



# Director's Letter

July 2017

#### Greetings!

Every day, Arkansans rely on our transportation system to get to work, to school, to go shopping, and visit our beautiful lakes and mountains. Our local businesses use this same system to

intermodal transportation system is the backbone of a modern, competitive, and productive economy that connects highways, rail, waterways, and air transport making the movement of people and goods more efficient, supporting trade and commerce, connecting supply chains, and reducing operating costs for everyone.

Over the past 18 months, our staff updated the Statewide Long Range Intermodal Transportation Plan to create a performance-based blueprint for the future of transportation in Arkansas. Thousands of citizens were involved in the development of the Plan goal, objectives, and implementation strategies. The Plan examines all aspects of the Arkansas' intermodal transportation system including highways, bridges, public transportation, rail, bicycle, pedestrian, ports and waterways, and aviation.

Tough issues were addressed – such as a growing and aging population and the expected growth in travel and freight shipments over the next 25 years. More and more, individuals and businesses want reliability in their travel options whether it is knowing how long a trip will take or if they can deliver their cargo on time.

At the same time, our staff also updated the Department's Strategic Plan identifying our mission, vision, core values and strategic goals related to providing the best transportation

With the completion of these two Plans, we have collectively identified policies and strategies system for Arkansas. that will assist in moving Arkansas' transportation system forward to meet the 21st century challenges. Investing in our intermodal transportation system will sustain and increase jobs, productivity, travel time reliability, and in turn, improve Arkansas' economic competitiveness. While the challenges of preserving, maintaining and modernizing our intermodal transportation systems are significant, we must be bold and lead the effort because it is necessary for supporting population and economic growth and providing our homegrown businesses a competitive edge in delivering goods to local, regional and global markets.

These are exciting, but challenging times for transportation in our state. However, I look forward to working together with the citizens of Arkansas to implement this Long Range Plan, which outlines how we can move the Arkansas intermodal transportation system forward.

Scott E. Bennett, P.E. Director





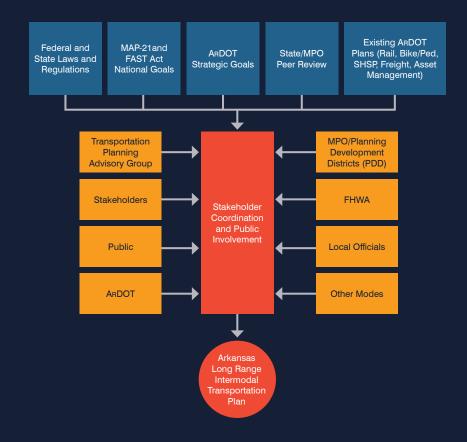
# Introduction to the Plan

The Arkansas Long Range Intermodal Transportation Plan (LRITP) is the state's first performance-based long range plan. This means that for the first time, system performance will be evaluated to measure progress toward meeting LRITP goals and objectives. Performance-based planning will help the Arkansas Department of Transportation (ARDOT) as it evaluates and prioritizes projects and programs, and develops performance reports to track progress.

The LRITP is a comprehensive document that details goals, objectives, policies, investment strategies, and performance measures that will guide future transportation investments to move Arkansas forward. It examines all aspects of the state's multimodal transportation system, including highways, bridges, public transportation, rail, bicycle, pedestrian, ports, waterways, and aviation.

Public and stakeholder outreach was an important part of the plan development process. Those efforts included creating a project website, forming the Transportation Plan Advisory Group, holding two rounds of regional public/stakeholder meetings, presenting to various organizations around the state, and using an online engagement tool to gather feedback on transportation priorities, preferences, and investments opinions.

The final outcome of the LRITP is a framework for ARDOT to move forward in concert with the Department's Strategic Plan to set priorities through a performance-based, data-driven decision making process.



