



Susan Montee, JD, CPA
Missouri State Auditor

TRANSPORTATION

Road and Bridge Funding

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Susan Montee, JD, CPA
Missouri State Auditor

YELLOW SHEET

Improvements Needed in the Development of Long-Range Transportation Needs and Funding Estimates, and Project Planning and Prioritization

Our audit objectives included (1) evaluating the effectiveness of MoDOT's short-term planning procedures, (2) evaluating whether MoDOT's long-range estimates of future funding requirements were reliable, and (3) evaluating whether MoDOT's long-range planning, prioritization, and funding allocation formula adequately aligned with strategic priorities and/or best practices. Missouri has the 7th largest state-maintained road and bridge system in the nation, with approximately 33,000 miles of roads and over 10,000 bridges. However, with gas and diesel fuel taxes among the lowest in the nation, Missouri's total revenue per mile and revenue per national highway system mile ranks 44th and 33rd nationally, respectively. MoDOT issued a report in June 2008 entitled *A Conversation for Moving Missouri Forward (Conversation)*, which established long-range transportation priorities for the system, identified "bare minimum" long-range system needs, including a listing of 46 specific expansion projects, and estimated the long-range funding available and necessary to provide for these needs. The *Conversation* document has been used as a marketing tool to discuss the State's long-range transportation funding issues with the public.

Long-range transportation needs and funding estimates not fully developed

The *Conversation* estimated \$12.6 billion will be available for construction over the next 20 years, while the costs of transportation system needs will be approximately \$31.3 billion. Based on concerns with the development of the *Conversation*, MoDOT's estimate of an \$18.7 billion funding shortfall may not be reliable. The audit identified the following weaknesses:

- Specific projects listed as long-range "needs" were not selected using established planning and prioritization policies and procedures
- Inflation was not included in long-range cost estimates
- A formal long-range revenue projection was not completed
- Adequate documentation to support long-range cost estimates was not maintained
- The MHTC did not formally approve the *Conversation* before issuance to the public

Assuming cost inflation of 3 percent annually, costs projected in the *Conversation* increase from \$31.3 billion to \$41.9 billion, an increase of 33 percent. A previous 1997 audit also found MoDOT did not consider inflation in its long-range planning (15-year plan) and did not make accurate long-range revenue projections.

The use of Amendment 3 debt has allowed MoDOT to make significant progress towards road condition goals in the short term. However, the final Amendment 3 bond issuance occurred in fiscal year 2010 and additional bonding capacity will not be available until 2029, requiring ongoing taking care of the existing system (TCOS) activity to be funded with pre-Amendment 3 funding levels.



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Funding allocation formula emphasizes expansion and is inconsistent with stated priorities

Although TCOS has been established by MoDOT and the public as the top priority, the funding allocation formula continues to provide more funding toward system expansion than TCOS. The fiscal years 2009-2013 Statewide Transportation Improvement Plan provides 52 percent of highway construction funds to system expansion, with 48 percent going towards TCOS. By continually under-funding TCOS activities, and over-funding system expansion, MoDOT has created a situation where additional revenue is needed to cover essential ongoing TCOS activities.

In addition, improvements are needed in MoDOT's project categorization processes to help clarify the purpose of construction projects and improve transparency.

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Abbreviations

ARRA	American Recovery and Reinvestment Act
AASHTO	American Association of State Highway and Transportation Officials
FHWA	U.S. Department of Transportation - Federal Highway Administration
LRTP	Long-Range Transportation Plan
MHTC	Missouri Highways and Transportation Commission
MoDOT	Missouri Department of Transportation
SAO	State Auditor's Office
STIP	Statewide Transportation Improvement Program
TCOS	Taking Care of the System



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Honorable Jeremiah W. (Jay) Nixon, Governor
and
Members of the General Assembly
and
Missouri Highways and Transportation Commission
and
Pete K. Rahn, Director
Department of Transportation
Jefferson City, MO

The Missouri Department of Transportation (MoDOT), with oversight by the Missouri Highways and Transportation Commission, is responsible for administering the 7th largest state-maintained road and bridge system in the nation, with approximately 33,000 miles of roads and over 10,000 bridges. Our audit objectives included (1) evaluating the effectiveness of MoDOT's short-term planning procedures, (2) evaluating whether MoDOT's long-range estimates of future funding requirements were reliable, and (3) evaluating whether MoDOT's long-range planning, prioritization, and funding allocation formula adequately aligned with strategic priorities and/or best practices.

Our audit found that while MoDOT's short-term planning was generally effective, long-range estimates contained in the *A Conversation for Moving Missouri Forward* (see Appendix III) report were not fully developed and analyses of long-range funding needed and available may not be accurate. As a result, MoDOT's long-range estimate of an \$18.7 billion funding shortfall over the next 20 years may not be reliable. In addition, improvements are needed in long-range planning to ensure the funding allocation formula is consistent with stated goals.

We conducted our audit in accordance with the standards applicable to performance audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform our audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides such a basis. This report was prepared under the direction of John Luetkemeyer, CPA. Key contributors to this report included Robert Showers, CPA; Amanda Locke, M.Acct.; and Ashley LeCuru.

A handwritten signature in cursive script that reads "Susan Montee".

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State Auditor

Introduction

The Missouri Department of Transportation (MoDOT) is responsible for designing, building and maintaining the roads and bridges in the state; administering other transportation programs, such as aviation, rail, public transit, waterways and bicycle/pedestrian; managing motor carrier operations; and providing other services. MoDOT is ranked 4th lowest in the nation for administrative disbursements per mile and 13th in the nation for overall administrative performance and cost-effectiveness.¹ The Missouri Highways and Transportation Commission (MHTC) is responsible for oversight of the state's transportation programs. As of February 2008, MoDOT had approximately 6,500 active employees in 10 districts and its general headquarters.

Missouri's Roads and Bridges

MoDOT is responsible for maintaining the 7th largest state road system in the nation, comprised of approximately 33,000 miles (or 75,000 lane miles), of which 4,416 miles are part of the National Highway System.² Missouri ranks 9th nationally in National Highway System miles. As of 2008, MoDOT reported 83 percent of the major roads, which carry nearly 80 percent of the state's traffic, are in good condition and 64 percent of minor roads are in good condition.

MoDOT is also responsible for maintaining the 7th largest bridge system in the nation, comprised of 10,276 bridges. MoDOT reported 2,844 (28 percent) of those bridges were deficient as of 2007, and *Better Roads Magazine* ranks Missouri 7th for the number of deficient bridges nationally. The MHTC has approved the Safe and Sound Bridge program to repair or replace 802 of Missouri's worst condition bridges by 2014.

Traffic fatalities were reduced to less than 1,000 per year in both 2007 and 2008. For the period of 2005-2006, Missouri lowered fatality rates more than any state in the nation.

Road and Bridge Funding

MoDOT receives funding for designing, building and maintaining the roads and bridges from various state revenues, including motor fuel taxes, motor vehicle registration and driver licensing fees, and motor vehicle sales and use taxes. Other sources of funding include federal reimbursements, bond

¹ "17th Annual Report on the Performance of State Highway Systems (1984-2006)," *Reason Foundation*, July 2008. Reason Foundation is a tax-exempt research and education organization.

² According to the Federal Highway Administration (FHWA), national highway system miles includes the interstate highway system as well as other roads important to the nation's economy, defense, and mobility developed by the United States Department of Transportation.

proceeds, interest, and miscellaneous revenues. Table 1.1 represents the sources of funding for roads and bridges for fiscal years 2005 to 2009.

Table 1.1: Sources of Road and Bridge Funding, Years Ended June 30 (dollars in thousands)

Funding Source	2005	2006	2007	2008	2009
Federal Reimbursements	776,722	758,400	807,350	897,197	847,902
Bond Proceeds	0	370,175	829,994	540,871	144,469
Gas and Diesel Fuel Tax (net)	519,622	520,828	515,160	520,472	499,427
Motor Vehicle Registration and Driver Licensing Fees (net)	266,178	282,421	252,240	271,767 ¹	264,883 ²
Motor Vehicle Sales and Use Tax ³	174,355	169,837	257,388	257,407	233,680
Interest and Miscellaneous Receipts	90,415	96,687	151,839	145,302	186,689
Total Funding Sources	1,827,292	2,198,348	2,813,971	2,633,016	2,177,050

¹ MoDOT received approximately \$256 million from motor vehicle registration fees and \$16 million from driver licensing fees.

² MoDOT received approximately \$247.8 million from motor vehicle registration fees and \$17.1 million from driver licensing fees.

³ Motor Vehicle Sales and Use Tax includes Amendment 3 revenues. MoDOT received \$26.1 million, \$65.7 million, \$84.5 million, and \$91 million in fiscal years 2006, 2007, 2008, and 2009 respectively. Voter approval of Amendment 3 in November 2004 required MoDOT to issue bonds for use towards taking care of the system or system expansion projects while providing MoDOT additional funding for repayment of those bonds.

Source: MoDOT. A MoDOT official said the revenues are based on a cash basis.

MoDOT estimates \$525 million will be received for road and bridge projects from the American Recovery and Reinvestment Act (ARRA), the federal economic stimulus package that was approved by the U.S. Congress and signed by the President on February 17, 2009. MoDOT has developed a \$577 million listing of road and bridge projects, consisting of both taking care of the system (TCOS) and system expansion projects, that could be completed under ARRA constraints to ensure the state will receive and be able to utilize any federal stimulus funding. These projects were either accelerated from the current Statewide Transportation Improvement Program (STIP) or considered a new project. The day the economic stimulus package was signed into law, MoDOT was the first in the nation to award and begin construction on a transportation project funded by the ARRA.

Revenue Comparisons to Other States

Missouri's overall transportation revenue is low compared to other state transportation departments. Our analysis of 2006 FHWA statistics identified Missouri's revenue per mile and revenue per national highway system mile ranks 44th and 33rd nationally, respectively.

