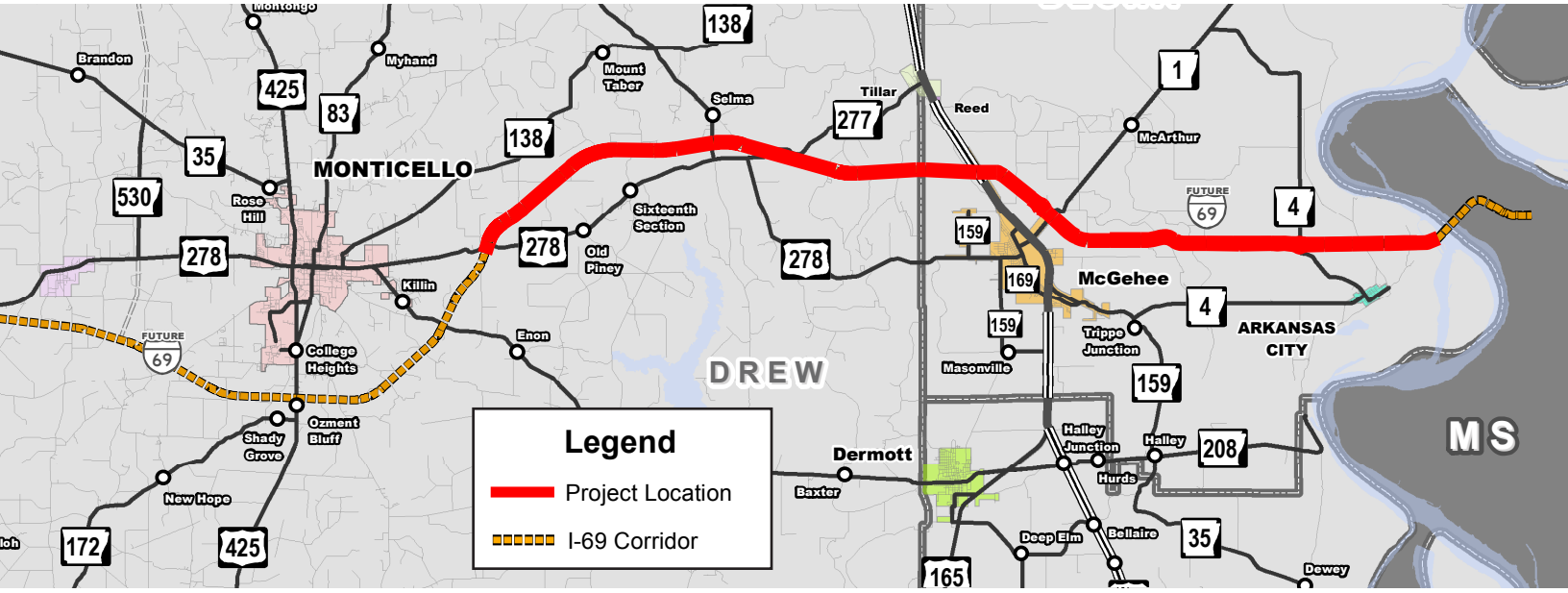
FASTLANE 2016
GRANT APPLICATION
I-69 PROJECT



ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
WWW.ARKANSASHIGHWAYS.COM

Arkansas State Highway and Transportation Department
Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) Grant

Interstate 69 National Freight Corridor Improvements	
Project Name	Interstate 69 Project Development
Previously Incurred Project Cost	$2,060,000
Future Eligible Project Cost	$25,000,000
Total Project Cost	$27,060,000
NSFHP Request	$12,000,000
Total Federal Funding (including NSFHP)	$21,648,000
Are matching funds restricted to a specific project component? If so, which one?	No
Is the project or a portion of the project currently located on National Highway Freight Network	Upon Completion of I-69, it will be.
Is the project or a portion of the project located on the National Highway System • Does the project add capacity to the Interstate system? • Is the project in a national scenic area?	NHS – Yes Interstate Capacity - Upon Completion of I-69, YES. Scenic - NO
Do the project components include a railway-highway grade crossing or grade separation project?	Yes
Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports), or intermodal facility?	No
If answered yes to either of the two component questions above, how much of requested NSFHP funds will be spent on each of these project components?	Not applicable.
State(s) in which project is located	Arkansas
Small or Large project	Small
Also submitting an application to TIGER for this project?	No
Urbanized Area in which project is located, if applicable	No
Population of Urbanized Area	Not applicable.
Is the project currently programmed in the • TIP • STIP • MPO Long Range Transportation Plan • State Long Range Transportation Plan • State Freight Plan?	TIP – Not applicable. STIP – Yes MPO LRTP - Not applicable. SLRTP – This is not a project specific plan. SFP – Current SFP is not project specific. The update is underway and this route will be included in some manner.

