

# ***FUTURE MOBILITY IN ARKANSAS:***

Meeting the State's Need for Safe and Efficient Mobility

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*Founded in 1971, TRIP ®, of Washington, DC is a nonprofit organization that researches, evaluates and distributes economic and technical data on surface transportation issues. TRIP is sponsored by insurance companies, equipment manufacturers, distributors and suppliers; businesses involved in highway and transit engineering, construction and finance; labor unions; and organizations concerned with an efficient and safe highway transportation network.*

## **Executive Summary**

Arkansas' extensive system of roads, highways, bridges and public transit provides the state's residents, visitors and businesses with a high level of mobility. As the backbone that supports the Natural State's economy, Arkansas' surface transportation system provides for travel to work and school, visits with family and friends, and trips to tourist and recreation attractions while simultaneously providing businesses with reliable access for customers, suppliers and employees. With an unemployment rate of 7.8 percent, and with the state's population continuing to grow, Arkansas must improve its transportation system to foster economic growth, keep business in the state, and ensure the safe, reliable mobility needed to maintain and improve the quality of life for all residents.

As Arkansas looks to rebound from the current economic downturn, the state will need to improve the physical condition of its surface transportation network and enhance the system's ability to provide efficient and reliable mobility for residents, visitors and businesses. Making needed improvements to Arkansas' roads, highways, bridges and transit could provide a significant boost to the state's economy by creating jobs and stimulating long-term economic growth as a result of improved mobility and access.

The federal government is an essential source of funding for the ongoing modernization of Arkansas' roads, highways, bridges and transit. But recent declines in federal transportation revenues and increases in the cost of construction materials are making it more difficult for the state to maintain and improve its surface transportation system.

Approved in February 2009, the American Recovery and Reinvestment Act provides approximately \$352 million in stimulus funding for highway and bridge improvements and \$28 million for public transit improvements in Arkansas. This funding can serve as a down payment on needed road, highway, bridge and transit improvements, but it is not sufficient to allow the state to proceed with numerous projects needed to modernize its surface transportation system. Meeting Arkansas' need to improve and maintain its system of roads, highways, bridges and transit will require a significant, long-term boost in transportation funding at the federal, state or local levels.

Congress is currently deliberating over a long-range federal surface transportation program. The current program, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), originally scheduled to expire on September 30, 2009, now expires on December 31, 2010 following five short-term extensions. The level of funding and the provisions of a future federal surface transportation program will have a significant impact on future highway and bridge conditions and safety as well as the level of transit service in Arkansas, which, in turn, will affect the state's ability to improve its residents' quality of life and enhance economic development opportunities.

**The federal surface transportation program is an essential source of funding for the construction, maintenance and improvement of Arkansas' system of roads, highways, bridges and public transit.**

- Federal spending levels for highways and public transit are based on the current federal surface transportation program, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), which was approved by Congress in 2005. SAFETEA-LU, originally scheduled to expire on September 30, 2009, now expires on December 31, 2010 after five short-term extensions.
- From 1998 to 2008, Arkansas received approximately \$5.04 billion in federal funding for road, highway and bridge improvements, and \$239 million for public transit, a total of approximately \$5.28 billion.
- On average, under SAFETEA-LU, federal funds provide 56 percent of revenues used annually by the Arkansas State Highway and Transportation Department (AHTD) to pay for road, highway and bridge construction, repairs and maintenance.
- Federal funds also provide 42 percent of the revenue used annually to pay for the operation of and capital improvements to the state's public transit systems, which includes the purchase and repair of vehicles and the construction of transit facilities.
- From 1991 to 2008, Arkansas modernized approximately 7,500 miles and widened approximately 1,200 miles of major roadways and built, replaced or significantly reconstructed 1,508 bridges. These transportation projects improved safety and enhanced mobility and economic productivity. Many of the projects were undertaken with federal funds.
- This report contains lists of projects completed throughout Arkansas that used significant federal funding including rehabilitating 91 miles of I-30 from Texarkana to Little Rock and 132 miles of I-40 from the Oklahoma state line to just west of the Faulkner/Pulsaki County line and reconstructing interchanges on I-30 in Texarkana and on Hwy 63 in Crittenden, Pointsett and Craighead counties. Federal funding also helped Arkansas construct I-540, Hwy 549 and U.S. 67 to Interstate standards, widen several freeways, and reconstruct the existing roadway and add lanes on I-30 and I-40.
- While construction materials costs have stabilized somewhat during the current recession, a 58 percent materials cost increase in Arkansas over the past five years, coupled with declines in federal transportation revenues, will make it more difficult for Congress to authorize new federal surface transportation legislation that adequately funds needed improvements to the nation's roads, highways, bridges and public transit systems.