As a consequence of having low state transportation revenues, Missouri has historically utilized more federal transportation funding, as a percentage of total funding, than most states nationally. For the period of 2005 to 2006, 40

percent of Missouri's funding was from federal funds, whereas nationally, states relied on an average of 36 percent of federal funds.³

State user fees for transportation rank low

State gas and diesel fuel tax revenues are among the lowest in the nation. Missouri's gas and diesel fuel rates, both 17 cents per gallon, rank 43rd and 39th nationally, respectively, based on 2008 FHWA statistics. Rates have not been increased since 1996.⁴ An American Association of State Highway and Transportation Officials (AASHTO) report⁵ states that by allowing years to pass without changes to the user fees, purchasing power for the transportation program has been substantially reduced. Motor fuel taxes are dependent on the gallons of gas purchased by consumers. National increases in motor fuel prices in 2008 resulted in a decline in the demand for motor fuel, which led to a slight decrease in motor fuel tax revenues in the later months of fiscal year 2008 as compared to the same periods in prior years.

Motor vehicle registration and driver licensing fees have not changed since 1984, according to a MoDOT document, and commercial motor vehicle registration fees have not changed since 1991. Some examples of low motor vehicle registration fees include (a) Missouri's fee for a typical automobile ranks 37th nationally, (b) Missouri's fee for a typical farm and non-farm vehicle ranks 45th nationally, and (c) Missouri's fee for a typical three-axle truck/trailer ranks 27th nationally.⁶

Planning, Prioritization, and Funding Allocation Process

MoDOT has established a planning framework,⁷ endorsed by Regional Planning Commissions and Metropolitan Planning Organizations, to guide planning and decision-making. MoDOT's planning process, in accordance with federal guidance, includes a 20-year long-range transportation plan (LRTP). The LRTP sets the overall direction of the agency and includes some long-range goals; however, the document is not fiscally constrained by available funding, and therefore, is very broad in scope. The LRTP is updated periodically with the most recent update released in 2007. MoDOT's planning section issued a report in June 2008 entitled *A Conversation for Moving Missouri Forward (Conversation)*, which updated information from the LRTP and formulated it into a "plan of action." The

³ SAO analysis based on FHWA statistics, 2005 and 2006.

⁴ The motor fuel tax was increased temporarily by House Bill 1247 in 1992 from 11 cents to 17 cents over a 4-year period, with 1996 being the last increase. The increase to 17 cents was temporary and set to expire in 2008. In 2002, House Bill 1196 made the increase permanent.

⁵ "AASHTO Proposed Policy Recommendations for Surface Transportation Authorization" *American Association of State Highway and Transportation Officials*, October 2008.

⁶ SAO analysis based on 2006 FHWA statistics.

⁷ *Practitioner's Guide: Missouri's Framework for Transportation Planning and Decision Making*

Conversation established long-range transportation priorities for the system, identified "bare minimum" system needs, including a listing of 46 specific expansion projects,⁸ and estimated the long-range funding available and the funding still necessary to provide for these needs. The *Conversation* document has been used as a marketing tool to discuss the State's long-range transportation funding issues with the public.

The transportation funding allocation process is overseen by the MHTC, which has established a funding allocation formula. MoDOT uses the MHTC approved funding allocation to distribute transportation funding towards specific project categories, such as TCOS or system expansion, and to districts and statewide projects. Appendix I identifies the latest funding allocation approved by the MHTC in 2006. TCOS is considered to be any project that rehabilitates or reconstructs the existing roadway or reduces the number or severity of crashes on the existing roadway. System expansion is considered to be any project that adds capacity to the existing system, such as new roadways or new bridges. Expansion projects may be necessary for congestion relief or safety concerns. Basic maintenance projects, such as minor surface treatments (patching potholes, chip seals, etc.), replacing signs, restriping roads, mowing right of way, and snow removal are considered operational and not TCOS projects.

Projects deemed to be high-priority are selected for programming in the STIP, which is fiscally constrained by the projected available funding and by the MHTC's funding allocation. The STIP is MoDOT's rolling 5-year construction plan that details the projected revenues and expenditures, including the construction projects programmed or planned to be awarded for that timeframe. The STIP includes inflation and growth factors in its short-term project cost estimates. To ensure adequate resources will be available MoDOT intentionally leaves a portion of estimated funding uncommitted for years 3, 4, and 5. Specific projects programmed in the STIP are selected by MoDOT in conjunction with regional planning partners, including Regional Planning Commissions and Metropolitan Planning Organizations, of which boards are made up of local elected officials and other stakeholders. The MHTC and FHWA are responsible for approving the STIP.

Scope and Methodology

To accomplish audit objectives, we conducted interviews with personnel at MoDOT, the FHWA, the AASHTO, and Associated Industries of Missouri, and a local Chamber of Commerce representative. We attended the

⁸ While comparing the projects in the *Conversation* to projects in the LRTP was difficult, at least 31 of the 46 projects listed in the *Conversation* were included in the LRTP.

following public meetings: (1) the Missouri Transportation and Development Council Transportation Funding Summit in Mexico, Missouri, (2) a MHTC meeting, and (3) a Joint Committee on Transportation Oversight meeting. We also reviewed applicable information to gain an understanding of MoDOT's responsibilities, strategies, and/or performance. Our audit objectives were focused towards road and bridge construction administered by MoDOT.

To evaluate the reliability of MoDOT's estimates of future funding requirements, we obtained and reviewed MoDOT's 2007 LRTP, *Conversation* report, and the fiscal years 2009 to 2013 STIP as well as supporting documentation of revenue and/or expenditure projections, including historical and current trend data. Specifically, we reviewed the fiscal year 2009 to 2013 STIP to determine whether revenue estimates were reasonable, the funding allocation formula was complied with, projects were appropriately categorized, and actual project costs were consistent with cost estimates. Our review of the LRTP and *Conversation* was focused on ensuring revenue and expenditure estimates were reasonable, and determining the similarities and differences between the plans. We focused our attention on the *Conversation* because the information it contains was more current than the information presented in the LRTP and because it was presented to the public as a "plan of action" for the State's transportation needs.

To determine potential funding changes, we reviewed the Missouri Constitution, state laws, MoDOT data, and transportation literature. We also compared Missouri's statistics to other states using *Highway Statistics* produced by the FHWA and other available data.

To evaluate MoDOT's planning, prioritization, and funding allocation policies and procedures, we reviewed MHTC minutes, obtained respective policies and/or procedures, interviewed appropriate MoDOT personnel, and analyzed the distribution of funding for the fiscal years 2009 to 2013 STIP. To determine "best practices," we performed research, and reviewed prior SAO reports, federal guidance, AASHTO guidance and other available information.

A Thorough and Reliable Long-Range Funding Projection Study is Needed

While MoDOT's short-term planning appears effective, efforts to estimate the long-range financial needs of the state's transportation system and analyses of transportation needs have not been fully developed. In addition, estimates were not approved by the MHTC. As a result, MoDOT's estimate of an \$18.7 billion funding shortfall over the next 20 years may not be reliable. As discussed in Chapter 1 of this report, Missouri's state transportation funding structure does not provide as much funding as many other states. In addition, bond proceeds resulting from Amendment 3 will no longer be available for future road and bridge construction. MoDOT needs to prepare a thorough and reliable long-range funding projection to accurately determine the amount of future funding shortfalls. Future long-range financial projections should be reviewed and formally approved by the MHTC.

Short-term Planning Procedures Effective

MoDOT's short-term planning process, the STIP, effectively plans for when projects will be completed, estimates the cost of projects to be completed in the short term, and estimates revenues available for construction. Although the scope of our review did not include determining if specific project cost estimates were reasonable, we did determine the STIP process includes cost inflation factors in its cost estimates and, according to MoDOT documents, actual project costs have been .4 percent less than programmed project costs over the past 7 years. However, our review did identify weaknesses in the long-range planning processes which determine the projects to be included on the STIP which will ultimately be built.

Long-Range Transportation Needs and Funding Estimates Not Fully Developed

In 2008, MoDOT's Planning Division issued the *Conversation for Moving Missouri Forward* report (*Conversation*) as a tool to discuss long-range transportation needs, priorities, and funding. The *Conversation* estimated \$12.6 billion will be available for construction over the next 20 years, while the costs of transportation system needs will be approximately \$31.3 billion, or \$1.56 billion per year. The \$1.56 billion annual needs estimate is comprised of \$645 million for the number one priority of TCOS, \$626 million for system expansion projects, \$190 million for economic development projects, and \$102 million for other modes of transportation.

Based on our review of the *Conversation* and supporting information, the long-range financial projections it contains were not fully developed. We identified the following weaknesses:

- Specific projects listed as long-range "needs" were not selected using established planning and prioritization policies and procedures.
- Inflation was not included in the long-range cost estimates.
- A formal long-range revenue projection was not completed.

-
- Adequate documentation to support long-range cost estimates was not maintained.
 - The MHTC did not formally approve the *Conversation* before issuance to the public.

Projects listed as long-range "needs" were not selected using established policies and procedures

The *Conversation* identifies \$5.32 billion over 20 years (\$266 million annually) in specific major expansion projects as the state's "most critical major project needs." However, the projects identified were not selected based on MoDOT's planning and prioritization policies or established procedures. MoDOT officials said MoDOT asked local planning partners and other key officials to identify their highest priority projects in each district. MoDOT prioritized the responses based on the input received from the local planning partners and gave additional priority to those projects which involved completion of a corridor.

MoDOT's planning and prioritization procedures require TCOS or expansion projects to be prioritized based on certain weighted factors, such as road or bridge condition, safety, economic competitiveness, and congestion relief. Listing projects as "needs" in the *Conversation* without using a standardized prioritization process and without subjecting the list to a formal cost-benefit analysis could result in the "needs" portion of the document being inflated. Weaknesses in MoDOT's planning and prioritization process were discussed in detail in our 2005 report titled *Planning and Project Prioritization*⁹.

Inflation was not included in long-range cost estimates

MoDOT did not include an inflation factor in the construction cost estimates in the *Conversation*. MoDOT officials said inflation was not used in long-range projections because the estimated cost, excluding inflation, was already significant and including inflation could have resulted in the focus being on the inflation rate chosen rather than the actual cost estimate. As a result, construction costs estimated in the *Conversation* could be significantly understated. MoDOT's LRTP also did not include an inflation factor in the construction cost estimates. A previous SAO report issued in 1997, titled *Special Review of Department of Transportation 15-Year Road and Bridge Program*,¹⁰ noted MoDOT did not account for cost inflation increases, which subsequently contributed to the failure of the 1992 "15-year plan" that attempted to plan 15 years worth of transportation projects.