#### The LRITP specifically includes the following:

- · Goals and objectives
- · Analysis of trends and the role of transportation in the economy
- Description of the existing multimodal transportation system and its condition
- Multimodal transportation system needs through 2040
- Baseline revenue forecast through 2040 with funding options
- Performance measures aligned with the identified goals and objectives
- Analysis of alternative future scenarios
- Policy recommendations and implementation strategies

The LRITP is aligned with national goal areas defined in Moving Ahead for Progress in the 21st Century Act (MAP-21) and Fixing America's Surface Transportation Act (FAST Act) of 2015:

- Safety
- Infrastructure condition
- Congestion reduction
- System reliability
- · Freight movement and economic vitality
- Environmental sustainability
- Reduced project delivery delays

# Vision and Goals

#### **ARDOT Vision**

Continue to preserve and improve Arkansas' transportation system emphasizing safety, efficiency, quality, trust, and stewardship with a public service focused workforce

#### Goals

A key component of the performance-based planning process is the establishment of goals and objectives that create a framework for the performance-based plan. Goals and objectives provide a foundation for the development of performance measures and establish the strategic direction that will drive investment decisions over the life of the plan.

The goals and objectives development process included a review of federal and state laws and regulations, review and coordination with the Department's strategic goals, a review of existing plans, coordination with the concurrent development of the Statewide Freight Plan and the Transportation Asset Management Plan, and a peer review of goals and objectives from other states and MPOs.

#### **Safety and Security**

Improve statewide safety by funding projects reducing fatal and serious injury crashes, reducing vulnerability (the magnitude of impact on the system due to events such as major traffic incidents, flooding, lane closures, bridge failures, and seismic activity), and improving resiliency of the system (the ability of the system to recover from these events)

# Multimodal Transportation System

Partner with responsible modal agencies, local jurisdictions, and planning organizations working to improve safety, accessibility, and connectivity for the movement of people and goods

# **Environmental Sustainability**

Enhance the performance of the transportation system while avoiding, minimizing, and/or mitigating impacts to natural and cultural resources

# Economic Competitiveness

Improve intermodal transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness

#### Infrastructure Condition

Invest in existing highways and bridges to maintain and preserve the existing system

Invest in the multimodal transportation system to improve mobility, connectivity, accessibility, and reliability for people and goods



# **Engagement Process**

The development of the LRITP included an extensive engagement process that gave a variety of stakeholders the opportunity to provide input into the plan and its development. Input from stakeholders was collected through a variety of tools:

#### Stakeholder Interviews

Some of the key takeaways included the need to prioritize maintaining the current transportation system, a need for a multimodal focus in the state, the importance of regional connectivity and the need to improve it, a recognition that safety is very important, a concern about long-term funding for transportation, a desire for ARDOT to focus on improving partnerships, and a recognition of transportation's role in the state's economy.

# Transportation Planning Advisory Group (T-PAG)

The T-PAG was formed as an advisory committee to guide the development of the LRITP. The group met three times and as part of their discussions provided input on issues important to Arkansas and transportation within the state and outlined the next steps the state needs to take to meet the LRITP goals and objectives.

#### **MPO** Coordination

During the plan development process all eight Metropolitan Planning Organizations (MPOs) were engaged through a meeting and presentation regarding the goals and objectives of the LRITP. Presentations were also made to all of the MPOs detailing plan and goal development and highlighting feedback from stakeholder meetings. Additionally, feedback from the MPOs was solicited regarding the alternative future scenarios.

# Public Open House Meetings and Comment Cards

Five open house public meetings were conducted in October 2015 in North Little Rock, Monticello, Springdale, Jonesboro, and Hope. Feedback requested at the meetings and through comment cards included feedback on the LRITP goals and the state's transportation priorities. The majority of stakeholders indicated they were comfortable with the goals presented. Infrastructure Condition and Safety and Security were ranked highest. In response to identifying top transportation priorities, maintaining the current transportation system assets was ranked most often as a top priority.

