Missouri Statewide Transportation Improvement Program

It's often typical to think of transportation in terms of roads and bridges or the kinds of vehicles used — cars, buses, boats, trucks, planes and trains. But transportation is much more than that. Transportation is personal. It's the connection that affects safety, jobs, businesses and the ability to see friends and family, go to the doctor or buy groceries. It's about ordering a child's soccer shoes online or grabbing groceries on the way home.

It's the connections that keep businesses up and running. Transportation not only moves us, it makes the movement of goods and services possible. It's personal. It's a vital connection to safety, work, economic growth and a good quality of life.

This transportation lifeline is in trouble. If transportation investments aren't a priority, lives, jobs, mobility and a good quality of life will be lost. With funding for transportation in Missouri on a steep decline, MoDOT is working to remind Missourians about the importance of transportation and to warn of serious issues ahead.

■ Transportation: A connection to safety

Unfortunately, getting into a car each day is one of the most dangerous things to do. So making roads and bridges better through additional lanes, shoulders, rumble stripes, guard cables and brighter signs means safer traveling. The Missouri Department of Transportation has made some good progress in recent years.





Fatalities have decreased by 35 percent since 2005 and are at the lowest rate since 1949. This means 1,538 lives have been saved, and 7,821 disabling injuries have been prevented on Missouri's roads. But the work is not finished. There's more to do. Eight hundred twenty people still died on Missouri roads in 2010 and nearly 6,000 were injured. Missourians deserve the transportation investments that will make the system safer.

■ Transportation: A connection to work

Transportation not only gets people to work – it creates jobs along the way. State and local investments in highway and bridge construction support 21,653 direct and indirect jobs. Unfortunately, Missouri's unemployment rate has been at about 9 percent for more than a year. More jobs are needed as well as an assurance that workers can get to the jobs.

■ Transportation: A connection to business

Transportation also connects Missouri businesses with customers and the entire world. It provides the goods and services needed every day and influences quality of life. Transportation plays a role in every product produced and every customer serviced. Annually, more than 800 million tons of freight originate, terminate or pass through Missouri by rail, motor carriers, ports and airports.

Transportation helps Missouri attract new businesses and retain existing ones, add and keep jobs, and build and maintain tax revenues in the communities. Highway accessibility is the second leading factor when companies choose locations – it's ranked just behind labor costs.

One of the eight strategic initiatives the Missouri Department of Economic Development has identified as key to transforming Missouri's economy is to provide necessary infrastructure for companies and communities to succeed. Furthermore, DED has identified transportation and logistics as one of the key industry sectors it will target for the state's future economic growth.

Transportation also brings tourists to the state and keeps them coming back.

There's no arguing that investments in transportation yield tremendous economic returns. In fact, on average, every dollar invested in this five-year Statewide Transportation Improvement Program generates about \$4 in new economic activity.

■ Transportation: A connection to family and more

Transportation connects everybody to everybody – nearby and around the world. It's how the grandkids come to visit and how the kids get to college. It's the connection to summer vacations and the life-long memories made by these trips.

Here are some pretty staggering thoughts.

- People travel about 70 billion miles on Missouri roads every year.
- They take more than 65 million transit trips.

These figures underscore the vital role transportation plays in connecting families and friends.

■ Transportation: A connection to better government

Missouri voters gave MoDOT extra money for transportation projects when Amendment 3 was approved in November 2004. The department has worked hard to make the best use of these resources and to be accountable to the citizens it serves. MoDOT is proud of the results!

On average, MoDOT has awarded projects 10 percent under budget during the past three fiscal years. These savings have allowed the department





to complete an additional \$426 million worth of projects in communities all across the state. MoDOT has shown that amazing things can happen when there is money to work with – the money needed to invest in transportation.

Eighty-six percent of Missouri's major roads are in good condition. MoDOT is working to bring Missourians 802 better bridges through the Safe &Sound program. Customer satisfaction with MoDOT is at 83 percent, and 92 percent of Missourians trust the department to keep the commitments outlined in this construction program.