The U.S. Department of Labor Bureau of Labor Statistics shows there has been an approximate 3 percent increase annually in the Consumer Price

⁹ SAO Report No. 2005-27

¹⁰ SAO Report No. 97-83

Index during the period of 2004 to 2007.¹¹ No cost index exists for construction costs, but based on discussion with MoDOT officials construction costs have likely increased at a rate higher than the Consumer Price Index in recent years. Assuming cost inflation at the Consumer Price Index level of 3 percent per year, costs projected in the *Conversation* increase from \$31.3 billion to \$41.9 billion, an increase of 33 percent.

Specifically, when inflation is included in the long-range TCOS cost estimate, the total cost to achieve TCOS goals increases by \$4.1 billion, or 32 percent. When inflation is included in long-range cost estimates, the conditions of the existing road system decline significantly at currently planned TCOS spending levels. Table 2.1 shows the projected impact of a 3 percent inflation rate on road and bridge conditions by 2026 if planned spending levels are maintained.

Table 2.1: Impact of Inflation on Road and Bridge Conditions

Inflation Rate	Percent of Major Roads in Good Condition	Percent of Minor Roads in Good Condition	Percent of Major Bridges in Good Condition	Percent of Minor Bridges in Good Condition
None	92	78	90	90
3 Percent	59	50	86	77

Source: MoDOT

A formal long-range revenue projection was not completed

MoDOT did not complete a formal long-range revenue projection to ensure the \$632 million per year (\$12.6 billion over 20 years) estimate of "what we have" available for construction in the *Conversation* was accurate. A similar concern was noted regarding revenue estimates in the LRTP which estimated revenues at \$950 million annually (\$19 billion over 20 years), or a difference of \$318 million annually (\$6.4 billion over 20 years) from the *Conversation*. MoDOT officials said MoDOT's Planning division intentionally calculated the amount informally without consulting the Resource Management section, which tracks and projects the Department's revenues and expenditures, to keep the document easily explainable to the public. A MoDOT Planning official said the "what we have" estimate was not a formal revenue projection, and because the *Conversation* is not fiscally constrained, no formal revenue projection was required. This official said the funding allocation formula was used to give an order of magnitude of available funding in each component. Our previous 1997

¹¹ U.S. Department of Labor Bureau of Labor Statistics, December 2008.

report also identified erroneous revenue estimates as contributing to MoDOT's failure in meeting the 1992 "15-year plan."

Adequate documentation to support long-range cost estimates was not maintained

Adequate documentation to support the long-range cost estimates in the *Conversation* was not maintained. For example, a MoDOT official said documentation to support the long-range TCOS needs of \$645 million annually, including the assumptions used and output data generated, was not maintained. As a result, we were unable to make a determination of whether assumptions used to generate the estimate were reasonable, or whether the estimate was accurately calculated. Upon request, the Planning section was able to recreate an approximation of the analysis utilized. Sound planning practices dictate the department establish policies and procedures requiring documentation of the assumptions and outputs used in the development of department documents be maintained.

MHTC did not approve *Conversation* before issuance

MoDOT issued the *Conversation* to the public before the document was presented to the MHTC in September 2008. The MHTC did not vote to approve the document. MoDOT officials stated the *Conversation* is a general document to obtain comments from the public, does not replace the LRTP, and was not intended to be formally approved by the MHTC. Upon reviewing a draft of this report, MoDOT officials stated the *Conversation* was presented to the MHTC and, although the document was not formally approved, commission members have unofficially approved it and some members have taken part in its presentation to the public. However, due to the importance of the subject matter of the document and since the *Conversation's* assertions and the priorities listed are essentially a revised version of the LRTP, the MHTC should have been involved and approved the *Conversation* before it was presented to the public.

Bond Proceeds Will No Longer Be Available for Construction

MoDOT has utilized or will utilize bond proceeds to finance certain construction projects, including all Amendment 3 projects, the Interstate 64 project in St. Louis, the Mississippi River Bridge project in St. Louis and the statewide Safe and Sound Bridge projects. The use of bond proceeds allows completion of certain construction projects earlier than they otherwise would be constructed, while also avoiding construction cost inflation. However, Missouri's Constitution requires MoDOT to repay the principal and interest of these bonds using available funding prior to any other expenditures. The annual debt service payment will average approximately \$250 million annually from 2009 to 2028. In addition, with the last issuance of the Amendment 3 debt in fiscal year 2010, MoDOT utilized all available Amendment 3 borrowing, and has structured its Amendment 3 debt such that additional bonding capacity will not be available until 2029.

While the use of debt financing has allowed MoDOT to make significant progress towards road condition goals in the short term, it requires ongoing road maintenance be paid for with pre-Amendment 3 funding levels. See Appendix II for the expected debt amortization schedule for all bonded debt over the next 20 years and page 21 for additional discussion of Amendment 3 funds.

Options are Available to Increase Road and Bridge Construction Revenue

MoDOT has used the *Conversation* to discuss the state's specific long-range transportation needs and the potential need for additional transportation funding with various entities throughout the state. Based on our research, various options exist to increase transportation revenues. These options include, but are not limited to, the following:

- Increasing motor fuel taxes
- Imposing a motor fuel sales tax
- Increasing the motor vehicle sales and use tax
- Imposing a general sales tax
- Increasing the motor vehicle registration and driver license fees
- Distributing growth in general revenue to road and bridge projects
- Allowing toll roads and/or public-private partnerships
- Local level funding

A MoDOT survey issued in 2008 stated that when asked which of the following four funding options would be acceptable, respondents gave the following responses: (a) toll roads (34 percent), (b) general sales tax (22 percent), (c) registration and license fees (21 percent) and (d) fuel tax (8 percent).¹² The 2007 LRTP identified a general state sales tax as the only majority supported option.

Conclusions

MoDOT's short-term planning procedures for projecting revenues and completing projects appear effective. While effective short-term planning is certainly an important aspect of MoDOT's function, effective long-range planning is critical to ensuring available transportation resources are used in the most strategic and effective manner possible over the long term. MoDOT presented the *Conversation* report to the public to discuss long-range transportation needs and priorities and to inform the public that additional transportation funding may be necessary. However, information presented in the document was not fully developed. Long-range system expansion "needs" were not supported by established prioritization procedures, inflation was not included in long-range cost estimates, a formal long-range revenue projection was not completed, and documentation of

¹² Sixteen percent did not think any of these options were acceptable.

assumptions used and calculations made was not maintained. In addition, the document was not formally approved by the MHTC prior to presenting the information to the public.

The use of various debt instruments has allowed MoDOT to make significant progress in road conditions in the short-term; however, the state must now begin repayment of the debt and must fund ongoing road maintenance with pre-Amendment 3 funding levels.

Based on these concerns with the development of the *Conversation*, MoDOT's estimate of an \$18.7 billion future funding shortfall may not be reliable. In addition, given the magnitude of MoDOT's estimate, the failure to include an inflation factor in cost estimates, and the reduction of available funding due to increasing debt payments, it is likely current funding sources will not be sufficient to achieve minimum TCOS goals and or maintain current road conditions. Adequate funding is necessary to ensure a safe, reliable, effective, and efficient transportation system. However, reliable estimates of long-range system needs are necessary to determine appropriate funding levels. In the event new revenue is approved by the legislature or the taxpayers, MoDOT must ensure its effective and efficient use.

Recommendations

We recommend the Missouri Department of Transportation:

- 2.1 Prepare a thorough and reliable long-range financial projection prior to discussing options to increase transportation funding with the public, planning partners, and the legislature. Future long-range projections should include reliable estimates for revenue and expenditure projections that include inflationary estimates and utilize established processes to determine projects needed within the transportation system.
- 2.2 Ensure any future long-range financial projections presented to the public are reviewed and formally approved by the MHTC.

Agency Comments

2.1 *MoDOT concurs. Preparation of a formal financial forecast is appropriate prior to discussing funding options with the public. For instance, leading up to the Amendment 3 initiative petition that appeared on the November 2004 ballot, MoDOT developed a thorough and reliable financial planning projection to help answer questions from the public, our planning partners and the legislature regarding Amendment 3. The fact that no formal financial forecast was prepared for A Conversation for Moving Missouri Forward illustrates that A Conversation for Moving Missouri Forward is not about funding options. Funding options are never mentioned in the document. It is not an update to the Long-Range Transportation Plan (LRTP). MoDOT's*

2007 Long-Range Transportation Plan remains Missouri's official long-range transportation plan as required by Title 23 CFR 450.214, and includes Missouri's documented transportation needs, along with project estimates and a formal 20-year funding projection.

A Conversation for Moving Missouri Forward is a tool to educate and engage Missourians in a discussion of transportation needs and priorities. It is written in layman's terms and minimizes transportation jargon. It is like dozens of other documents produced by MoDOT each year that are designed to engage Missourians in a thoughtful, fact-based consideration of transportation issues.

Everything from What to know about Speed Limits, to Clean Up Missouri! Join the NO More Trash! Bash, to Meet MoDOT, to Top 10 Work Zones to Watch Out for in 2009 are designed to get Missourians interested in and thinking about the transportation system they interact with every day. We want them to communicate with us about their transportation experience, and safely interact with the transportation system. You refer to A Conversation as a marketing tool, and to some extent, it is that as well. It is completely different from many documents we produce, the content of which is prescribed by law or regulation. And since it is not a discussion of "options to increase transportation funding", it does not include and is not based upon a "thorough and reliable long-range financial projection".

When presentations have been given throughout the state on A Conversation for Moving Missouri Forward, the discussions have not included the subject of funding. In fact, when audience members have asked about funding options, presenters have told them that they were not there to discuss funding options – only to discuss Missouri's transportation needs and priorities. The funding information provided in A Conversation for Moving Missouri Forward compared fiscal year 2008 funds available with cost estimates to illustrate the funding gap and was provided for informational purposes only.

Also, since A Conversation is not a list of project commitments, it does not "include inflationary estimates and utilize established processes to determine projects needed within the transportation system". All of that comes much later; after we've heard from Missourians about exactly what it is they want in a transportation system and what transportation legacy they want to leave to their children and grandchildren.

The first page of A Conversation succinctly states:

The following pages outline the Missouri Department of Transportation's vision for improving the state's transportation system and making it safer. The initiative identifies future transportation priorities needed to make Missouri roads safer, create jobs and improve our quality of life. It is by no means a finished product, but is the first step in identifying the state's most critical transportation needs and how they could possibly be addressed. If, when and how we move ahead with these projects will be based on local direction and public input. There is no doubt this conversation will evolve over time, but it's a start – a conversation for moving Missouri forward.