#### Targeted Stakeholder Meetings

Nine targeted stakeholder meetings were held in June 2016 in Batesville, Conway, El Dorado, Greenwood, Harrison, Hot Springs, Pine Bluff, Pocahontas, and Wynne. Of the future scenarios presented, *Keep It Smooth – Preserve the Investment*, had the most support. Some of the other major themes coming out of the meetings included the importance of the city/county/state funding split, the importance of supporting the transportation needs of existing businesses and economic development opportunities, a need for increased communication and coordination between state and local agencies, concerns about ARDOT's mowing policies and practices, and the need to find a long-term funding solution.



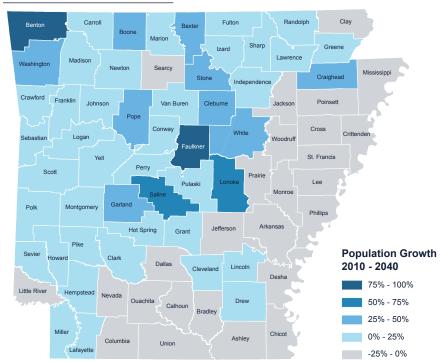
# **Existing Trends**

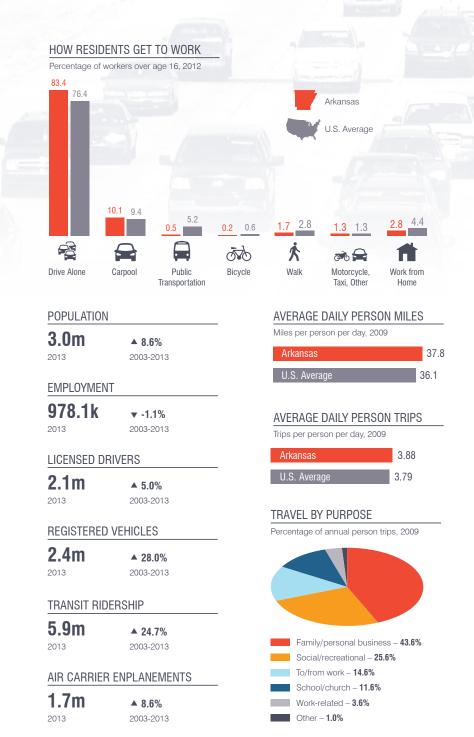
Arkansas' population is expected to surpass 3.3 million by year 2040. Out of 75 counties, 26 counties are expecting a decrease in population. The decrease in population is concentrated in rural counties and is offset by the increase in population in counties near urban and suburban population centers such as Benton, Faulkner, Saline, and Lonoke counties.

In 2016, Arkansas current-dollar Gross Domestic Product (GDP) was \$120.7 billion and ranked 34th in the United States. In 2006, Arkansas GDP was \$94.8 billion and ranked 34th in the United States. In 2016, Arkansas real GDP grew 0.8 percent; the 2015-2016 national change was 1.5 percent. The 2006-2016 compound annual growth rate for Arkansas real GDP was 0.7 percent; the compound annual growth rate for the nation was 1.1 percent.

Increasing population and employment are putting greater demand on the existing transportation system. Mirroring the population and employment growth, vehicles miles traveled (VMT) and transit ridership are projected to continue to increase.

#### PROJECTED POPULATION GROWTH





Source: USDOT Bureau of Transportation Statistics (retrieved April 2017)

#### Arkansas 🛛 (412) (6Z) (16) Fort Smith Regional (64) , West Memphis Rock **D** PineBluii Airport (35). Port Railroad Waterway Arkansas (167) Interstate **US Route** State Highway Urban Area Arkansas vs National VMT Trends ∢3,400 36▶ ₹3.200 34▶ 32▶ 43,000 **Arkansas ranks** 30 ▶ 42,800 6th in the nation in 28,▶ **Annual Vehicle Miles** 26▶ 42,600 Arkansas Traveled (AVMT) per 24▶ **42,400** registered vehicle. 22 National 42,200 20▶

₹2,000

2015

2010

18▶

2000

2005

### Transportation Infrastructure

#### MILES OF STATE HIGHWAYS

### 16,424

Roads to be reconciled with acceptable pavement ride quality based on International Roughness Index, 2012

Arkansas

80.1% 81.3%

U.S. Average

ARDOT is responsible for maintaining and improving the State Highway System (SHS), which includes 16,424 miles and 7,279 bridges. Although the SHS constitutes only 16 percent of the total public roadway miles (102,609), it carries 75 percent of the total traffic and 95 percent of all heavy truck traffic.