But there's a problem . . . a BIG problem.

■ Transportation: Connections are in jeopardy

For the last five years, Missouri's transportation construction program has averaged \$1.2 billion a year. Moving forward, the best it will be is half that amount – about \$600 million a year.

What does such a sharp decline in funding mean?

It means the investment that has supported jobs in the state is in jeopardy; the investment that helped save lives is in jeopardy; and the investment that supports Missouri's economy and touches every industry in the state from agriculture to healthcare is in jeopardy. This transportation funding decline means more than a decrease in needed projects – it means Missouri stands to lose 17,000 jobs. Funding for transportation in Missouri has been cut in half. This is the best case scenario. It could get a lot worse.

The huge question mark is federal funding – further indication that transportation funding is on a steep decline. The federal Highway Trust Fund is basically insolvent, and Congress has had to funnel general revenue to the fund to keep it at its current level of funding. State revenue is at least stable for now. But the gas tax is a revenue source at risk of going down slowly, but surely.

As a result, the department is redirecting internal cost savings to the construction program to ensure it receives the maximum amount of federal matching funds available. Specifically, MoDOT has committed \$189 million in cost savings to this 2012-2016 Statewide Transportation Improvement Program.

The federal government allocates funding to the states using a formula that requires the states to match a percentage of the money. This action helps keep the state from losing millions of dollars in federal funds; however, it's only a temporary fix.

Beyond the STIP horizon, MoDOT will not be able to match projected federal funds with the current state revenue available for transportation. This means fewer transportation projects. It's not a surprise – MoDOT knew this day was coming. Transportation funding has fallen off the cliff and hit the bottom. Now, MoDOT and Missouri must pull up, scrape off the dust and figure out what can be done to increase transportation funding.

■ Transportation: MoDOT is tightening its belt

MoDOT is doing what most businesses and families have had to do over the last few years – tighten its belt. The guide for doing so is called the **BOLDER** 5-Year Direction – several steps beyond the direction announced last year that has already saved \$64 million. A new plan is necessary to survive. It's all about putting every possible dollar onto Missouri's roads and bridges, and reducing MoDOT staff, facilities and equipment.

For starters, MoDOT is getting smaller. As of June 2011, the department had more than 400 fewer employees than a year earlier. In all, the plan calls for reducing statewide staff by 1,200 employees. This will be accomplished by March 31, 2013, through attrition where possible, by working smarter and more efficiently, and through layoffs when necessary.

MoDOT is cutting costs. Over the next five years, the bolder plan calls for 131 fewer facilities – 107 maintenance and traffic facilities, 17 construction offices, three district offices, four leased facilities in Jefferson City -- and 740 fewer pieces of equipment.

However, even with a bolder direction, MoDOT will continue to have a strong, visible presence in all corners of the state. It will be decentralized, nimble and responsive to public needs. The primary goals are to take care of the existing roads and bridges, and to keep Missouri citizens safe. MoDOT will redirect staff away from the design and construction areas and toward 'boots on the ground' workers in order to ensure this happens.

MoDOT will continue to squeeze every penny out of every dollar. The result will be 1) a savings of \$512 million through 2015 and \$117 million per year thereafter redirected to roads and bridges and 2) a streamlined, efficient agency that is the right size to deliver quality service for the people of Missouri regardless of the funding level.

In summary, to cope with the funding challenge, the MoDOT game plan is simple. The next five years will continue to be about these five areas.

- Honoring commitments in the Statewide Transportation Improvement Program
- Keeping major roads at 85 percent good condition
- Improving the condition of farm-to-market roads found in rural areas
- Keeping pace with needed bridge repairs and maintenance
- Providing outstanding customer service

■ Transportation: Connections will get worse

The best Missouri's transportation system will be for a while is "okay." But it will get worse. Roads and bridges will get worse. There will be more wear- and-tear on family vehicles, so maintenance costs will go up. Doing the bare minimum isn't a good thing, but it's what has to be done for now.