Rather than using the document for its intended purpose, the audit criticizes it for failing to include things that were consciously left out. The 2007 LRTP is the document the audit staff should have used if their objective was "evaluating whether MoDOT's long-range estimates of future funding requirements were reliable".

Several concepts need to be understood when discussing Missouri's transportation future. First is the sheer magnitude of the dollars involved on both a revenue and expenditure side. MoDOT does 1-year, 5-year and 20-year projections. But anything beyond the first two or three years becomes little more than educated guesswork. That is why our 5-year Statewide Transportation Improvement Program (STIP) leaves significant amounts of projected revenues uncommitted in years 3, 4 and 5; to ensure projects are not cancelled if revenue projections are too high or costs rise faster than our planned inflation rate.

When discussing infrastructure needs and a funding shortfall of the magnitude that exists in Missouri, and indeed across the nation, trying to be absolutely right would simply prevent you from ever beginning the dialog. For the purposes of A Conversation, this process of testing what Missourians want in a transportation system, the level of precision, stated in current dollars, is sufficient to get people thinking about what they want and what they are willing to pay for. This is not a specific list of projects that have been promised and now need to be paid for. As the discussion evolves and specifics are identified, both the costs and the necessary revenues will be distilled to a fiscally constrained list of project commitments.

The audit report criticizes the method MoDOT used to identify highway needs. As stated in A Conversation:

When we asked the public to give us a list of the state's most pressing highway needs, we got a list of about 100 projects totaling \$15 billion. We have pared that list down to 46 priority projects. The estimated cost: \$266 million a year for a total of \$5.32 billion over 20 years.

We used our planning and prioritization policies and established procedures to come up with the list of 100. That list was prepared during the 2007 Investment Priorities Process. Continuing to use our established processes and procedures, we identified gaps, considered statewide equity, and applied agency expertise to whittle the list down to 46 projects. We then listed those projects in A Conversation to begin the next iteration. Throughout A Conversation we stress that this is not a finished product but a place to begin. We have used public meetings, a tear out sheet in the document, and supplied a web address and an e-mail address to collect comments so we can determine if we got this list and the other 4 elements/priorities (take care of our roads and bridges, do a better job of providing other ways to get around, rebuild Interstates 70 and 44, and meet regional needs) right.

The auditor refers to a 1997 audit report on the failed 15-year plan, pointing out that the 15-year plan project costs did not consider inflation, and therefore asserting that the needs discussed in A Conversation should. MoDOT has long since recognized the mistakes we made in the 15-year plan. In that instance, we did have a list of projects identified and a defined revenue stream, and it was obvious nearly from the beginning that revenues would be insufficient to pay for the projects. Since then, both the MHTC and MoDOT have adopted the concept that any project included in the STIP is a commitment.

*Great results don't happen by accident. At MoDOT, they are delivered through careful planning and program management practices. MoDOT is a nationwide leader in making transportation system improvements. Today, 83.4 percent of Missouri's major highway system is in good condition, and we are on track for ensuring 85 percent is in good condition by 2011. This is up from 47 percent in 2004. In addition, traffic fatalities in Missouri were lowered 21 percent during the last two years – the second largest decrease in the nation. Last year, MoDOT delivered a \$1.2 billion program 2.3 percent **below** the program estimate. During the last seven years, MoDOT has delivered \$6.9 billion of transportation improvements for 0.4 percent **below** the program estimate.*

We are more than cognizant of the trust we lost due to the failed 15-year plan and are absolutely committed to preventing that from happening again. Our record for the last 7 years demonstrates that commitment. A Conversation is not a list of promised projects. We disclose in A Conversation that we are woefully short of the funds needed to provide these improvements. And we state in the document itself that the price tag is based on 2008 costs "and doesn't factor in inflation".

The audit attributes A Conversation to MoDOT's Transportation Planning division. It is inappropriate to attribute A Conversation or the information in it solely to Transportation Planning. The document was prepared largely from information retained in that division, but it is a MoDOT document that was reviewed in several divisions and approved by MoDOT's executive management. We chose to use current revenues available for the priorities included in the document, and hold that constant over the 20-year window, just as we depicted costs in 2008 dollars. Without a new source of revenue identified, this was a reasonable approach to paint a picture of the magnitude of the difference between needs and available funding. While MoDOT and the auditor disagree over the exact revenues available and costs of potential projects, the auditor's conclusion supports what MoDOT stated in A Conversation; current funding is insufficient to ensure the safe, reliable, effective and efficient transportation system Missourians deserve.

2.2 MoDOT agrees that official financial planning projections, like those included in the STIP, should be reviewed and formally approved by the MHTC; however, MoDOT does not agree (nor does the Commission) that informational brochures and discussion pieces, like A Conversation for Moving Missouri Forward, require MHTC approval. A Conversation for Moving Missouri Forward was presented to the MHTC, and MHTC members support it and have taken part in its presentation to the public.

SAO Comment

We disagree with the contention that the *Conversation* is just like dozens of other documents produced by MoDOT each year. Unlike other documents, MoDOT officials presented the *Conversation* at public meetings throughout the state. In addition the *Conversation*, not the LRTP or the STIP, was presented to the public as MoDOT's ". . . plan for what could be done if more money were made available for transportation." The presentation of the *Conversation* generated significant statewide press coverage and resulted in numerous newspaper articles with headlines including *MoDOT:*

Funding for projects billions short, An ominous 'funding cliff' looms for Missouri transportation, and Money gap remains in Mo's revised transportation needs. In any event, we believe MoDOT documents and public presentations containing estimates of transportation funding needs, available resources, and resulting funding shortfalls over the next 20 years need to be as fully developed and reliable as possible.

Improvements are Needed in MoDOT's Funding Allocation Formula

The MHTC funding allocation formula is not consistent with stated goals and priorities, and as a result, TCOS activities have been insufficiently funded. In addition, improvements in project categorization would improve accountability.

Funding Allocation Formula is Inconsistent with Stated Priorities

The funding allocation formula, approved by the MHTC, is not consistent with established short- and long-term goals. In 2007, MoDOT and the MHTC established a short-term goal of having 85 percent of the major roads in good condition by 2011. In addition, long-term goals established by MoDOT in 2008 are to maintain major roads at 85 percent, bring minor roads to 75 percent, and bring bridges to 90 percent good condition. Further, MoDOT's 2001 and 2007 LRTP identifies the public's highest priority as TCOS.

Although TCOS has been established by MoDOT and the public as the top priority, the MHTC's funding allocation formula does not ensure road and bridge condition goals are properly prioritized. MoDOT planning documents estimate it would cost \$645 million¹³ annually over the long-term to achieve stated TCOS goals, yet the MHTC allocation formula only dedicates \$460 million specifically for TCOS projects. While other funding may be allocated, such as \$131 million in flexible funds to districts or \$30 million for economic development cost-share, these funds are not specifically mandated for TCOS projects. Any remaining funds available for construction have historically been dedicated to system expansion projects.

Our 2005 report titled *Planning and Project Prioritization*¹⁴ showed the amount allocated toward TCOS projects by the MHTC funding allocation formula was insufficient to meet road condition goals. We recommended the Commission align investment decisions with road condition goals.

MoDOT officials said the MHTC has consistently increased funding towards TCOS per the funding allocation formula as additional funds became available. In addition, focusing solely on TCOS would be at the detriment of congestion relief, air quality and other concerns, according to a MoDOT official.

System expansion spending exceeds spending for TCOS

MoDOT management programmed more system expansion projects in the fiscal years 2009 to 2013 STIP than TCOS projects. Of the \$3.182 billion¹⁵

¹³ As identified on page 10, the \$645 million estimate does not include inflation.

¹⁴ SAO Report No. 2005-27

¹⁵ An additional \$773 million is programmed for engineering; however, these costs are not specifically attributable to either a TCOS or a system expansion project.

programmed as of July 2008, 52 percent was programmed towards system expansion projects and only 48 percent was programmed towards TCOS projects. Our *Planning and Project Prioritization* report also identified this trend in prior STIP documents as well.

Initially Amendment 3 funds were used for the Smooth Roads Initiative to improve road conditions on the state's most traveled roadways; however, 78 percent of Amendment 3 funding in fiscal years 2005 to 2013 has been programmed for system expansion. In November 2004, MoDOT presented, and the MHTC approved, a plan to expend Amendment 3 funds. The plan called for \$400 million to be used for TCOS purposes, \$1.3 to \$1.4 billion to be used for system expansion projects and \$300 million to be used for either TCOS or system expansion projects. Approximately \$729 million (or 44 percent) of the amount programmed to system expansion projects in the current STIP is from Amendment 3 funding.

Project categorization processes need improvement

MoDOT categorizes some projects to funding categories in the STIP that do not specifically identify whether the project is related to TCOS or system expansion activities. For example, MoDOT uses a funding category entitled Amendment 3 which does not specifically identify whether the funds were dedicated towards TCOS or system expansion. As a result, the STIP does not specifically summarize how much funding was allocated towards TCOS and system expansion. Specifically attributing projects to TCOS or system expansion funding categories will assist in better transparency and accountability of funds, and aid in determining whether funding was utilized as planned.

Our review of the STIP also noted projects which may fit into multiple categories. Currently MoDOT's procedure is to categorize a project towards the element that achieves the primary goal of the project. Our review identified projects in the fiscal years 2009 to 2013 STIP that were fully programmed towards (1) TCOS when elements of the project included system expansion, (2) system expansion when elements of the project included TCOS, or (3) TCOS or system expansion when elements of the project included maintenance/operations. As a result, MoDOT could not provide total expenditure information regarding TCOS and system expansion activities to determine whether funding was utilized in accordance with MHTC approved plans.

Conclusions

MoDOT planning documents have established TCOS as the top priority, yet the funding allocation formula has not ensured adequate funding for this purpose. The current STIP, as well as past plans, have programmed more system expansion projects than TCOS projects and the majority of Amendment 3 debt will be spent for system expansion purposes. While

system expansion is often necessary, such as in cases of significant congestion or safety concerns, by continually under-funding TCOS activities, and over-funding system expansion, MoDOT has created a situation where additional revenue is needed to cover essential ongoing TCOS activities.

