

Missouri Statewide Transportation Improvement Program

Introduction

General

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 2010 through 2014 (July 1, 2009 through June 30, 2014.) 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 on August 10, 2005. It funds highways, highway safety, and transit improvements for the five-year period of 2005 through 2009. This document meets all state and federal requirements and is fiscally constrained.

The STIP identifies specific projects MoDOT will undertake in the next five years. It covers highways, bridges, transit, aviation, rail, waterways, enhancements, and other projects. It is a project-specific document that tells Missourians what improvements to expect on their transportation system during this period.

Transition Period

The STIP reflects a construction program in transition. On the one hand, major projects are being provided, such as the Mississippi River Bridge project, the remaining Amendment 3 major projects, the Safe & Sound Bridge Improvement Program, and the American Recovery and Reinvestment Act of 2009 (ARRA) projects. On the other hand, by the end of the five-year period, the construction program focus becomes one of taking care of our existing transportation system. The resources from Amendment 3 will have been fully utilized, and revenues will shrink, forcing MoDOT to concentrate on maintenance- and safety-type projects. Please refer to Section 5 for more details on funding.

American Recovery and Reinvestment Act Projects

During the past year, additional federal funds were made available for ARRA projects. This resulted in approximately \$788 million for shovel-ready transportation projects in Missouri. MoDOT was first in the nation to start an ARRA project. The Osage River bridge replacement project near Tuscumbia on Route 17 in Miller County was started on February 17, 2009, the day ARRA was signed by President Barack Obama. MoDOT started a number of other ARRA projects in state fiscal 2009, in keeping with the intent of the Act. The remaining ARRA projects have been incorporated into this STIP and identified with a special logo and comment in the project description. See the Economic Recovery Project List tab at the end of Section 4 for more details.



Amendment 3 Review

On November 2, 2004, the voters of Missouri approved Amendment 3, which provided additional funds for transportation projects. These additional funds made possible the Smoother, Safer, Sooner program. This program consists of three elements: the Smooth Roads Initiative (SRI), the Accelerated Projects, and New Major Projects (original and additional.) The STIP identifies the remaining projects made possible by Amendment 3 funding with a special logo.

The SRI program was completed in December 2006, one year ahead of schedule. The SRI program improved the pavement, striping, and shoulders on the 2,200 miles of the most heavily traveled roads. The Smooth Roads Initiative represents a great beginning in MoDOT's effort to improve Missouri's major roads, but much more remains to be done.

Better Roads Brighter Future



The major highway system is composed of Missouri's most traveled highways, and consists of approximately 5,600 miles. It carries nearly 80 percent of the state's traffic and approximately 95 percent of Missouri's residents live within 10 miles of these roads. The Better Roads Brighter Future program picks up where SRI left off, making more roads smoother and safer. It will bring 85 percent of Missouri's major highways to good condition by the end of 2011, and keep them in good condition. The Better Roads Brighter Future program started in January 2007, with the acceleration or addition of 34 projects. All known Better Roads Brighter Future projects have been programmed and identified with a special logo. However, changing conditions may require that additional projects be added in future STIPs to meet the goal.

Once the Better Roads Brighter Future goal is achieved in 2011, more STIP resources can be directed toward improving Missouri's minor highway system. The minor highway system carries approximately 20 percent of the state's traffic on approximately 27,000 miles of roadway.

Safe & Sound Bridge Improvement Program



This STIP also includes the Safe & Sound Bridge Improvement Program, an initiative to improve 802 bridges in poor condition around the state. This project was started in state fiscal year 2009. A team of contractors and designers was selected to replace 554 bridges as part of a single design-build package. The remaining 248 bridges will be rehabilitated using a design-bid-build approach. 110 of these structures (quick-start bridges) were awarded in state fiscal year 2009. The remaining 138 structures will be awarded between state fiscal years 2010 and 2013. The remaining Safe & Sound Bridges are identified with a special logo and symbol in the description. See the Safe & Sound Bridges tab at the end of Section 4 for more information on the Safe & Sound Bridge Improvement Program projects.