Directing all available resources to taking care of Missouri's roads and bridges doesn't leave enough money for the major road and bridge projects needed to keep motorists safe, support jobs, provide additional transportation options and compete economically.

This severe drop in highway funding should be a wake-up call. There are disconcerting consequences of operating with insufficient funds. The good roads and improved bridges Missourians have enjoyed for the past six years will start to deteriorate without more money for transportation projects. It means the department will not be able to make significant safety improvements or address congestion.

It also means MoDOT will not be able to assist and support the state's economic development. The department will not be able to afford the use of longer-term pavement treatments, deliver corridor improvements or replace major bridges.

■ Transportation: Safety is at risk

MoDOT won't be able to make the safety improvements needed to keep motorists safe – four-lane corridors, shoulders, guard cable and rumble stripes. Guard cable saves an



average of 45 lives each year; up to 100 lives a year are saved by rumble stripes and bigger, brighter signs, wider stripes and brighter lights.

While great strides have been made, in reality, the state has only made these improvements to a few thousand miles. There are more than 33,000 miles in the state system – so there is more work to do! Even with improvements, 820 people still died on Missouri's highways and nearly 6,000 were seriously injured last year. More investments will help drive fatalities and disabling injuries down even more.

■ Transportation: Options will decline

How does Missouri make it so people can bike to work and have access to public transit more than two or three days a week?



In fiscal year 2010, only 1 percent of state investments went to air, rail, port, transit, bicycle and pedestrian facilities. Missouri will never make progress with such a small investment. This doesn't get Missourians or the state or MoDOT where they need to be. It doesn't allow for connecting the various forms of transportation, such as rail, ports and interstates. With gas prices on the rise again, Missourians have to have options.

■ Transportation: Jobs are at stake

With MoDOT's construction program dipping to \$600 million a year, there will not only be a lot fewer needed projects being done, but Missouri also stands to lose jobs. On the other hand, here is an example of what can happen when we invest in transportation options.

On Highway 141, the roadway is being relocated and new lanes are being added to improve safety, reduce congestion and decrease flooding. The project is costing \$135 million and creating about 1,300 direct and indirect jobs. The economic benefit, spread out over 20 years, means \$19 billion in spending and household income, and 117,510 jobs.

The New Madrid Port project, in southeast Missouri, included a rail spur extension, storage facility and truck access. The project cost \$53.4 million and created 36 direct jobs and 100 construction jobs.

A company recently built a cement plant near St. Louis. Holcim officials have said access to interstate highways was the main reason the plant located there.

Transportation plays a role in every product produced and every customer that's served. Annually, more than 800 million tons of freight originate, terminate or pass through Missouri. Transportation helps Missouri attract new businesses and retain existing ones, add and keep jobs, and build and maintain tax revenues in communities statewide.

There's no arguing that investments in transportation yield tremendous economic returns. As previously stated, on average, every dollar invested in this five-year construction program generates about \$4 in new economic activity. This means work, and work means jobs. Thus Missourians must make a choice going forward.

■ Two Options: 1) DO NOTHING?

If the choice is to do nothing – Missourians will lose the progress gained. Roads and bridges will get worse, not immediately, but they will get worse – lives and jobs will be at stake. If nothing is done, the progress gained will be gone. The transportation services needed won't happen. Missouri won't be able to compete economically.



■ Or: 2) TAKE ACTION!

It's time we stop talking and take action. Now is the time for Missouri to take care of Missouri. No one can wait for the federal government to

fix Missouri's situation. In fact, it could make it worse. Missourians have to find a way to invest in infrastructure. This is tough to do in today's political and economical environment, but jobs and lives are at stake.

In the meantime, MoDOT will continue to use the resources it's given in the best ways possible. MoDOT will keep talking about the importance of transportation and will support the efforts across the state to help grassroots supporters identify ways to increase transportation funding. The department only has a say in how additional money would be spent, not in how to get the additional funding. Only Missourians can decide that.