#### MILES OF FREIGHT RAILROADS

### 2,698

Approximately 70 percent of Arkansas rail traffic is through traffic without an Arkansas origin or destination. Coal has been by far the highest tonnage commodity carried on the Arkansas rail network.

#### TRANSIT SYSTEMS

#### **17**

There are eight urbanized and nine rural transit systems providing service in Arkansas. Additionally, over 200 human service agencies support transportation services for seniors, persons with disabilities, and persons seeking employment opportunities.

#### **BRIDGES**

### 12,667

Bridges classified as functionally obsolete, 2013

Arkansas

U.S. Average **13.7**%

Bridges classified as structurally deficient, 2012

Arkansas

6.7% 10.1%

15.6%

U.S. Average

There are 12,667 bridges on public roads in Arkansas, of which 7,279 bridges are on the SHS.

#### MILES OF WATERWAYS

### 1,860

Arkansas has the nation's third largest inland waterway system. It consists of four commercially active waterways and one river (the Red River) designated as a future navigable waterway. Arkansas has 12 riverports and slackwater harbors.

#### **PUBLIC USE AIRPORTS**

#### 92

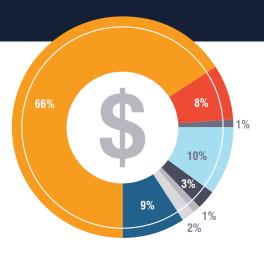
Arkansas is home to four primary airports, four nonprimary airports, and 84 general aviation and public use airports. Over 39,700 jobs can be traced to aviation.

Source: USDOT Bureau of Transportation Statistics (retrieved April 2017); 2015 Needs Study

# Transportation System Needs

The estimated cost of meeting the 25-year needs to preserve, maintain, modernize, and expand the Arkansas highway system (bridges, highways, interchanges, and transportation support system) totals \$53.7 billion (2014\$). In addition to these needs, transportation providers work with public and private partners at the local, regional, federal levels to address other needs including passenger and freight rail operations, ports and waterways, bicycle and pedestrian needs, and public transportation. The 25-year cost of these additional needs is estimated to be \$9.1 billion (2014\$).





- Highways \$41.54 Billion
- Bridges \$4.93 Billion
- Interchanges \$0.82 Billion
- Transportation Support System \$6.38 Billion
- Rail Facility \$1.72 Billion
- Ports and Waterways \$0.74 Billion
- Bicycle and Pedestrian \$1.00 Billion
- Public Transportation \$5.69 Billion

#### **Highways**

- Approximately 1,175 centerline miles of highway need to be expanded in order to accommodate future traffic
- By 2040, over 33,000 lane miles will need to be preserved and over 12,000 lane miles will need to be rehabilitated

### **Transportation Support System**

- \$4.6 billion is needed to perform routine maintenance and ITS on the existing system
- Safety improvements of \$1.8 billion are needed to reduce fatality rates over the next 25 years

Arkansas' 25-year transportation system needs total \$62.8 billion, out of which \$53.7 billion is estimated for highways, bridges, interchanges and transportation support.