**Without a substantial boost in federal or state highway funding, Arkansas will be unable to complete numerous projects to improve the condition and expand the capacity of roads, bridges, highways and public transit, hampering the state's ability to improve mobility and enhance economic development opportunities.**

- From 2009 to 2018, Arkansas needs to modernize 3,800 miles of major roadway, add 230 new lane miles, and rebuild, replace or significantly reconstruct 1,452 bridges.
- Needed projects in Arkansas that would require a significant boost in federal or state funding to proceed include major reconstruction, pavement preservation projects and roadway widening on 15 state highways statewide, plus repair or replacement of bridges on I-40 at Lake Dardanelle in Pope County, on I-40 over the White River in Prairie county and on I-540 on the Arkansas River in Sebastian and Van Buren counties. A list of needed projects is included in the report.
- To ensure that federal funding for highways and bridges in Arkansas and throughout the nation continues beyond the expiration of SAFETEA-LU, Congress needs to approve a new long-term federal surface transportation program by December 31, 2010.
- The American Recovery and Reinvestment Act provides approximately \$352 million in stimulus funding for highway and bridge improvements and \$28 million for public transit improvements in Arkansas.

**Despite the current economic slump, Arkansas has experienced significant growth of population, vehicle travel and economic output since 1990. Population and economic growth in the Natural State have resulted in increased demands on the state's major roads and highways.**

- Arkansas' population reached 2.9 million in 2009 an increase of 23 percent since 1990. The state's population is expected to grow another 13 percent by 2030, an increase of approximately 385,000 people.
- Vehicle travel in Arkansas increased 52 percent from 1990 to 2008 -- the tenth largest increase in the nation. Vehicle miles of travel (VMT) increased from 21 billion in 1990 to 32 billion VMT in 2008.
- By 2025, vehicle travel in Arkansas is projected to increase by another 40 percent.
- From 1990 to 2008, Arkansas' gross domestic product (GDP), a measure of the state's economic output, increased by 57 percent, when adjusted for inflation.
- Arkansas' unemployment rate rose from 4.8 percent in April 2008 to 7.8 percent in April 2010.

**Commuting and commerce in Arkansas are constrained by growing traffic congestion, which will increase in the future unless additional highway capacity is provided. Three of Arkansas' five most significant highway chokepoints are located in the Little Rock area.**

- Arkansas faces increasing congestion on its urban Interstates and other highways or freeways. In 2008, 39 percent of the state's urban highways carried a level of traffic that is likely to result in significant delays during peak travel hours.
- According to a report by the Reason Foundation, unless additional highway capacity is added, traffic delays in the Little Rock area will increase 44 percent by 2030.
- According to the Texas Transportation Institute, Little Rock-area drivers were delayed in congestion an average 22 hours in 2007.
- The following list indicates the three most congested highway chokepoints in the state that impede commuting, personal travel or commerce. A full list of the most congested chokepoints is included in the report.

Rank	Urban Area	Route	Chokepoint description
1	Little Rock	I-430/I-630 Interchange	High delays during peak periods. Ramp demands exceed capacity at multiple approaches. I-630 terminates just west of the interchange at a signalized intersection; queues from this extend through the interchange during PM peak period, interfering with normal freeway operations. Queues that form at this interchange extend for miles, subsequently interfering with other interchanges. Safety is a major concern.
2	Bella Vista	Hwy 71B/Co. Rd. 40 Intersection	High commuter traffic in the peak period results in major delay on the approaches and queues that extend for several miles. Queues that form in the northbound direction in the PM peak period extend into the Hwy 71/County Road 40 intersection to the south, creating safety concerns.
3	Jacksonville	Hwy 67/Hwy 440 Interchange	Lack of adequate capacity northeast of the interchange on Hwy 67 (four through lanes) results in queues during peak periods that extend for several miles (and to a lesser extent on the Hwy 440 ramp in the PM peak period).