Transportation: It's personal, so get involved

MoDOT speakers are available to discuss these transportation issues by calling 1-888-ASK MoDOT (275-6636) or filling out an online request form at www.modot.mo.gov/asp/requestExpert.htm. For more information, visit www.modot.org/itspersonal.

Introduction

The Missouri Department of Transportation (MoDOT), in accordance with state and federal law, has prepared this Statewide Transportation Improvement Program (STIP), for state fiscal years 2012 through 2016 (July 1, 2011, through June 30, 2016). The STIP is prepared annually and includes all projects proposed for funding under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Vision 100-The Century Aviation Reauthorization Act and state revenue. SAFETEA-LU was signed into law August 10, 2005. It funds highways, highway safety and transit improvements for the five-year period of 2005 through 2009. Extensions of SAFETEA-LU continue to provide funding until a new transportation bill is enacted and Missouri's specific reauthorization amounts are known. This document meets all state and federal requirements and is fiscally constrained.

While the **BOLDER** 5-Year Direction was approved by the Missouri Highways and Transportation Commission in June 2011, this STIP was developed and approved based on the previous district boundaries. From this point forward as new STIPs are developed, the new district boundaries, effective June 8, 2011, will be used.

Public Involvement

Public involvement in project development and programming activities is a key element in gaining public acceptance critical to the success of any transportation improvement program. The recent multi-year federal transportation bills have emphasized the necessity of public involvement. In Missouri, the approach is primarily to seek involvement from four groups. These groups are: (1) metropolitan planning organizations, (2) regional planning commissions, (3) local officials and (4) the general public. Through public involvement, Missourians have a say in how transportation dollars are spent.

Metropolitan planning organizations represent urbanized areas with populations over 50,000. They are responsible for transportation planning within their regions. Regional planning commissions represent multi-county rural regions and are charged with coordinating functions of local

governments, including transportation planning. The public is involved in the planning process in two ways: 1) through election of the local officials who comprise the regional planning commission and metropolitan planning organization boards of directors; and 2) through direct contact with MoDOT, metropolitan planning organizations, regional planning commissions or local officials. (See Section 1 for contact information regarding metropolitan planning organizations, regional planning commissions and MoDOT district offices.)

Public involvement for development of transportation improvements begins several years before the projects actually appear in the Statewide Transportation Improvement Program (STIP).

Transportation planning consists of a series of decisions that direct the use of current and future available resources to accomplish Missouri's transportation goals. The current transportation planning process can be summarized in the following steps.

- 1. Develop the state's transportation vision and a plan to accomplish it
- 2. Identify and prioritize needs
- 3. Develop solutions and design projects
- 4. Prioritize and select projects for the STIP's Highway and Construction Schedule

Develop the State's Transportation Vision and a Plan to Accomplish It

MoDOT's long-range transportation plan identifies the state's transportation vision. The plan also identifies what the public expects of the state transportation system, including high-priority statewide corridors and goals for taking care of the system. It identifies the values that guide needs and project prioritization for a 20-year planning horizon.

The vision is Missouri's ideal transportation system. However, Missouri cannot afford all the components of this ideal system. The long-range transportation plan also includes policies and goals, and a fiscally constrained strategy for achieving the highest-priority components of the transportation vision within an agreed-upon timeframe. This requires working with planning partners to determine where Missouri's transportation dollars should be spent.

MoDOT's current long-range plan, Missouri Advance Planning (MAP), was completed in April 2007. Information regarding the long-range plan can be found at www.modot.org/plansandprojects/index.htm. Projects identified in the STIP have been given priorities based on, and are consistent with, the long-range transportation plan.

Identify and Prioritize Needs

There are many transportation problems, often called needs, on Missouri's transportation system. Identifying these needs is a continuous process and crucial for successful planning. For example, one need might be redesigning a high-accident location, such as an intersection; another need might be a location improvement that helps a new business move products more efficiently. There are two levels of needs identification, regional

and statewide, and they are classified in two groups – physical system condition needs and functional needs. Physical system condition needs target the state of repair of road and bridge components. Functional needs target how well the transportation system is operating.