# **Bridges**

- 1,170 bridges in the state are classified as deficient and require major rework
- Approximately \$4.9 billion is needed to rehabilitate existing bridges

### **Rail Facility**

- 286 miles of class III rail lines are in poor state of repair and require upgrades
- Passenger rail service is needed between central Arkansas and northwest Arkansas

#### **Bicycle and Pedestrian**

- Creation of statewide bike-way network
- Improve the physical network of pedestrian accommodations, especially as they relate to travel along and across arterial roadways

### Interchanges

 Six major interchanges within fast growing corridors will likely require modification over the next 25 years

### **Ports and Waterways**

- Port infrastructure needs total \$193 million
- Maintenance and dredging needs on Arkansas' navigable rivers total \$549 million

### **Public Transportation**

- An additional 8.4 million rural and urban passenger trips are expected over the next 25 years
- Expansion of feeder services from rural areas are needed to connect with the national and regional bus carriers



# Baseline Revenue Forecast and Funding Gap

The baseline revenue forecast includes state revenues and federal funding for surface transportation infrastructure investment over the 25-year forecast period between 2016 and 2040. The forecast includes state highway and transit funds as well as federal highway and transit funds. The forecast does not include local funding unless local funds are required as matching funds to receive certain federal transit funds.

Projected state and federal transportation revenues over the next 25-years total \$15.4 billion (2014 dollars), but when accounting for inflation the purchasing power is decreased to \$11.0 billion. Of this amount, \$10.5 billion is dedicated to highways, bridges, interchanges, and transportation support services, and the remaining \$500 million will fund public transportation investments by transit agencies.

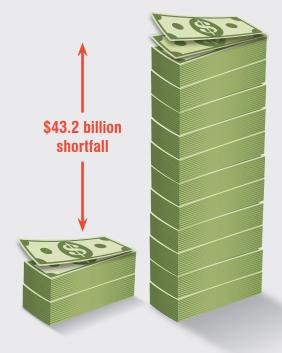
Based on the 2040 needs analysis, the estimated highway needs are \$53.7 billion (2014 dollars) and the projected 25-year revenue totals \$10.5

billion in inflation adjusted dollars (2014 dollars). This results in a \$43.2 billion funding gap and equates to a \$1.7 billion average annual funding gap. The projected revenues will only cover approximately 20 percent of the projected needs.

Arkansas faces a significant funding challenge in part due to a decline in purchasing power and more fuel efficient vehicles. Between 2016 and 2025, annual revenues are projected to decline 23 percent and by 2040 annual revenues will decline 40 percent.

Over the next 25-years, Arkansas' transportation annual revenues will decline to unprecedented levels and the state will struggle to maintain current infrastructure conditions and struggle more to adequately address highway expansion that is needed to improve our congested corridors and overall economic competitiveness. Combined with the growth in population and travel demand, achieving all of the transportation goals and objectives will be challenging.

#### 2016 - 2040 Revenue Forecast



Arkansas' Transportation Revenues \$10.5 billion

Total Needs \$53.7 billion

# **Future Scenarios**

The LRITP identifies and explores the potential outcomes of four alternative future scenarios. The four alternative future scenarios reflect different priorities, expected outcomes, and investment levels based on the 25-year baseline revenue

forecast. Four alternative future scenarios were selected to understand the trade-offs, consequences, and outcomes of potential planning scenarios representing changes in travel and investment decisions. Brief descriptions and expected performance for the four selected scenarios are shown below based on the allocation of the same amount of funds to various investments.

Safety and maintenance are considered to be equal across all scenarios as spending in these areas is important and should be maintained regardless of the scenario. Comparison of these alternative future scenarios helps the Department better prepare to meet the strategic goals of stewardship, quality of life, and economic development.

#### **Keep it Smooth – Preserve the Investment**

Focus is on maintaining and preserving the existing highway and bridge system in a state-of-good-repair. A higher priority will be given toward maintaining highway and bridge assets on the National Highway System (NHS) with a balance struck with APHN and non-APHN assets to ensure equity in meeting systemic performance goals by roadway classification.



### **Connecting Communities – Forging Opportunities**

This scenario would analyze the results of allocating resources to complete the Four-lane Grid System. The focus of this scenario would emphasize increasing capacity to improve economic competitiveness throughout the state. System preservation and freight movement investments on existing roadways would be lower in this scenario than the previous two scenarios.