**In 2008, more than a third - 34 percent - of major roads in Arkansas were in poor or mediocre condition, providing motorists with a rough ride.**

- In 2008, nine percent of Arkansas' roads were rated in poor condition and 25 percent were rated in mediocre condition. This includes Interstates, highways, connecting urban arterials and key urban streets that are maintained by state, county or municipal governments.

- Roads rated in poor condition may show signs of deterioration, including rutting, cracks and potholes. In some cases, poor roads can be resurfaced, but often are too deteriorated and must be reconstructed. Roads rated in mediocre condition may show signs of significant wear and may also have some visible pavement distress. Most pavements in mediocre condition can be repaired by resurfacing, but some may need more extensive reconstruction to return them to good condition.
- Roads in need of repair cost each Arkansas motorist an average of \$308 annually in extra vehicle operating costs – \$634 million statewide. Costs include accelerated vehicle depreciation, additional repair costs and increased fuel consumption and tire wear.
- Highways and major roadways in the Little Rock metropolitan area provide even rougher rides. Little Rock roads, 28 percent of which are rated in poor condition and 33 percent of which are rated mediocre, cost motorists an average \$483 a year.
- The functional life of Arkansas' roads is greatly affected by the state's ability to perform timely maintenance and upgrades to ensure that structures last as long as possible. It is critical that roads are fixed before they require major repairs because reconstructing roads costs approximately four times more than resurfacing them.

**Twenty-two percent of bridges in Arkansas show significant deterioration or do not meet current design standards. This includes all bridges that are 20 feet or more in length and are maintained by state, local and federal agencies.**

- In 2009, seven percent of Arkansas' bridges were structurally deficient. A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Structurally deficient bridges are often posted for lower weight or closed to traffic, restricting or redirecting large vehicles, including commercial trucks, school buses and emergency services vehicles.
- In 2009, 15 percent of Arkansas' bridges were functionally obsolete. Bridges that are functionally obsolete no longer meet current highway design standards, often because of narrow lanes, inadequate clearances or poor alignment.
- This report contains a list of needed bridge rehabilitation and replacement projects across the state that would require significant federal funding to be completed.

**Arkansas' rural traffic fatality rate is significantly greater than the fatality rate on all other roads in the state. Improving safety features on Arkansas' roads and highways would likely result in a decrease in traffic fatalities in the state. Roadway design is an important factor in approximately one-third of all fatal and serious traffic accidents.**

- Between 2004 and 2008, 3,271 people were killed in traffic accidents in Arkansas, an average of 654 fatalities per year.

- Arkansas' traffic fatality rate was 1.81 fatalities per 100 million vehicle miles of travel (VMT) in 2008, the fifth highest fatality rate in the country and 44 percent higher than the national average of 1.25.
- The traffic fatality rate in 2008 on Arkansas' non-Interstate rural roads was 2.60 traffic fatalities per 100 million VMT, which is more than double the traffic fatality rate of 1.14 fatalities per 100 million VMT on all other roads and highways in the state.
- Several factors are associated with vehicle accidents that result in fatalities, including driver behavior, vehicle characteristics and roadway design. It is estimated that roadway design is a factor in approximately one-third of fatal traffic accidents.
- Where appropriate, highway improvements can reduce traffic fatalities and accidents while improving traffic flow to help relieve congestion. Such improvements include removing or shielding obstacles; adding or improving medians; adding rumble strips, median cable barriers, wider lanes, wider and paved shoulders; upgrading roads from two lanes to four lanes; and better road markings, signing, traffic signals, and lighting.
- The Federal Highway Administration has found that every \$100 million spent on needed highway safety improvements will result in 145 fewer traffic fatalities over a 10-year period.

**Two congressionally appointed commissions and a national organization representing state transportation departments have recommended a broad overhaul of the Federal Surface Transportation Program to improve mobility, safety and the physical condition of the nation's surface transportation system by significantly boosting funding, consolidating the program into fewer categories, speeding up project delivery and requiring greater accountability in project selection.**

- The National Surface Transportation Policy and Revenue Study Commission (NSTPRSC) and the National Surface Transportation Infrastructure Financing Commission (NSTIFC) were created by Congress to examine the current condition and future funding needs of the nation's surface transportation program, develop a plan to insure the nation's surface transportation system meets America's future mobility needs, and to recommend future funding mechanisms to pay for the preservation and improvement of the nation's roads, highways, bridges and public transit systems.
- The NSTPRSC concluded that it is critical to the future quality of life of Americans that the nation create and sustain the preeminent surface transportation system in the world, one that is well-maintained, safe and reliable.
- The NSTIFC found that the U.S. faces a \$2.3 trillion funding shortfall over the next 25 years in maintaining and making needed improvements to the nation's surface transportation system.