Statewide needs are identified formally through the long-range transportation plan process, and public outreach is done in conjunction with the long-range transportation plan development. These needs typically cross several county lines, and involve interstates and major highways.

MoDOT districts work with planning partners – such as local and regional elected and community officials, and representatives of the metropolitan planning organizations and regional planning commissions – to identify regional transportation needs. Specific methods and timeframes are discussed in the implementation section of MoDOT's planning framework for guiding transportation decisions and investments.

Prioritizing needs is the process of deciding which problems, from the list of identified needs, should be addressed first. This can be a difficult task given a wide variety of needs. Not only do needs have different subject matter – safety, maintenance or economic development – they have varying time horizons. A structurally deficient bridge might be a more immediate need than a resurfacing project. However, simply being an immediate need does not imply higher priority. These complicated decisions require a coordinated effort from many groups.

Needs prioritization is based on the goals in Missouri's long-range transportation plan. MoDOT districts work with planning partners to prioritize regional needs annually. Statewide needs are prioritized periodically as funds become available; however, emerging needs can be added to the needs priority list between updates. Both regional and statewide needs will be prioritized using the processes established in MoDOT's planning framework, which are based primarily on objective data. Information regarding the planning framework can be found at www.modot.org/plansandprojects/index.htm. Using the results of the prioritization process as a starting point, MoDOT districts work with planning partners to divide needs into three categories.

- High Resources are focused on addressing these needs first. They are the first to be selected for preliminary engineering.
- Medium These needs may be addressed as additional resources become available.
- Low No work is in progress to address these needs at this time.

The high-priority needs list is fiscally constrained to about 10 years of funding and is not a commitment to design or construct projects. Existing needs will be re-evaluated each time needs are prioritized. Some high-priority needs may never be designed or constructed due to prohibitive costs, changing priorities or other reasons. Needs from the high-priority list will be selected for preliminary project design.

Develop Solutions and Design Projects

When the high-priority needs have been identified, they are evaluated to find the best solution to the problem based on engineering expertise, public input and financial considerations. Environmental impact is another factor that influences the development and selection of a solution. There are a variety of environmental reviews that must occur for the proposed solutions. Some solutions may be less desirable or eliminated from consideration due to the extent of the environmental impacts. After a solution is agreed upon, design plans are started.

Determining the cause of a problem is often more complicated than might be expected. For instance, a high incidence of accidents at a given intersection might be due to poor sight distances, weather conditions, signal timing, roadway geometry or even reckless driving. Identifying the primary reason or combination of reasons for the problem is key to developing effective solutions.

When a problem is identified, the natural tendency for any problem-solver is to immediately offer the solution. Effective planning requires developing many possible solutions in order to capture the most efficient and effective solution. MoDOT engineers and planners are experts at generating good solutions to transportation problems. MoDOT staff is even more effective when working with local and regional officials to generate the solutions. This process reveals issues and concerns that may not have previously been evident.

The public's involvement in defining needs and determining the appropriate solutions will take several forms. The public may actually initiate the investigation of needs by contacting MoDOT or its planning partners. The public, through its local officials, has representation in determining the best solution for the transportation need. As MoDOT develops public involvement plans for specific projects, the public will have further opportunity to review concepts and provide input.

Prioritize and Select Projects for Construction

Deciding which projects to do and when to do them is a complicated and often controversial matter. Gathering and discerning public input is crucial to realizing the full benefit of available funds for Missouri's transportation system. MoDOT relies on local and regional planning agencies for this process.

The project prioritization processes are based primarily on data and serve as a starting place for determining the best candidates for funding. There are separate project prioritization processes for each category in MoDOT's funding distribution method.