TABLE OF CONTENTS

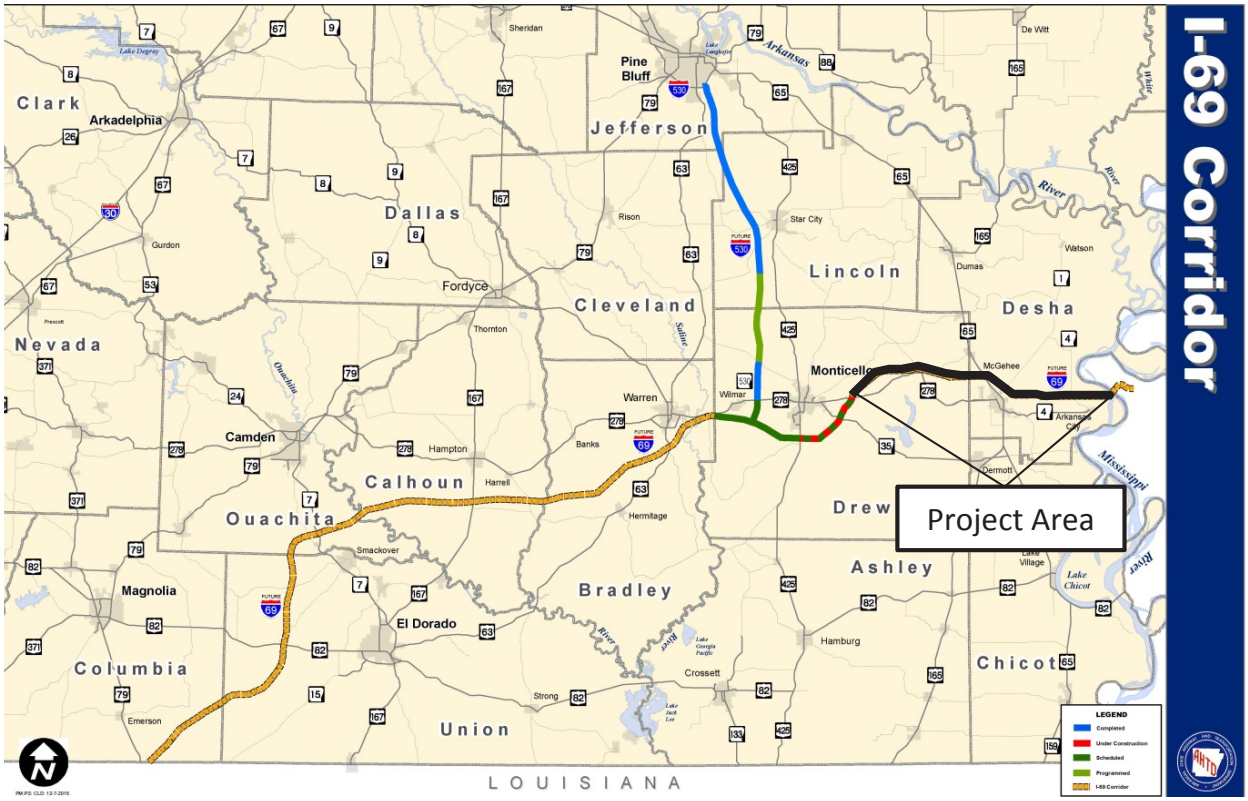
LIST OF FIGURES AND TABLES

PROJECT DESCRIPTION

This Project proposes to complete the design and right-of-way acquisition for a portion of the proposed Interstate 69 in southeast Arkansas, which is part of the High Priority Corridor 18 identified in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

The completion of the design and right-of-way acquisition for this 29.5 mile portion of Interstate 69 will move Arkansas one step closer to the goal of constructing the segment of this High Priority Corridor within the state. "Figure 1 [Interstate 69 Corridor in Arkansas]" shows the requested project within the greater Interstate 69 project corridor in Arkansas.