### Think Locally – Trade Globally

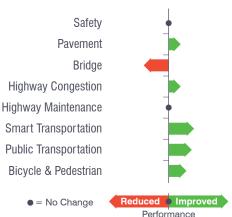
investments that support industry retention and attraction, with resources focused on existing major Interstates, major four-lane highways, and other freight corridors as identified in the State Freight Plan. The focus of this scenario would emphasize adding capacity to alleviate freight bottlenecks on the Interstate.

Enhanced infrastructure



# **Bigger Cities – More Mobility**

This scenario emphasis is on allocating funds to alleviate urban congestion by focusing on demand management and intelligent transportation systems in congested corridors, increasing transit operations, preserving the existing urban system, and addressing gaps in the bicycle and pedestrian network. Rural system preservation, rural freight movements, and economic competitiveness investments would be lower in this scenario than those previously defined.







#### **Highways**

- Optimize the use of maintenance funds to provide a smooth riding surface on all roads
- Use asset management strategies to minimize the life-cycle cost for state-maintained roads
- Identify corridors and work with local governments and MPOs to establish Corridor Management Plans to protect existing assets and identify cost effective transportation systems management and operational solutions
- Prioritize and enhance intermodal connections for both passenger and freight movement by establishing an appropriate network of intermodal connectors
- Evaluate, adjust, and enforce weight and size restrictions on roads and bridges to balance the competing needs of infrastructure preservation and freight mobility

#### **Bridges**

- Use asset management strategies to minimize the life-cycle cost for state-maintained bridges
- Prioritize the use of bridge funds to reduce the number of fracture-critical bridges in Arkansas
- Identify the minimum amount of annual funding required to maintain less than 10 percent of bridge deck area in poor condition

#### **Interchanges**

 Explore innovative intersection and interchange solutions

#### **Transportation Support System**

- Conduct a vulnerability assessment on the Arkansas Primary Highway Network transportation assets to improve system resiliency and redundancy
- Use technology, information, and operations strategies to improve transportation security and emergency preparedness and response
- Consider "Best Practice" solutions to optimize the safety and security of the transportation system
- Continue with safety improvements, maintenance of the existing system, and implementing intelligent transportation technology

#### **Rail Facilities**

- Continue working with the Freight Advisory Committee (FAC) to identify infrastructure improvements that are important to economic competitiveness for Arkansas
- Continue meeting as the FAC to educate the public and law-makers regarding the importance of multimodal cooperation for planning, funding, and implementation of improvements
- Develop a multimodal inventory for economic development to quantify non-highway needs

#### **Ports and Waterways**

- Coordinate with the Arkansas Economic
  Development Commission and other statewide economic development stakeholders to
  identify transportation projects or improvements needed to support local and regional
  economies
- Prioritize and enhance intermodal connections for freight movements by establishing an appropriate network of intermodal connectors

#### **Bicycle and Pedestrian**

 Use results from the State Bicycle and Pedestrian Plan to provide transportation lifecycle options for citizens

 Improve sight distance, visibility, lighting, pavement friction, signage, and other traffic control devices, particularly at un-signalized intersections

 Coordinate with urban and rural planning agencies to implement multimodal transportation infrastructure improvements for increased connectivity among bicycles, pedestrians, and public transit

# **Public Transportation**

 Implement a comprehensive set of rural transportation regions to insure that there is a regional entity responsible for addressing the needs in all areas of the state