MoDOT recognizes the need for a balance between taking care of the current transportation system and expanding the system to accommodate anticipated future demand. As a result, transportation funding is divided accordingly. The nature of this balance is adjusted through the level of funds in each category. The project prioritization processes include the following.

- Safety
- Taking care of the system
- Major projects and emerging needs (regional)
- Major projects and emerging needs (statewide)
- Interstates and major bridges
- Amendment 3

Projects are divided into three categories - high, medium and low - within each funding category. Each time projects are prioritized, existing projects not yet programmed for construction are re-evaluated.

Projects are prioritized against other projects in the same funding category. Larger projects of statewide significance are compared with one another. Smaller projects and those intended to take care of the existing system are compared with one another. MoDOT works with local and regional officials to determine the priority of the projects in each funding category. Projects on the high-priority project list are candidates for funding. The projects selected for funding are shown in Section 4.

Additionally, each of Missouri's seven metropolitan planning organizations (MPO) located in Columbia (Columbia Area Transportation Study Organization - CATSO), Jefferson City (Capital Area Metropolitan Planning Organization - CAMPO), Joplin (Joplin Area Transportation Study Organization - JATSO), Kansas City (Mid-America Regional Council - MARC), St. Joseph (St. Joseph Area Transportation Study Organization - SJATSO), St. Louis (East-West Gateway Council of Governments - EWGCOG) and Springfield (Ozarks Transportation Organization - OTO) prepares a Transportation Improvement Program (TIP) and a long-range transportation plan (LRTP) for its MPO area. These TIPs are the accumulation of federally funded projects proposed by their local governments and MoDOT. These projects are consistent with the LRTP's goals and objectives. MoDOT uses public input received throughout the year to develop its submittal for the MPO's TIP. Each MPO has an approved public involvement plan for its respective area that allows for review and feedback from individual citizens, organizations, agencies and local area governments. Using public input as one of its decision factors, the MPO determines the projects in its area that will be programmed for construction.

These TIPs are incorporated by reference into the five-year STIP without modification. (See Section 9.)

Public Review Period

Comments from the public and the planning partners are considered throughout the year in an effort to maximize Missouri's resources. Based on public and engineering input, a draft of the STIP is published, followed by a 30-day public review period. During this public review period, the program is distributed to MoDOT districts for public access, and the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) for review. The STIP is also available on MoDOT's Web site at www.modot.org/plansandprojects/index.htm. Citizens have the opportunity to provide comments by mail, email or telephone (by calling 1-888-ASK-MODOT) to district representatives during this time period. MoDOT responds to the comments received through an acknowledgement or by providing additional information, depending on the nature of the comment. Most answers or acknowledgements are sent within five business days of receiving the comment. Some comments require more time for research before an answer can be provided. Changes are made as appropriate in response to comments before a final STIP is developed and presented to the Missouri Highways and Transportation Commission (MHTC) for approval. Input from this part of the process will be used to measure the effectiveness of the program and to begin making improvements on next year's program. The STIP becomes effective when approved by the MHTC as well as the FHWA and FTA.

Program Amendments

Projects can be amended to the STIP and to a TIP. The public involvement process for STIP amendments occurs prior to incorporating the project in the program. Public involvement for projects inside a MPO area will be coordinated by the MPO according to its approved TIP amendment process.

A seven-day public comment period is provided for all proposed amendments and administrative amendments to the STIP. Administrative modifications do not require a seven-day public comment period. All projects, regardless of proposal time, follow the public involvement processes and policies defined in MoDOT's planning framework.

Reference Information

Administrative Amendment – This is the addition of federally-funded scoping projects, state-funded regionally significant scoping projects, hardship right of way purchases, emergency projects, major scope changes without budget changes or the addition of right of way to construction projects already in the Statewide Transportation Improvement Program (STIP) with no net budget change (uninflated). Administrative amendments do not require Missouri Highways and Transportation Commission approval, but they do require Federal Highway Administration / Federal Transit Administration approval. Administrative amendments occur between annual STIP updates.

