 editorials – more than twice as many as usual. Most of the positive reviews concerned bridges – MoDOT's quick inspections following the Minneapolis bridge collapse, progress on the Safe & Sound program, and the need for additional funding for bridge improvements. Thirty of the 58 positive editorials pertained to these bridge issues, with only two negatives. Missouri leading the nation in reducing highway fatalities also garnered several positives, as did funding messages early in the quarter. Safety campaigns such as work zone safety, median guard cables and anti-drunk driving also generated positive editorials, although the use of talking urinal cakes in the drunk driving campaign generated two negatives. Progress on Route 36 received two positives, while the airport road issue in Springfield also received two negatives. Other editorials, both positive and negative, were isolated on various local issues.



### Number of repeat visitors to MoDOT's web site

Result Driver: Shane Peck, Community Relations Director

Measurement Driver: Matt Hiebert, Community Relations Coordinator

#### **Purpose of the Measure:**

This measure tracks the number of customers who have used MoDOT's Web site on a repeat basis. The data helps demonstrate whether the public views the site as a valuable information resource. If they are returning to the site for multiple visits, they probably view it as a worthwhile use of their time online.

#### **Measurement and Data Collection:**

Data is gathered using Web Trends software. Web Trends measures site activity and produces reports in graphic and tabular formats.

#### **Improvement Status:**

The number of repeat visitors to MoDOT's web site continues to increase. Excluding Gateway Guide visitors, the overall site has seen a 65 percent increase in return visitors from July 2006 to July 2007. By adding and marketing new content, such as the Travel Information Map, MoDOT is reaching a new, broader audience and retaining visitors who find elements of the site worthy of revisiting.