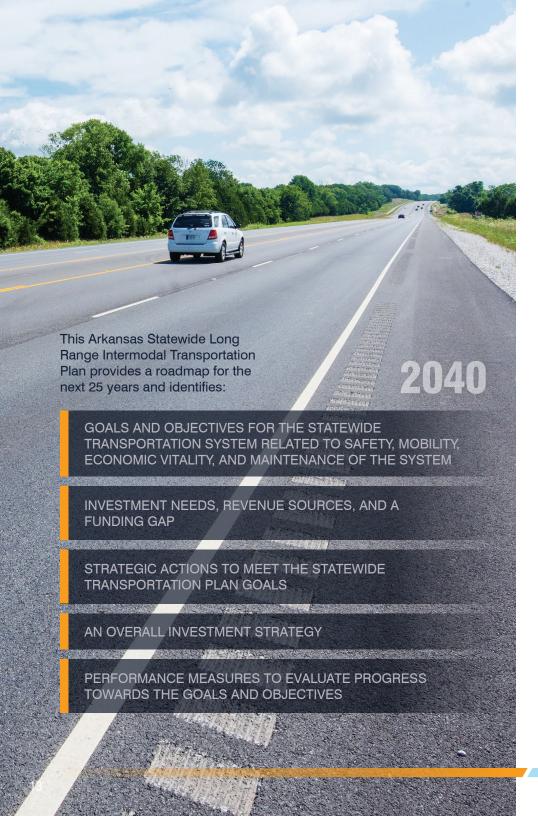
 Continue to provide capital assistance for vehicle purchase through existing programs or a similar state-provided program. Allow agencies to continue to operate services using their own agency operating budgets

 Consider multimodal options and choices in all project development activities



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**Policies and Strategies** 



# Plan Implementation and Next Steps

The LRITP goals and objectives provide a strategic vision for the future of Arkansas' transportation system. To accomplish this long-term vision, policies and strategies were identified and ARDOT will coordinate implementation with its partners to improve and maintain system performance across the LRITP goal areas. Another implementation step will include linking the LRITP goals, objectives, and performance measures to the Department's strategic plans and project programming process, to ensure available funds are used in the most effective way to meet the transportation system performance objectives, as well as the identified strategic objectives. To make this a success, we must:

- 1. Preserve our existing system and make it a top priority;
- 2. Support new economic development along with existing businesses; and,
- 3. Identify long-term funding solutions for transportation.

Beginning in 2018, ARDOT will coordinate the target setting process with the MPOs and report baseline performance conditions. Although federal performance measures have been identified, ARDOT will develop additional measures to chart progress in areas of particular interest to the road users of Arkansas. The LRITP website, video, and training materials will be used to guide the implementation process. By exploring the website and watching the video, Arkansans will quickly learn why the LRITP's conclusions are important to improving safety, system preservation, mobility, economic competitiveness, and accessibility for all users of Arkansas transportation system.

# Acknowledgments

#### **Arkansas Department of Transportation**

#### **Partners**:

**AARP** 

Arkansas Agriculture Department

**Arkansas Association of Counties** 

Arkansas Department of Environmental of Quality

Arkansas Department of Health

Arkansas Department of Human Services

Arkansas Department of Parks and Tourism

Arkansas Economic Development Commission

Arkansas Farm Bureau

Arkansas Game and Fish Commission

Arkansas Good Roads and Transportation Council

Arkansas Municipal League

**Arkansas Transit Association** 

**Arkansas Trucking Association** 

American Society of Civil Engineers - Arkansas Section

Arkansas State Police

Central Arkansas Planning and Development District

City of Bentonville

Department of Arkansas Heritage

East Arkansas Planning and Development District

Federal Highway Administration - Arkansas Division

Frontier MPO

Hot Springs Area Transportation Study

Jonesboro Area Transportation Study

Little Rock Tours

Metroplan

Northwest Arkansas Economic Development District

Northwest Arkansas Regional Planning Commission

Pine Bluff Area Transportation Study

Southeast Arkansas Economic Development District

Southwest Arkansas Planning and Development District

Texarkana Urban Transportation Study

University of Arkansas for Medical Science

West Central Arkansas Planning and Development District

West Memphis-Marion Area Transportation Study

Western Arkansas Planning and Development District

White River Planning and Development District



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- Page 8 Razorback Transit (photo panel, top right): Photograph by <u>Brandonrush</u> / <u>CC BY-SA 3.0</u>

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