In the event additional funding does not materialize, the maximization of existing funding will be imperative. The previously identified weaknesses in the existing planning processes and funding allocation formula need to be addressed to ensure future funding is utilized in the most effective manner possible. Improvements in project cost categorization would also help improve accountability of the funds spent.

Recommendations

We recommend the Missouri Highways and Transportation Commission:

- 3.1 Ensure the funding allocation formula is consistent with established priorities to adequately take care of the existing system.
- 3.2 Clearly identify funds programmed in the STIP as either TCOS or system expansion to help ensure the accountability and transparency of construction dollars.

Agency Comments

- 3.1 *MoDOT disagrees with the audit conclusions. When the auditors say, "By continually under-funding TCOS activities, and over-funding system expansion, MoDOT has created a situation where additional revenue is needed to cover essential ongoing TCOS activities" they ignore the fact that we haven't enough funding to do either.*

A Conversation demonstrates that the need for additional infrastructure is enormous. We have made investments in system expansion because it is necessary. We have also consistently increased funding for taking care of the system, as additional funds have been made available. In 1997, \$157 million was allocated annually toward taking care of the system. Today, it is funded with \$460 million annually. This emphasis, in combination with Amendment 3's Smooth Roads Initiative and our current Better Roads, Brighter Future program, has resulted in significant improvements to Missouri's major highway system. In addition, 44 percent of MoDOT's American Recovery and Reinvestment Act funds are going to taking care of the system projects, much of it on the minor road system. Finally, MoDOT is addressing Missouri's bridges through Safe & Sound. That program is rehabilitating or replacing 802 of Missouri's worst bridges within five years. It isn't the case that TCOS is under-funded and system expansion over-funded. The truth is that everything is under-funded. That is what prompted A

Conversation. Furthermore, the time is approaching when a stagnant revenue stream and rising costs mean there won't be sufficient funding to take care of the existing system. MoDOT and the MHTC have been explaining this for years. Amendment 3 and the ARRA each forestalled the inevitable, but without additional revenue, within the next 5 years, Missourians will face a deteriorating transportation system with no system expansion.

The audit recommends allocating all funds to taking care of the system before funding any other needs. That would mean no funding for congestion mitigation, safety enhancements or regional economic development needs. All funds would be distributed to regions based on taking care of the system factors alone (percent of total vehicle miles traveled, percent of square feet of bridge deck and percent of total lane miles) rather than also distributing a portion of funds based on the factors used for major projects and emerging needs (percent of total population, percent of total employment and percent of total vehicle miles traveled). This philosophy would mean a dramatic shift in funding away from population centers. The St. Louis region, for example, would receive one-third fewer funds for transportation than the current allocation. The Kansas City region would receive 12 percent fewer funds than the current allocation.

While Missourians have indicated that taking care of the system is a priority, they did not indicate all taking care of the system needs should be addressed before any safety, congestion, economic development or connectivity needs are addressed. There must be balance in addressing all of these needs. The MHTC's approved funding allocation formula does just that – provides system improvements in each of these areas.

SAO Comment

MoDOT's response mischaracterizes our recommendation. We did not recommend ". . . allocating all funds to taking care of the system before funding any other needs." Our recommendation is simply to align what MoDOT has defined as its priorities to how it spends resources.

3.2 Section 4 of MoDOT's STIP clearly identifies the funding category of each individual project. The STIP transparently conveys this information and ensures the MHTC approved funding allocation is followed.

Additionally, the funding categorization in the report is inaccurate when it says 52 percent was programmed towards system expansion and 48 percent to TCOS. Fifty-two percent had a primary funding category of

either Amendment 3 or Major Projects/Emerging Needs, but those categories can be used for any type of work, including taking care of the system. For example, the New I-64 project was categorized as a Major Project/Emerging Need but is primarily about taking care of the existing system. It is a \$535 million dollar project that is completely rebuilding approximately 10 miles of the oldest interstate in St. Louis, while also rebuilding 12 interchanges and replacing nearly 30 bridges. The statement that 44 percent of Amendment 3 funds were programmed for system expansion is incorrect for the same reason.

SAO Comment

Section 4 of the STIP contains over 200 pages of project detail, but does not contain summary information to clearly identify the amounts of funding being categorized as TCOS or system expansion. As a result, to present TCOS and system expansion numbers in the report, auditors had to work in conjunction with MoDOT's planning division to determine the categories of the projects in the STIP.

We agree that the I-64 project is primarily a TCOS project; however, since this project was included in a prior year STIP, it was not included in the percentage calculations we reported. It is also a good example of MoDOT's unclear categorization process.

Transportation Funding Allocation Formula

This appendix shows the funding allocation formula approved by the MHTC as of 2006. This formula is utilized to allocate MoDOT's construction funds.

Of the total funds available, the funds are initially allocated as follows:

- Step 1: Deduct federal funds designated for specific projects or purposes. The amount deducted varies by fiscal year. For fiscal year 2009, MoDOT estimated the total sub-allocated funds was \$144.8 million.
- Step 2: Deduct funding for other modes of transportation, including transit, aviation, waterways, and railways. For fiscal years 2009 to 2013, MoDOT designated \$22.8 million annually towards these projects.
- Step 3: Deduct the financing cost for projects accelerated through bond financing, including Amendment 3. Refer to Appendix II for the total debt service estimated.
- Step 4: Deduct federal discretionary earmarks for distribution to the related earmarked projects.
- Step 5: Deduct \$30 million annually for economic development and cost-share projects.

Of the remaining funds available for road and bridge improvements, the funds are allocated as follows:

- Step 1: Deduct Amendment 3 funds for use on Element 3 (system expansion). MoDOT dedicated \$460.7 million towards Element 3 in fiscal years 2009 to 2013.
- Step 2: Allocate \$460 million towards TCOS projects, which includes \$125 million for interstates/major bridges, \$25 million for safety projects, and \$310 million for TCOS of the remaining system. MoDOT Central office is responsible for determining the projects selected statewide for interstates/major bridges. The remaining TCOS and safety funds are distributed to the districts.
- Step 3: Allocate \$131 million to flexible funds for either TCOS or Major Projects and Emerging Needs (system expansion). Flexible funds are distributed to the districts based on certain weights, including percentage of population, percentage of total employment, and percentage of vehicle miles traveled on the national highway system.
- Step 4: Allocate remaining funds to Major Projects and Emerging Needs (system expansion). The remaining funding is distributed to (a) three Transportation Management Areas based on certain weights, including percentage of population, percentage of total employment, and percentage of vehicle miles traveled on the national highway system and (b) the rural areas with half of the remaining rural funds distributed by MoDOT Central office for statewide rural system expansion projects and the other half distributed to districts based on the same weights as the Transportation Management Areas distribution.

Estimated Bond Repayment Schedule

MoDOT uses bond proceeds to finance construction projects. The bond proceeds MoDOT has received or is planning to receive related to outstanding or planned debt, are as follows:

- Senior Bonds: MoDOT issued bonds with a par amount of \$907 million from fiscal years 2001 to 2004 for state highway construction projects.
- Amendment 3: MoDOT issued bonds with a par amount of \$1.977 billion from fiscal years 2006 to 2010.
- Interstate 64 project: MoDOT issued bonds with a par amount of \$142.7 million during fiscal year 2009 for the interstate 64 design-build project in St. Louis.
- Mississippi River Bridge project: MoDOT is expected to receive \$80.75 million in bond proceeds towards the Mississippi River Bridge project in fiscal year 2010. A MoDOT official said the proceeds will fund Missouri's interchanges surrounding the new bridge being built over the Mississippi river between Missouri and Illinois.
- Safe and Sound Bridge project: MoDOT issued bonds with a par amount of \$600 million during fiscal year 2010 towards the Safe and Sound Bridge program. MoDOT is expected to receive an additional \$77.8 million from the final bond issuance in fiscal year 2010.

Total proceeds from the above bond issues are approximately \$3.8 billion. Over \$2 billion in interest will be paid over the life of these bonds.

Appendix II
Estimated Bond Repayment Schedule

The table below represents the estimated repayment schedule for bond debt for the next 20 years, based on data available as of November 2009.

Table II.1: Estimated Repayment Schedule of Bond Debt

Year	Senior Bonds	Amendment 3¹	Interstate 64	Mississippi River Bridge²	Safe and Sound³	Total Debt Service Payment
2009	73,879,226	\$121,769,068	2,596,469			198,244,763
2010	73,665,583	126,155,528	6,358,700		13,117,284	219,297,095
2011	73,468,646	132,525,950	13,498,700	7,931,752	44,539,586	271,964,634
2012	73,290,982	150,539,656	13,499,500	7,928,788	44,539,813	289,798,739
2013	72,566,926	154,551,543	13,498,850	7,929,388	44,542,688	293,089,395
2014	72,440,788	154,581,832	13,501,600	7,932,863	44,539,438	292,996,521
2015	72,340,713	154,615,360	13,497,938	7,931,113	44,542,338	292,927,462
2016	72,207,463	146,758,122	13,500,462	7,928,613	44,542,100	284,936,760
2017	72,230,263	165,832,464	13,499,462	7,929,863	44,541,350	304,033,402
2018	72,253,863	165,836,721	13,502,462	7,929,112	44,541,350	304,063,508
2019	72,076,113	165,835,139	13,501,062	7,932,700	44,541,150	303,886,164
2020	72,271,113	165,843,022	13,501,537	7,931,587	44,538,876	304,086,135
2021	50,910,331	165,847,528	13,502,663	7,930,250	44,539,951	282,730,723
2022	34,417,344	165,849,237	13,498,163	7,932,900	44,539,463	266,237,107
2023	19,784,588	165,860,803	13,497,413	7,928,487	44,539,789	251,611,080
2024		165,864,509	13,498,913	7,931,487	44,540,207	231,835,116
2025		165,872,449	13,501,163	7,930,587	44,537,699	231,841,898
2026		165,876,029			44,755,902	210,631,931
2027		45,878,891			44,742,770	90,621,661
2028		29,035,079			44,751,555	73,786,634
Total	977,803,942	2,874,928,930	211,455,057	118,959,490	815,473,309	4,998,620,728

¹ Repayment of existing Amendment 3 bond debt is scheduled to end in 2029.

² The Mississippi River Bridge bond is expected to be issued in fiscal year 2010 with an estimated par value of \$80.75 million, so actual debt repayments may vary from schedule.