Administrative Modification – This is a fiscally constrained change in an existing project, such as splitting or incorporating projects or changing fiscal years. This also includes the addition of state-funded non-regionally significant scoping projects. Administrative modifications do not require Missouri Highways and Transportation Commission approval or Federal Highway Administration / Federal Transit Administration approval. Administrative modifications occur between the annual updates of the Statewide Transportation Improvement Program.

Advance Construction – This is a mechanism that allows a project to be funded with state funds now and preserves a project's eligibility for federal reimbursement in the future.

Amendment – This is the addition of a new project to the Statewide Transportation Improvement Program (STIP) or a major change to a project already in the STIP. Amendments require Missouri Highways and Transportation Commission and Federal Highway Administration / Federal Transit Administration approval. Amendments occur between the annual STIP updates.

Amendment 3 – This is a bonding referendum passed by voters in November 2004 that provides additional funds for transportation projects. The funding made available resulted in three initiatives: the Smooth Roads Initiative, the Acceleration of Projects and New Major Projects (original and additional).



American Recovery and Reinvestment Act (ARRA) – On February 17, 2009, President Barack Obama signed this federal act to help spur the national economy. ARRA included funding for shovel-ready transportation projects.

At-Grade Intersection – This is an intersection of two or more roadways that provides for vehicular and pedestrian traffic movement on the same level of the riding surface.

Better Roads Brighter Future – This was a MoDOT initiative to improve and maintain the pavement condition and safety on Missouri's most-traveled and busiest 5,600 miles of state roads. These major highways carry nearly 80 percent of the state's traffic, and approximately 95 percent of Missouri's residents live within 10 miles of these roads. This program started in January 2007 with the goal of bringing 85 percent of these highways to good condition by the end of 2011 and keeping them in good condition. MoDOT exceeded this goal by bringing 86 percent of these highways to good condition in 2010.

Culvert – This is a drainage structure constructed beneath the roadway. Box sections, pipes and arches are examples of various culvert shapes.

Deck – This is the portion of a bridge that provides the riding surface for vehicular and pedestrian traffic. The deck distributes loads to the superstructure elements.

Engineering – This is the work required to develop a project's scope and detailed design, as well as the inspection of a construction project.

Expressway – This is a multilane, divided highway where access is allowed at public roads via at-grade intersections.

Fiscal Constraint – This is the demonstration that sufficient funds are reasonably expected to be available to cover the anticipated project costs within the five-year window of the Statewide Transportation Improvement Program.

Fiscal Year – This is a 12-month period to which the annual operating budget applies, and at the end of which a government determines its financial position and the results of its operations. The State of Missouri fiscal year is July 1 through June 30. The federal fiscal year is October 1 through September 30.

FFOS – **Funding From Other Sources** – These are funds applied to a project that are from sources other than the funding distribution categories available for district use.

FHWA – **Federal Highway Administration** – This is the federal agency that provides financial and technical support for the construction, improvement and preservation of the highway system.

Freeway – This is a multilane, divided highway where access is provided only at grade-separated interchanges.

Geometric Improvement – This is a roadway improvement other than a surface treatment, such as adding turn lanes or widening an intersection.

Intersection – This is where two or more roadways meet. An at-grade intersection has two or more roadways that provide for traffic movement on the same level.

Interchange – This is where two or more roadways meet. An interchange has two or more roadways that provide for the movement of traffic on different levels (grade separated).

Lane – This is the travel path of one vehicle on a roadway and usually delineated by a dashed or solid stripe.

Let – This means to advertise projects and take bids from contractors to perform the work.

Long-Range Transportation Plan (LRTP) – This is a multimodal transportation plan covering a period of at least 20 years developed through the statewide transportation planning process.

MAP – Missouri Advance Planning – This is Missouri's 20-year long-range transportation plan, which analyzes transportation trends, system conditions, and customer input and expectations. The plan makes recommendations for addressing or meeting these expectations through policies and strategies.