Figure 1 [Interstate 69 Corridor in Arkansas]



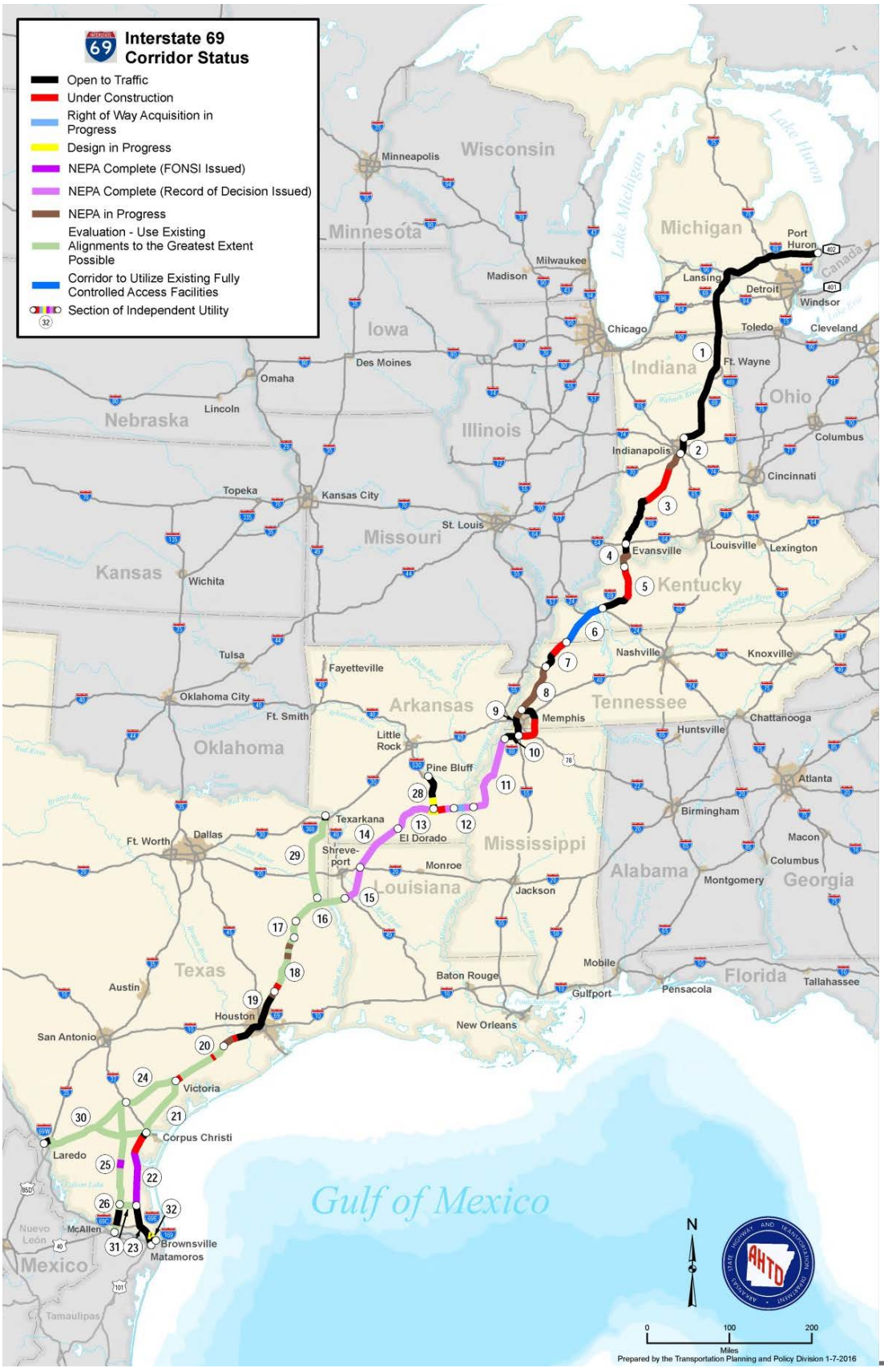
As a demonstration of the Arkansas State Highway and Transportation Department's (AHTD) commitment to the completion of Interstate 69, the 2016-2020 Statewide Transportation Improvement Program (STIP) includes funding for project development using $8 million in National Freight Program funds with a $2 million match in state funds.

Our request for $12 million of FASTLANE funds combined with $3 million in state matching funds will allow the continuation of project development activities along this segment of the Interstate 69 corridor.