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 last three multi-year federal transportation bills have emphasized the necessity of public involvement. In Missouri, the approach is to primarily 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 planning, including 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.

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 the 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, 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 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. Perhaps the deficient bridge is no longer needed and can be closed, the road to be resurfaced carries a heavy load of traffic. 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 will 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 will 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 ten years of funding and is not a commitment to design or construct projects. Existing needs will be reevaluated 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.

Once 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 bridge
- 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 will be reevaluated.

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 (MPOs) 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), prepare a Transportation Improvement Program (TIP) within its respective metropolitan planning areas and a respective MPO Long-Range Transportation Plan (LRTP). These TIPs are the accumulation of federally funded projects proposed by their local governments and MoDOT. These projects are consistent with the goals and objectives of the LRTP. MoDOT utilizes 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 and Federal Transit Administration for review. The STIP is also available on MoDOT's website 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 period. MoDOT responds to the comments received during this period. Public comments are either acknowledged or answered depending on the nature of the comment. Most answers or acknowledgements are sent within a week 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 draft is developed and presented to the Missouri Highways and Transportation Commission 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 Commission as well as the Federal Highway Administration and Federal Transit Administration.

Program Amendments

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

A seven-day public comment period is provided for all proposed amendments to the STIP occurring on MoDOT's transportation system. All projects, regardless of proposal time, will follow the public involvement processes and policies defined in MoDOT's planning framework.

Reference Information

Administrative Action or Modification – A change in a project’s fiscal year, or other minor change to a project already in the STIP. Administrative modifications do not require Commission and FHWA/FTA approval. Administrative modifications occur in between the annual STIP updates.

Advance Construction – 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 – The addition of a new project to the STIP or a major change to a project already in the STIP. Amendments require Commission and FHWA/FTA approval. Amendments occur in between the annual STIP updates.

Amendment 3 – 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 (SRI), 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 Act to spur the national economy. ARRA includes funding for shovel-ready transportation projects.

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

Better Roads Brighter Future – A MoDOT initiative to improve and maintain the pavement condition and safety on Missouri’s busiest 5,600 miles. This initiative follows the completion of SRI, which improved the busiest 2,200 miles.

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

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

Engineering – 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 – The demonstration that sufficient funds are reasonably expected to be available to cover the anticipated project costs within the five-year window of the STIP.

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 (SFY) is July 1 through June 30. The federal fiscal year (FFY) is October 1 through September 30.

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

FHWA – Federal Highway Administration – 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 adding turn lanes or widening an intersection.

Intersections – 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). An at-grade intersection has two or more roadways that provide for the movement of traffic on the same level.

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

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

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

MAP – Missouri Advance Planning – 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 – 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 – Missouri’s most traveled roads. This system consists of approximately 5,600 miles, which carry nearly 80 percent of the state’s traffic. Approximately 95 percent of Missouri residents live within 10 miles of these roads.

Minor Highway System – Any road not on the Major Highway System. This system consists of approximately 27,000 miles, which carry nearly 20 percent of the state’s traffic.

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 – MoDOT’s process of involving the public and planning partners in the identification and prioritization of needs and projects.

Programmed – This means a project has right of way and/or construction funds committed for expenditure in state fiscal years 2010-2014 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. Often accompanied by improvements to the functional and operational capacity of the highway.

Rehabilitation – This is a type of improvement designed to preserve and extend the service life and enhances 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 – An initiative to improve over 800 bridges around the state within five years of award and maintain them for 25 years. 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 – One of the elements of Amendment 3 funding, completed in December 2006, which improved pavements and safety on the 2,200 busiest miles of major roads.

STIP – Statewide Transportation Improvement Program – Fiscally constrained five-year listing of transportation projects in Missouri.

STP – Surface Transportation Program – One of several categories of federal transportation funds.

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 – 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 Sept. 30, 2003.

TIP – Transportation Improvement Program – Fiscally constrained four-year listing of transportation projects within Metropolitan Planning Organizations.

TMA – Transportation Management Area – The entity responsible for transportation planning in urbanized areas with populations greater than 200,000. The three TMA's 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.