³ A Safe and Sound Bridge project bond is expected to be issued in fiscal year 2010 with an estimated par value of \$77.77 million, so actual debt repayments may vary from schedule. Repayment of the Safe and Sound bridge project debt is estimated to continue until 2033.

Source: SAO analysis based on information provided by MoDOT.

A Conversation for Moving Missouri Forward

Missouri Department of Transportation



A Conversation for Moving Missouri Forward

The following pages outline the Missouri Department of Transportation's plan for what could be done if more money were made available for transportation. It is by no means a finished product, but is the first step in identifying the state's most critical transportation needs and how they could possibly be addressed. If, when and how we move ahead with these projects will be based on local direction and public input. There is no doubt this plan will evolve over time, but it's a start - a conversation for moving Missouri forward.

Saving Lives, Creating Jobs

You buzz through the fast-food drive-through for breakfast, order a book off the Internet on your lunch break and put your visiting mother on the train back home when you get finished with work.

These are scenes from what could be considered a typical day – activities we might take for granted. Although there are many factors coming together to make these things happen, we probably rarely stop to think about them . . . unless there's a problem.

One of those factors is transportation. It plays a large role in our daily activities and our quality of life – from getting us where we want to go to providing the food, clothes and other goods we use.

We've been fortunate in Missouri in recent years to be able to do some key work to get our roads in pretty good condition. In November 2004, Missouri voters approved a constitutional amendment - Amendment 3 - that redirected some money that used to go to general revenue to transportation. We quickly used that money to make 2,200 miles of the state's busiest highways smoother and safer in just two years, speed up 55 critical highway projects and move ahead with \$1.6 billion in new construction.

This work has created jobs – an average of more than 7,500 a year – and saved lives. Missouri led the nation in saving lives in 2006 when 161 fewer people were killed on our highways.

But tough times are looming. With the passage of Amendment 3, voters directed us to sell bonds and use the money for highway construction. The new revenue from Amendment 3 is being used to pay off those bonds over time.



Accomplishments

- Missouri has gone from having the third worst pavement on major roads to an estimated ninth best.
- Seventy-eight percent of the state's major roads are now in good condition.
- Missouri jumped from 28th to 17th in overall performance of the state highway system in one year.
- The Show-Me State has the fourth lowest administrative costs per mile.
- Customer satisfaction with MoDOT is at 78 percent.
- The Missouri Department of Transportation received the 2007 Missouri Quality Award.

The money we received from selling the bonds will be used up in 2010 and state funds available for highway maintenance and construction will return to pre-Amendment 3 levels. In addition, we're expecting to receive less federal funding for highway projects. And we all know prices for most everything are on the rise. We feel it most in fuel and construction materials, such as asphalt.

We don't want to go back to the days when we were ashamed to tell people we were from Missouri because our roads were so bad. But that's what we're facing. And although we've made our roads safer, about 1,000 people still die on our highways every year – that's too many.



We have a plan of action – a conversation to get us started – for what could be done if more money were made available for transportation. We know the first step in any funding discussion must answer, “What will we get if we give you more money?” We did not develop the answer to that question in a vacuum. We gathered input from local officials and combined it with our technical expertise to develop a plan of action. The next few pages will outline that plan – the plan to move Missouri forward.

Missouri’s Transportation System

First, let’s start with some information that describes our vast and complex transportation system. Missouri has the seventh largest highway system in the U.S., with more than 32,800 miles of highways. That’s more than Iowa, Nebraska and Kansas combined. We have 10,276 bridges and the most major river bridges in the nation with 53. One of our problems is that we’re largely funding our system with a gas tax that - at 17 cents a gallon - is one of the lowest in the country and hasn’t been raised in 12 years. These statistics show what we’re up against.



Our Top Five Priorities

We believe you deserve to travel without sitting in traffic or fearing for your life. At a minimum, we need to:

1. Take care of our roads and bridges;
2. Do a better job of providing other ways to get around;
3. Rebuild Interstates 70 and 44;
4. Tackle needed major projects; and
5. Meet regional needs.



Taking Care of Our Roads and Bridges

We have three goals to move Missouri forward:

- Get 85 percent of our heavily traveled roads in good condition; now they are at 78 percent.
- Get 75 percent of our less traveled roads in good condition; now they are at 62 percent.
- Get 90 percent of our bridges in good condition; now they are at 72 percent.

Then we want to keep them there. If we were giving out grades, this work would raise the condition of our roads and bridges to a B.

The estimated cost: \$645 million a year for a total of \$12.9 billion over 20 years.

Heavily Traveled Roads

You probably wouldn't think that 80 percent of all travel in Missouri takes place on just 17 percent of our highways, but it does. That means just a few of our highways, mainly our interstates and state routes, carry the bulk of the load. That's because more than 90 percent of all Missourians live within 10 miles of these roads.

With the recent funding we received from Amendment 3, an initiative approved by Missouri voters in November 2004 that redirected some highway user fees to MoDOT, we've been able to take these roads to a grade level of B. However, we won't be able to keep them there without more money. Additional funds would help us keep these roads in good condition and make sure your travel is fast, easy and safe.



Less Traveled Roads

These are the roads we hear the most about. Everyone we talk to tells us they want us to improve our less traveled roads. Examples of these roads are the lettered routes in our state. Currently, 62 percent are in good condition. We'd like to raise that number to 75 percent.

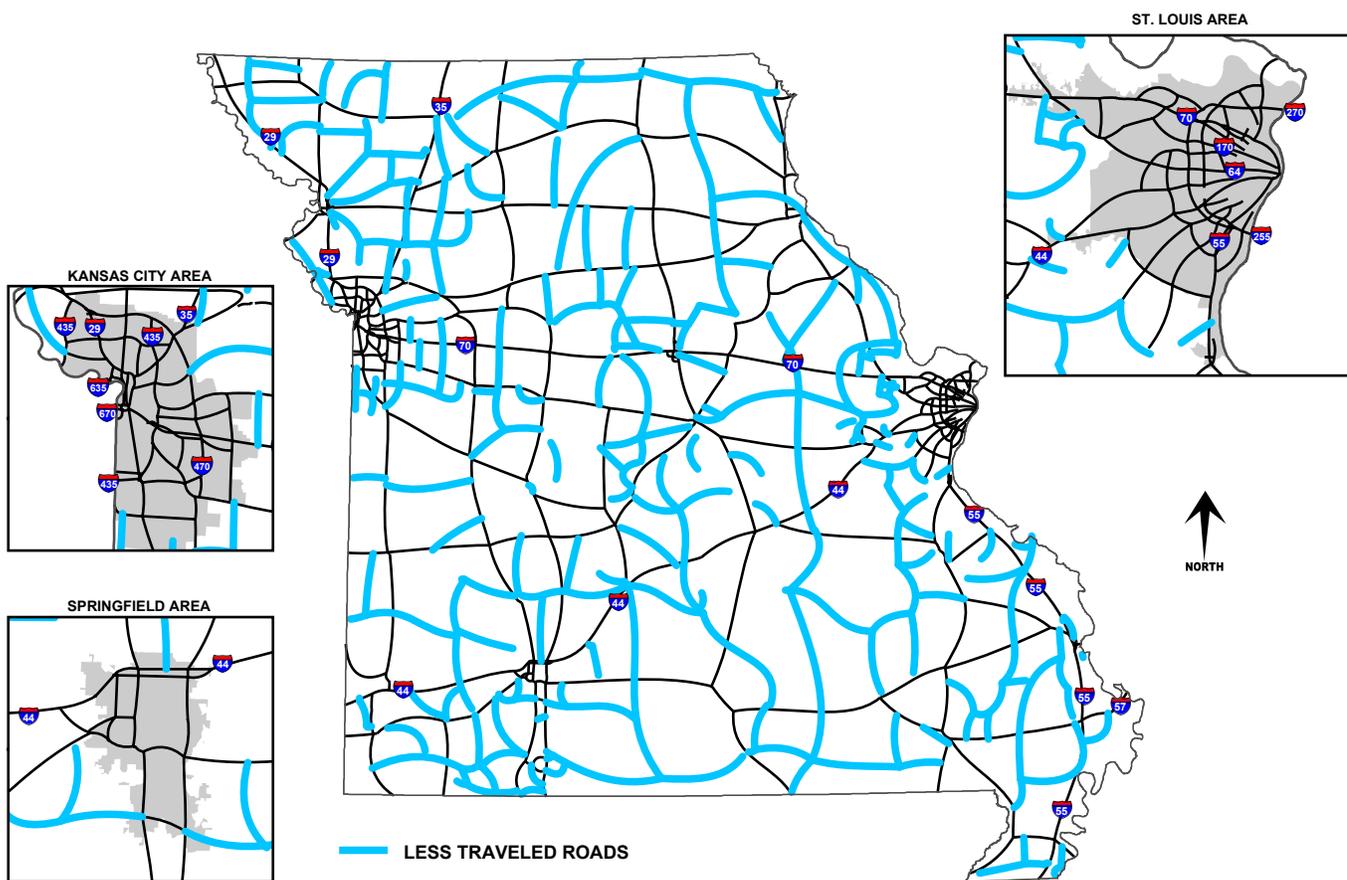
Our next step would be to take the 4,500 miles of the busiest of these roads and make them better and safer. These

4,500 miles represent 36 percent of travel, 26 percent of fatal crashes and 22 percent of severe crashes. We would give them improved pavement, paved shoulders, rumble stripes and bigger signs.

Less Traveled Roads Statistics

Less traveled roads make up 27,000 miles of the state's 32,800 miles; about 20 percent of all travel happens on these roads.

Improving Less Traveled Roads - The Next Step



Visit www.modot.org/conversation for the proposed list of projects to improve our less traveled roads.

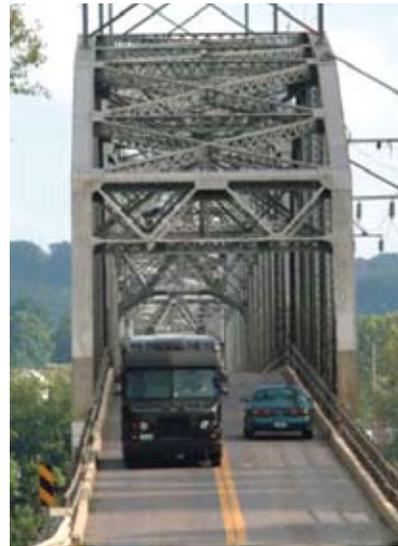
Big Bridges

When we think about bridges, we most likely picture those big structures that span our rivers. But a bridge can also carry traffic over roads, train tracks and flood plains. Even large culverts are considered bridges.