This segment of Interstate 69 is part of a larger corridor spanning seven states and provides international border crossing to both Canada and Mexico. In Canada, the Interstate 69 corridor joins an Interstate-quality road that connects to Toronto, Montreal, and Quebec. As a High Priority Corridor, Interstate 69 will make a notable impact on national and international shipping and travel trends providing a more direct north-south corridor for shipping goods as well as providing additional redundancy and resiliency to our national transportation network. "Figure 2 [Interstate 69 Corridor]" on page 3 identifies how the segment of Interstate 69 in Arkansas is part of a national and international transportation facility that will server not only those who travel across the United States, but it will also serve those who travel into Canada and Mexico.

Completion of this interstate will support and encourage multistate transportation development throughout this delta region. It will help to form vital social and economic connections. It will not only be used for connecting people to jobs, health care, and family in a way that enhances their quality of life, but it will also contribute to regional economic growth and development by connecting business to customers, goods to markets, and tourists to destinations. It will enhance the movement of commodities from this delta region to urban areas where they are consumed, processed, or sent out of the state or country. The funds awarded to this project will continue the development of this delta region's essential connection to the nation and the world.

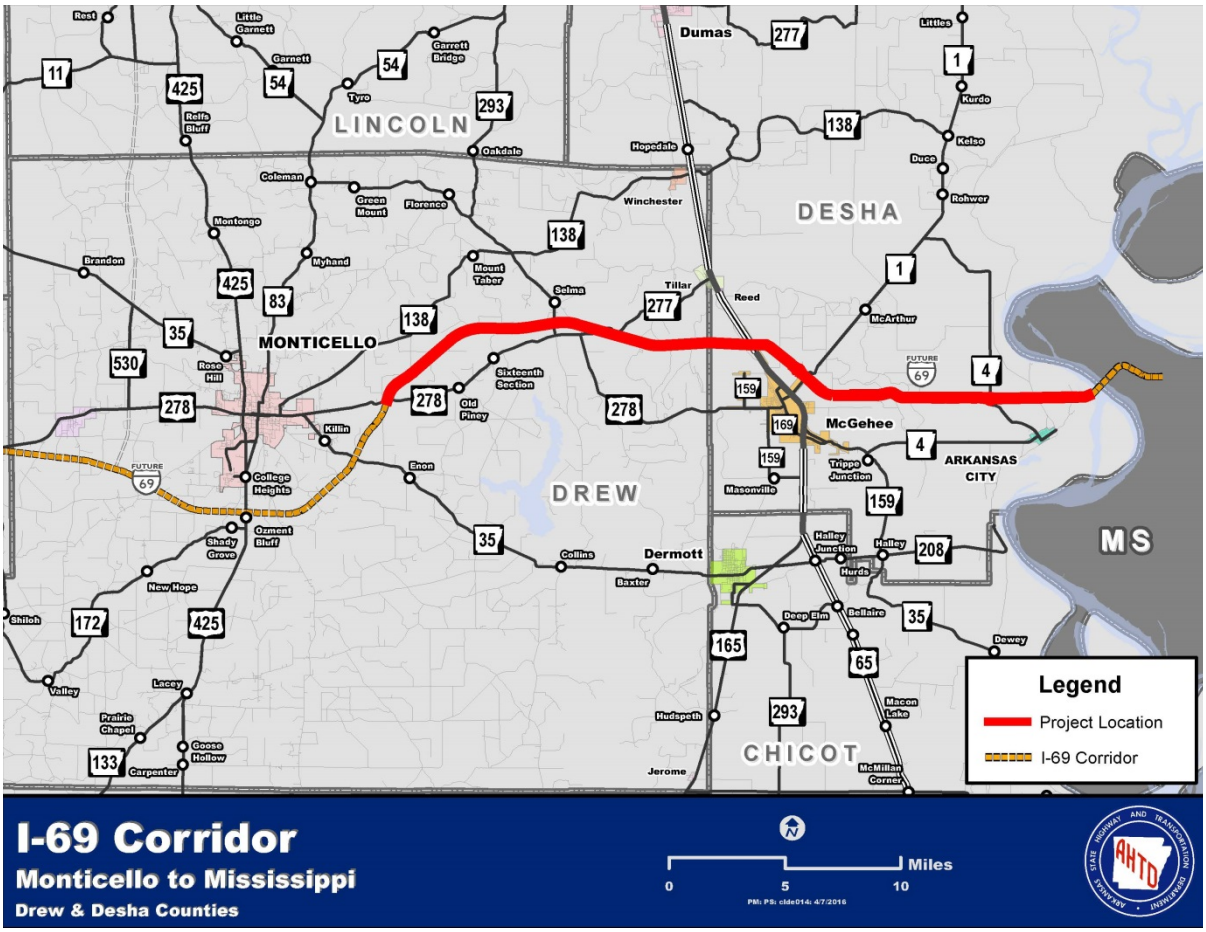
Figure 2 [Interstate 69 Corridor]