- The NSTIFC found that the use of motor fuel fees is not sustainable as a primary source of funding for the nation's surface transportation system because of the shift to a variety of fuel sources and more fuel efficient vehicles.

**Key recommendations of the Commissions and the American Association of State Highway Transportation Officials (AASHTO) include:**

**Program format:**

- Consolidate the more than 100 current transportation funding programs into 10 programs focused on key areas of national interest, including congestion relief, preservation of roads and bridges, improved freight transportation, improved roadway safety, improved rural access, improved environmental stewardship, and the development of environmentally-friendly energy sources (NSTPRSC).
- Speed up project development processes to reduce the excessive time required to move projects from initiation to completion by better coordinating the development and review process for transportation projects (NSTPRSC).
- Develop a future federal surface transportation program that would be accountable for results, would make investments based on community needs and would deliver projects on time and on budget (AASHTO).
- Provide a federal surface transportation program that is based on state-driven performance measures and is focused on six objectives of national interest: preservation and renewal, interstate commerce, safety, congestion reduction and connectivity for urban and rural areas, system operations, and environmental protection (AASHTO).

**Funding:**

- Shift the collection of federal surface transportation revenues from fuel taxes to mileage-based fees, which would charge motorists a fee based on the number of miles driven, with full deployment of a comprehensive system in place by 2020 (NSTIFC).
- Ensure that once implemented, mileage-based fees were indexed to inflation and that they and any other federal transportation charges were set at a rate that would provide enough revenue to provide adequate federal funding to ensure that the nation achieve an integrated national transportation system that is less congested and safer and that promotes increased productivity, stronger national competitiveness, and improved environmental outcomes (NSTIFC).
- Failure to address the immediate funding shortfall and provide adequate long-term funding for surface transportation will lead to unimaginable levels of congestion, reduced safety, costlier goods and services, eroded quality of life and diminished economic competitiveness (NSTIFC).
- In the short term, significantly boost the current federal motor fuel tax and index it to inflation to support increased federal surface transportation investment (NSTIFC).



- Expand the ability to use additional surface transportation funding sources including tolling, state investment banks and public-private partnerships as a supplement to primary sources of funding such as motor fuel fees and eventually a mileage-based fee (NSTIFC).

**The efficiency of Arkansas' transportation system, particularly its highways, is critical to the health of the state's economy. Businesses are increasingly reliant on an efficient and reliable transportation system to move products and services. Expenditures on highway repairs create a significant number of jobs. Significant increases in the cost of highway construction materials over the last five years have boosted the cost of road, highway and bridge repairs.**

- Annually, \$92 billion in goods are shipped from sites in Arkansas and another \$78 billion in goods are shipped to sites in Arkansas, mostly by trucks.
- Eighty-five percent of the goods shipped annually from sites in Arkansas are carried by trucks and another four percent are carried by courier services, which use trucks for part of the deliveries. Similarly, 84 percent of the goods shipped to sites in Arkansas are carried by trucks and another eight percent are carried by courier services.
- Commercial trucking in Arkansas is projected to increase 34 percent by 2020.
- A 2007 analysis by the Federal Highway Administration found that every \$1 billion invested in highway construction would support approximately 27,800 jobs, including approximately 9,500 in the construction sector, approximately 4,300 jobs in industries supporting the construction sector, and approximately 14,000 other jobs induced in non-construction related sectors of the economy.
- Over the five-year period from December 2004 to December 2009, the average cost of materials used for highway construction in Arkansas – including asphalt, concrete, steel, lumber and diesel – increased by 58 percent.

*All data used in the report is the latest available. Sources of information for this report include the Arkansas State Highway and Transportation Department (AHTD), the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the National Surface Transportation Policy and Revenue Study Commission (NSTPRSC), the National Surface Transportation Infrastructure Financing Commission (NSTIFC), The American Association of State Highway and Transportation Officials (AASHTO), the U.S. Census, The Bureau of Transportation Statistics (BTS), the National Highway Traffic Safety Administration (NHTSA), the Reason Foundation and the Texas Transportation Institute (TTI).*