

# Statewide Transportation Improvement Program

## -- Introduction --

The Missouri Department of Transportation, in accordance with state law and the federal Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), has prepared this Statewide Transportation Improvement Program, for state fiscal years 2006 through 2010 (July 1, 2005 – June 30, 2010). The Statewide Transportation Improvement Program prepared annually, includes all projects proposed for funding under TEA-21 and its extensions, Vision 100 - The Century of Aviation Act and state general revenue.

The Statewide Transportation Improvement Program sets forth the specific construction projects MoDOT will undertake in the next five years. It covers highways, bridges, transit, aviation, rail, waterways, enhancements and other projects. It is the project-specific product that tells Missourians what improvements to expect on their transportation system during this period.

A general election was held on November 2, 2004 for the qualified voters of the State of Missouri. The result of this election was a state constitutional amendment that increased MoDOT's share of existing revenues. The amendment required the bonding of the additional revenue. The estimated bonding level resulting from this additional revenue is approximately \$1.7 to \$1.9 billion. At the January 14, 2005 Missouri Highways and Transportation Commission meeting, the 2005-2009 Statewide Transportation Improvement Program was amended to include projects identified for funding from the resulting additional revenue from the constitutional amendment. These projects consisted of two elements. The first element was the "Smooth Roads Initiative". The goal of this initiative was to improve the pavement, striping and shoulders of the 2,200 miles of roads in Missouri that carry 60% of the vehicle traffic. About 86 percent of all Missourians live within 10 miles of one of these roads. The second element was the acceleration of major projects already in the 2005-2009 Statewide Transportation Improvement Program. The total programmed dollar amount of the first element or the "Smooth Roads Initiative" was \$375 million. The total programmed dollar amount of projects accelerated in the second element was \$427 million. Since the second element was already funded in the 2005-2009 Statewide Transportation Improvement Program, it did not impact the bonding level of \$1.7 to \$1.9 billion. The remaining bonding funds which consist of the estimated \$1.7 to \$1.9 billion, less the \$375 million for the "Smooth Roads Initiative" were used to fund Element 3. Element 3 consists of the identification of major projects of statewide significance through the Planning Framework Process.

Due to uncertainty in predicting degradation of pavements and bridges, taking care of the system funds are not fully programmed beyond 2006. This accounts for program levels being lower than the available funds in these years. Efforts are being made to fully develop and program the major projects throughout the entire program. These efforts are displayed Section 3 titled "Scoping and Design 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 1998 Transportation Equity Act for the 21st Century (TEA-21) reemphasized 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 electing 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.

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 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 construction

### **Develop 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 next several years.

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.

## **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, which target the state of repair of road and bridge components, and functional needs, which 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 the concern for meeting air quality standards in metropolitan areas. However, simply being an immediate need does not imply higher priority. Perhaps the deficient bridge is no longer needed and can be closed, while not meeting air quality standards could have a significant fiscal impact on future transportation projects and serious environmental consequences. 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 will be prioritized when MoDOT's long-range transportation plan is updated; 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. 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. 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 solutions. 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

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 group. 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 group. Projects on the high-priority project list are candidates for funding. The projects, which were selected for funding, are show in Section 4.

Additionally, each of Missouri's seven metropolitan planning organizations located in Columbia, Joplin, Kansas City, St. Joseph, St. Louis, Jefferson City and Springfield, prepare a transportation improvement program within its respective metropolitan planning areas. These transportation improvement plans are the accumulation of federally funded projects proposed by their local governments and MoDOT. MoDOT utilizes public input received throughout the year to develop its submittal for the Metropolitan Planning Organizations transportation improvement program. Each Metropolitan Planning Organizations has approved public involvement plans for its respective areas that allow for review and feedback from individual citizens, organizations, agencies and local area governments. Using public input as one of its decision factors, the Metropolitan Planning Organizations determines the projects in its area that will be programmed for construction. These transportation improvement plans are integrated into the five-year Statewide Transportation Improvement Program without modification.

### **Public Review Period**

After a preliminary draft of the Statewide Transportation Improvement Program, based on public and engineering input is developed, a 45-day public review period begins. During this public review period, the program is distributed to MoDOT districts for public access and the Federal Highway Administration for review. Citizens have the opportunity to provide written comments, verbal comments or telephone comments (by calling 1-888-ASK MODOT) to district representatives during this period. The Statewide Transportation Improvement Program is also available on MoDOT's website at [www.modot.org](http://www.modot.org). Changes are made 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 to evaluate its production process and to begin making improvements on next year's program. The Statewide Transportation Improvement Program becomes effective when approved by the commission.

### **Program Amendments**

Projects can be amended to the Statewide Transportation Improvement Program and to a metropolitan area transportation improvement plan. The public involvement process for Statewide Transportation Improvement Program amendments will occur prior to incorporating the project in the program. Public involvement on projects inside a metropolitan planning organization area will be done by the metropolitan planning organization according to its approved transportation improvement plan amendment process.

For amended projects outside Metropolitan Planning Organizations boundaries considered to be major transportation corridor investments, a 45-day public review period will be provided. During this public review period, information defining each project will be distributed to the affected MoDOT districts. Citizens will have the opportunity to telephone or write comments to district representatives during this period. MoDOT's Transportation Planning Division and MoDOT's districts around the state are responsible for notification and education of this review process. Notification should begin a minimum of 15 days prior to the public-review period.

Comments for projects outside Metropolitan Planning Organizations boundaries not considered major transportation investments are solicited from the affected governing bodies including counties and/or cities. After concurrence by all affected parties, the projects are amended quarterly into the Statewide Transportation Improvement Program.

## Reference Information

**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.

**Culvert** - This is generally 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.

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

**Fiscal Year** - This is a 12-month period 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 Oct. 1 through Sept. 30

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

**Geometric Improvement** – This project includes roadway improvements other than a surface treatment, such adding turn lanes or widening an intersection.

**Intersections** – This 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 and award a contract to the lowest responsible and responsive bidder.

**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.

**Programmed** – This means the status of a project that has right-of-way or construction funds planned for expenditure in state fiscal years 2006-2010 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 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.

**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 truss, concrete I-beams, and steel I-beams.

**TEA-21** - Congress passed the Transportation Equity Act for the 21st Century (TEA-21) June 9, 1998. It provided authorizations for highways, highway safety, and mass transit for six years. TEA-21 expired Sept. 30, 2003, and is currently under a continuing resolution.

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

## Glossary of Acronyms

### Document Acronyms

TEA-21	Transportation Equity Act for the 21st Century
MPO	Metropolitan Planning Organization
TMA	Transportation Management Area
TIP	Transportation Improvement Program
LRTP	Long-Range Transportation Improvement Plan
SFY	State Fiscal Year (ex. July 2005 – June 2006)
FFY	Federal Fiscal Year (ex. Oct. 2005 – Sept. 2006)
FFOS	Funding From Other Sources
NHS	National Highway System
STP	Surface Transportation Program