Missouri has 206 big bridges – bridges that are 1,000 feet long or more. That’s longer than three football fields. We inspect these bridges regularly to make sure they’re safe, and they are, but they’re also old. We would need to replace two bridges a year to keep all 206 of our big bridges safe and in good condition. Right now, we’re not even replacing one a year.

To get started, we would like to repair or replace our 20 worst big bridges. We would make them wider so you don’t have to hold your breath when you cross them or replace them altogether if that’s what is needed.

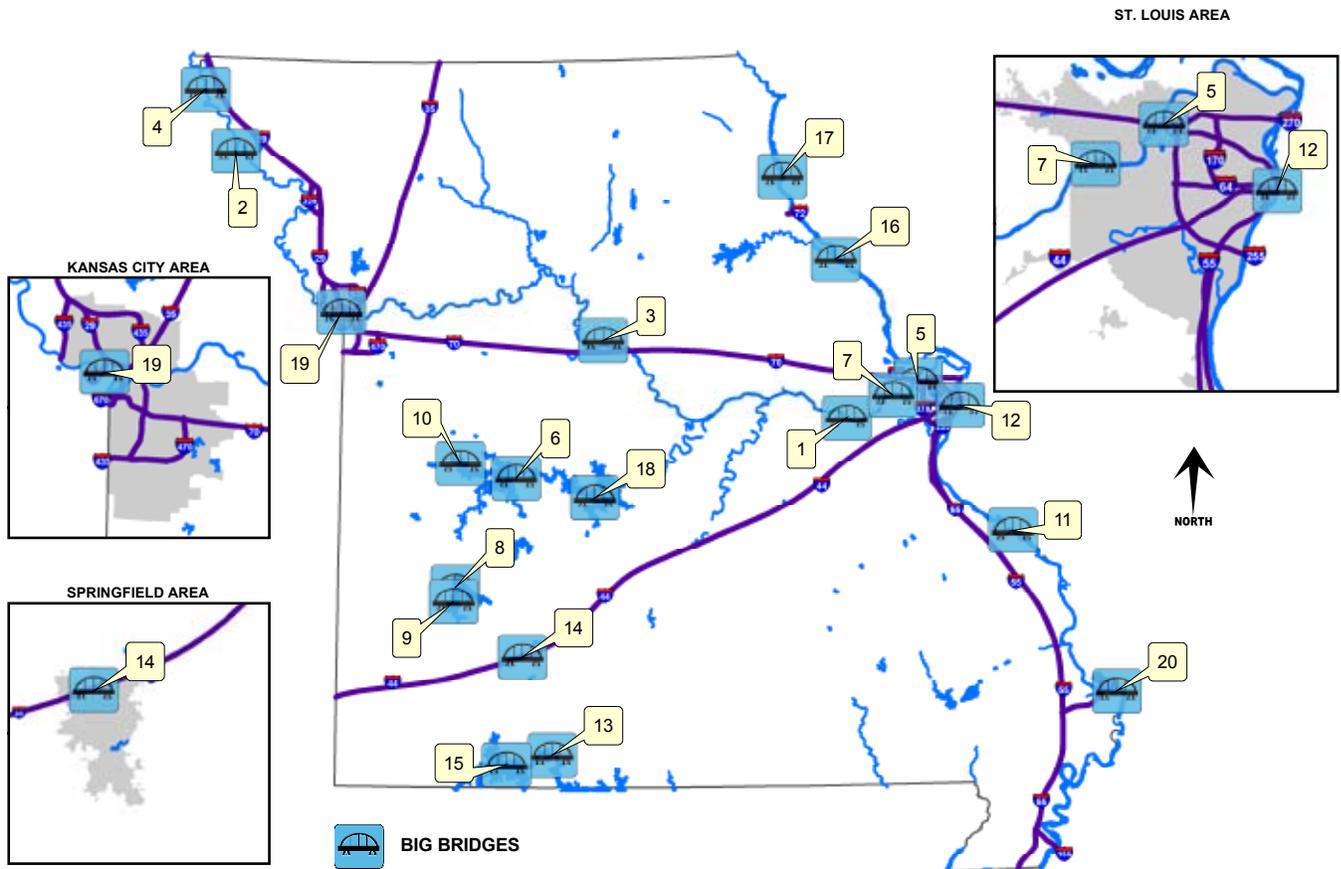
Here is a map of the 20 big bridges we would like to improve to start with.



Bridge Statistics

Fifty-three of Missouri’s big bridges cross the Missouri and Mississippi rivers. That’s more river bridges than any other state.

Missouri’s Most Critical Big Bridge Needs



Top 20 Big Bridge Projects

1. Route 47 bridge over the Missouri River in Warren/Franklin County
2. Route 159 bridge over the Missouri River in Holt County (connects to Rulo, Neb.)
3. Route 5 bridge over the Katy Trail in New Franklin, Howard County
4. Route 136 bridge over the Missouri River in Atchison County
5. Blanchette Bridge, Route I-70 west bound lane bridge over the Missouri River in St. Louis/St. Charles County
6. Routes 65, 7, 83 bridges over Truman Lake in Benton County
7. Daniel Boone Bridge, Route I-64 bridge over the Missouri River in St. Louis/St. Charles County
8. Route 215 bridge over the Sac River in Cedar County
9. Routes E, Y bridge over Stockton Lake in Dade County
10. Route 13 bridge over Truman Lake in St. Clair County
11. Route 51 bridge over the Mississippi River in Perry County
12. Poplar Street Bridge, Route I-64 bridge and approaches over the Mississippi River in St. Louis
13. Route 76 bridge over the White River in Taney County
14. Route 13 bridge over Locust Street in Greene County
15. Route 13 bridge over Table Rock Lake in Stone County
16. Route 54 bridge over the Mississippi River in Pike County
17. Route 24 bridge over the Mississippi River in Marion County
18. Hurricane Deck Bridge, Route 5 bridge over Lake of the Ozarks in Camden County
19. Route 69 bridge over the Missouri River in Platte County
20. Route 60 bridge over the Mississippi River in Mississippi County



Other Bridges

Our other bridges – there are about 10,000 of them – are wearing out faster than we can fix them. On average, these bridges are 44 years old and are only built to last 50 to 75 years. About 95 of them get in bad condition every year. Our Safe & Sound Bridge Improvement Program, which

will repair or replace 802 of our worst bridges in five years, will help, but we still have a lot of needs. We would like to get 90 percent of these bridges in good condition. That means they would have two lanes, be able to carry big trucks and would be wide enough that you would feel safe crossing them.

Are we on the right track?

Join the conversation for moving Missouri forward. Visit www.modot.org/conversation.

Other Ways to Get Around

We need to be able to focus more on non-highway travel options such as passenger rail, ports and transit and really function as a department of *transportation*. We have to help people get where they are going without driving a car. We also need to get some of the freight off of our highways. These options not only would help an under-served group of Missouri citizens, but would also allow us to conserve our natural resources and be more environmentally friendly.

The estimated cost: \$102 million a year for a total of \$2.04 billion over 20 years.

Passenger Rail and Freight Movement

We want you to consider passenger rail as a transportation option. Currently, it's not working too well in Missouri because the trains are frequently delayed for long periods of time. We want to make sure these trains arrive and depart on time, so you'll want to use them. To do that, we have to increase rail capacity, get new cars to provide a better ride and new engines that are more fuel-efficient and require less maintenance.

On a related note, we want to support the freight industry by providing additional matching funds for projects that have a positive impact on moving freight. We propose establishing a freight program that would fund projects designed to move freight more efficiently.



Ports

Water is the most efficient way to move goods, and investing in our ports would allow us to move some freight off of our busy highways. We are pleased with the additional funding the legislature has provided for capital improvements to our ports, but we still need additional funding to make barges a low-cost, efficient way to move goods.

Port Statistics

Missouri has nine public ports along the Mississippi and Missouri rivers that carry both passengers and freight.



Public Transportation

Approximately 70 million transit trips are taken in Missouri annually. Every county has some sort of transit service. However, in rural parts of the state, service averages only two days per week. We need more funding if we are to further develop transit service in Missouri, so people have other options for getting around.

Public Transportation Statistics

During peak travel times, one line of light rail has more than eight times the capacity of one lane of highway.



What do you think?
Join the conversation for moving Missouri forward. Visit www.modot.org/conversation.

Interstates 70 and 44 – Our Economic Lifelines

Interstates 70 and 44 are the two busiest highways in our state, with I-70 connecting our two largest cities and rail hubs – St. Louis and Kansas City. About 3.1 million people and 36 percent of all jobs are located within 10 miles of these interstates. Now 50 years old, they were designed to last 20 years, so you can see why they're crumbling and congested. We can't continue to band-aid these corridors. They need to be rebuilt with eight new lanes - some of which would only carry trucks - to make them safer and less congested.

If you don't live near these interstates, you might not think they affect you, but they do. They carry the trucks that deliver your food, clothes and other goods. In fact, trucks make up 25 percent of the traffic on these roads, a figure that is expected to double by 2030. That's another reason why improving I-70 and I-44 is the most critical need to move Missouri forward.

The estimated cost: \$360 million a year for a total of \$7.2 billion over 20 years.



I-70 Statistics

25 million miles a day are driven on I-70 and I-44. That's equal to 1,000 laps around the earth!