MPO – **Metropolitan Planning Organization** – This is the entity responsible for transportation planning in urbanized areas with populations greater than 50,000. The seven MPO's in Missouri serve the Columbia, Jefferson City, Joplin, Kansas City, St. Joseph, St. Louis and Springfield metropolitan areas.

Major Highway System – This system includes all of Missouri's most traveled roads. It consists of approximately 5,600 miles that carry nearly 80 percent of the state's traffic. Approximately 95 percent of Missouri residents live within 10 miles of these roads.

Major Bridge – Any bridge with a total length of at least 1,000 feet or more.

Minor Highway System – This system includes any road that is not on the Major Highway System. This system consists of approximately 27,000 miles, which carry nearly 20 percent of the state's traffic. These roads are often referred to as farm-to-market roads in the state's rural areas.

National Highway System – This is a system of major highway networks established by the federal government that includes interstate routes, many urban and rural principal arterials, the defense strategic highway network and strategic highway connectors.

Planning Framework – This is MoDOT's process of involving the general public and planning partners, which represent regions of the state and local areas, in the identification and prioritization of transportation needs and projects.

Programmed – This means a project has right of way and/or construction funds committed for expenditure in state fiscal years 2012-2016 in the Statewide Transportation Improvement Program.

Reconstruction – This is a type of improvement designed to replace the existing roadway or bridge when it has reached the end of its useful life. Reconstruction is often accompanied by improvements to the highway's functional and operational capacity.

Regionally Significant Project - This is a transportation project on a facility that serves regional transportation needs (such as access to and from the area outside the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, or employment centers; or transportation terminals) and would normally be included in the modeling of the metropolitan area's transportation network. At a minimum, this includes all principal arterial highways and all fixed guide way transit facilities that offer a significant alternative to regional highway travel.

Rehabilitation – This is a type of improvement designed to preserve and extend the service life and enhance the safety of an existing roadway or bridge when total replacement is not warranted.

Right of Way – This is land or property used specifically for transportation purposes.

Safe & Sound Bridge Improvement Program – This is an initiative to improve 802 bridges throughout the state within five years of award. A team of contractors and designers was selected to replace more than 550 bridges as part of a single design-build package and then maintain them for 25 years. The remaining bridges will be rehabilitated using a modified design-bid-build approach. (See Section 4, Safe & Sound Bridges tab.)



SAFETEA-LU – On August 10, 2005, President George W. Bush signed the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU authorizes the federal surface transportation programs for highways, highway safety and transit for the five-year period from 2005 through 2009.

SRI – **Smooth Roads Initiative** – This is one of the elements of Amendment 3 funding that improved pavements and safety on the 2,200 busiest miles of major roads. It was completed in December 2006.

STIP – Statewide Transportation Improvement Program – This is a fiscally constrained five-year listing of transportation projects in Missouri.

STP – **Surface Transportation Program** – This is one of several categories of federal transportation funds and can be used for road, bridge or other improvements.

Substructure – This is the abutments, piers or other bridge elements built to support bridge superstructure. The substructure transfers loads from the superstructure to the ground.

Superstructure – This is the portion of a bridge that supports the bridge deck and traffic loads. The superstructure transfers these loads to the bridge substructure. Examples of superstructure types include trusses, concrete I-beams and steel I-beams.

TEA-21 – The U.S. Congress passed the Transportation Equity Act for the 21st Century (TEA-21) on June 9, 1998. It provided authorizations for highways, highway safety and mass transit for six years. TEA-21 expired September 30, 2003.

TIP – Transportation Improvement Program – This is a fiscally constrained four-year listing of transportation projects within metropolitan planning organizations.

TMA – **Transportation Management Area** – This is the entity responsible for transportation planning in urbanized areas with populations greater than 200,000. Missouri's three TMAs serve the Kansas City, St. Louis and Springfield metropolitan areas.

Work Zone – This is a designated area where highway construction or maintenance is taking place.