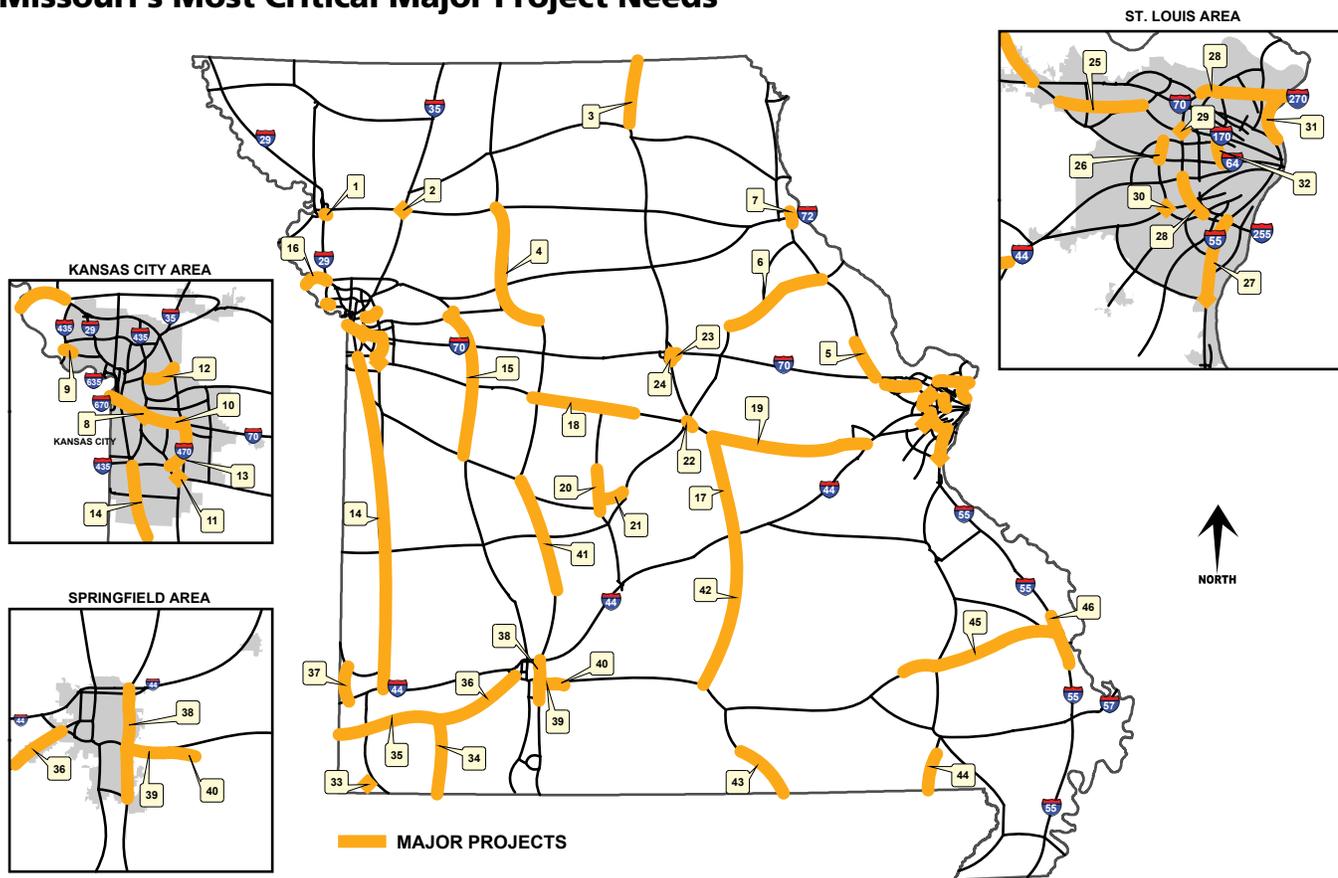
Dedicated truck lanes rendering

Major Projects

Major projects serve millions of people and have statewide impact. Rebuilding a 10-mile stretch of Interstate 64 in St. Louis, a project now under way, is an example of a major project. When we asked the public to give us a list of the state's most pressing highway needs, we got a list of about 100 projects totaling \$15 billion. We have pared that list down to 46 priority projects. The estimated cost: \$266 million a year for a total of \$5.32 billion over 20 years. Here is a list of those projects and a map showing their location.



Missouri's Most Critical Major Project Needs



Major Projects List

1. **US 169 from I-29 to Route AC** - widening and interchange improvements at I-29 and US 169 in St Joseph
2. **I-35 at US 36** - interchange improvements at US 36 and improvements at US36/Griffin Road intersection in Cameron
3. **US 63 from Kirksville to Iowa** - widen to four lanes
Depends on commitment from Iowa
4. **US 65 from north of Marshall to US 36** - shared four-lane
5. **US 61 from I-70 to Troy** - upgrade roadway and eliminate at-grade intersections
6. **US 54 from Mexico to US 61 at Bowling Green** - widen to four lanes
7. **US 61 from south of Hannibal to north of Hannibal** - construct alternate route to the west of Hannibal
8. **I-70 at I-435** - interchange and roadway improvements in Kansas City
9. **Mo 45 from Route K to I-435** - widen to four lanes
10. **I-70 from Kansas state line to I-470** - roadway and interchange improvements to reduce congestion and increase safety
11. **Mo 291 at US 50** - interchange improvements
12. **Mo 210 from I-435 to Mo 291 near Liberty** - capacity improvements
13. **I-470 from US 50 to I-70 in Kansas City** - capacity improvements
14. **US 71 from I-435 in Kansas City to Joplin** - upgrade to interstate standards I-49
15. **Mo 13 from Lexington to Clinton** - four-lane expressway
16. **Mo 92 from the Kansas state line to I-29 near Platte City** - roadway improvements to reduce congestion and increase safety
17. **US 63 from US50/US63 east of Jefferson City to Rolla** - four-lane expressway
18. **US 50 from California to Sedalia** - four-lane expressway

19. **US 50 from west of Linn to I-44 at Union** - four-lane expressway
20. **Mo 5 from the Niangua Bridge to Gravois Mill** - four-lane expressway
21. **Mo 42** - Route TT and Route MM from Mo 5 to the toll bridge at Lake of the Ozarks - improved 2-lane
22. **US50/63** - Rex Whitton Expressway from Eastland Dr. to Missouri Blvd. in Jefferson City - roadway improvements to reduce congestion and increase safety
23. **Mo 740 from US 63 to I-70 in Columbia** - four-lane expressway
24. **US 63 from Route AC to I-70 in Columbia** - interchange improvements at Route AC and Route WW
25. **Route D** - Page Avenue from west of Harvester to I-64 Phase II and III
26. **Mo 141 from I-64 to Mo 340** - capacity improvements
27. **I-55 from Route M to US 67** - interchange improvements and increase capacity
28. **I-270** - interchange improvements from McDonnell Blvd. to the Mississippi River and Mo 30 to Mo 100
29. **I-270/Route D/Mo 364** - interchange improvement
30. **I-44/Mo 141** - interchange improvement
31. **Route H from I-270 to north of I-70** - Hall St. in St. Louis - widen to four-lane
32. **I-170 from Route D to I-64** - improve interchange
33. **US 71 from the Arkansas state line to Pineville** - upgrade to interstate standards I-49. Depends on commitment from Arkansas
34. **US 37 from Monett to Arkansas** - four-lane expressway
35. **US 60 from Oklahoma state line to Monett** - improved two-lane with passing lanes
36. **US 60 from Monett to Republic** - four-lane expressway
37. **Joplin West Bypass from Mo 171 to I-44** - four-lane right of way acquisition with two-lane expressway from I-44 to Mo 66
38. **US 65 from I-44 to south of Ozark** - widen to six lanes
39. **US 60 from US 65 to Mo 125** - roadway and interchange improvements to reduce congestion and increase safety
40. **US 60 from Mo 125 to east of Rogersville** - roadway and interchange improvements to reduce congestion and increase safety
41. **US 65 from Buffalo to Warsaw** - widen to four-lane expressway
42. **US 63 from Rolla to Cabool** - widen to four-lane expressway
43. **US 63 from US 160 to Arkansas state line** - widen to four-lane expressway. Depends on commitment from Arkansas
44. **US 67 from US 160 south of Poplar Bluff to Arkansas state line** - widen to four-lane expressway. Depends on commitment from Arkansas
45. **Mo 34 from Piedmont to US 72** - improved two-lane
46. **I-55 from Fruitland to south of Scott City** - capacity improvements

Meeting Regional Needs

You can't always plan for regional growth, but you want to be able to seize the opportunity when it comes. For example, a new business might be thinking about locating in your area and the dealmaker might be if you can improve an intersection or build a new interchange so people can get to it. Our flexible fund program allows regions to address their own priorities, while our cost-share program lets us team up with communities by sharing project costs 50-50 to get the job done. We have had success with these programs and would like to increase our cost-share and flexible fund amounts to help regions grow and prosper.

The estimated cost: \$190 million a year for a total of \$3.8 billion over 20 years.



A Conversation for Moving Missouri Forward

	Annual	20-year
<i>What we need</i>	\$1.56 billion	\$31.3 billion
<i>What we have</i>	\$632 million	\$12.6 billion
<i>Gap</i>	\$931 million	\$18.7 billion

To deliver these improvements will cost a little more than \$1.5 billion a year for 20 years. That’s based on 2008 costs and doesn’t factor in inflation. But we estimate we’ll only have a little more than \$600 million a year during that time. That leaves quite a gap – nearly \$1 billion a year.



That’s a lot of money, but it’s a practical beginning. The wish list is two to three times bigger, but we’ve taken it to a conservative level. This is the start of the conversation - the bare minimum of what you deserve.

We recognize we must be innovative to accomplish necessary road and bridge improvements. We know we must be efficient in our operations and make our dollars stretch as far as they can. We owe that to you. However, innovative solutions and program efficiencies will only go so far.

Federal revenue to the states is on the decline, our revenue streams are under attack, and fuel and materials costs continue to rise. Our plan for progress is the bare-bones option to keep you safe on our roads, create jobs and contribute to your quality of life.

We hope you’ll talk about this plan in your community. It is not a finished product, but a work in progress, so please let us know what you think. It’s time to get excited about what we can do to move Missouri forward.

Join the Conversation

This plan is just a start - a conversation for moving Missouri forward. Have we identified the right projects? Is there an area where you’d like to see more or less emphasis? Are we moving in the right direction? Would you like more information or a speaker to address your group? We’d like to hear from you. Join the conversation for moving Missouri forward. Visit www.modot.org/conversation, call toll-free 1-888-ASK MODOT (275-6636) or write your comments below and send them to: Missouri Department of Transportation, Planning Division, P.O. Box 270, Jefferson City, MO 65102.

Comments

Optional

Name _____

Address _____

City, State, Zip Code _____

Telephone Number _____

E-mail Address _____

Source:



Missouri Department of Transportation

www.modot.org
888 ASK MODOT
275-6636