PROJECT LOCATION

This project is located in the southeast corner of the State of Arkansas in Drew and Desha Counties. It begins at the intersection of the Interstate 69 corridor and Highway 278 east of Monticello, Arkansas and continues until the western approach to the bridge over the Mississippi River, otherwise known as the Great River Bridge, in Desha County. Please refer to "Figure 3 [Interstate 69 Corridor (Monticello to Mississippi)]" for a map of the portion of Interstate 69 that is included in this project.

Figure 3 [Interstate 69 Corridor (Monticello to Mississippi)]



PROJECT PARTIES

The primary partner in this project is the Arkansas State Highway and Transportation Department (AHTD).

GRANT FUNDS, SOURCES AND USES OF PROJECT FUNDS/ COST SHARE

Table 1 identifies the sources and categories of funds anticipated to be used for the proposed projects. As the designated recipient for Federal-aid funding, AHTD is confident in the stability and reliability of the federal-aid funds committed to these improvements.

The state matching funds for the Federal-aid funds committed to this corridor and the requested grant funds will be derived from the state motor fuels tax revenues. This funding source is considered stable and reliable.

Table 1 [Sources and Uses of Funds (X $1,000)]

Interstate 69 Development	Cost-Estimate (X1,000)	Federal-aid Funding		Non-Federal-aid Funding
		Non-NSFHP	NSFHP	State
2016-2020 STIP	10,000	8,000		2,000
Proposed NSFHP	15,000		12,000	3,000
TOTAL CORRIDOR FUNDING	**25,000**	**8,000**	**12,000**	**5,000**
		20,000 (80%)		**5,000 (20%)**

When full funding of the grant request is received, the total Federal-aid funding for these projects will be $20,000,000, or 80 percent of the total project. The non-Federal-aid (State) portion of the project funding will be $5,000,000 or 20 percent of the total project. If this grant request is not awarded, the design and right-of-way acquisition of the proposed Interstate 69 in Arkansas will be delayed which will lead an increase in cost due to inflation.

Table 2 details the projects within Arkansas that are under construction or are scheduled as part of our effort to complete Interstate 69. These projects will complete two lanes of the ultimate four-lane interstate facility.

Table 2 [Projects Completed and Under Construction on the Monticello Bypass]

Job Number	Job Name	Funds Obligated or Scheduled		
		Federal-aid	Other	Total
Under Construction				
020471	Hwy. 425 – Hwy. 278 East (Gr. & Strs.)	$15,425,213	$3,856,303	$19,281,516
Scheduled				
020470	Hwy. 278 West – Hwy. 425 (2016)	$37,360,000	$9,340,000	$46,700,000
020484	Hwy. 425 – Hwy. 278 East (Bs. & Surf.) (2017)	$14,000,000	$3,500,000	$17,500,000
	TOTAL	**$51,360,000**	**$12,840,000**	**$64,200,000**

Travel Demand Impacts

Travel demand benefits for the proposed improvements along Interstate 69 are summarized in Table 3. Benefits reflect corridor-level impacts compared to a future 2040 No-Build scenario. The project's proposed opening to traffic is in year 2020. A future/horizon year for the No-Build and Build project scenarios is set at 2040 to provide a 20-year benefit stream for the impact analysis. Impacts are isolated to the Interstate 69 project only; they do not reflect any additional planned improvements in the region.

It is estimated that in 2040, the proposed project will reduce lead to a reduction of over 500,000 vehicle hours travel and over 46 million vehicle miles traveled.

Table 3 [Project-Level Impacts in 2040]

	Auto	Truck
Vehicle Miles Traveled	(19,343,893)	(27,317,687)
Vehicle Hours Traveled	(67,214)	(437,897)

The benefits of implementing the project include cost savings due to reduced pavement maintenance cost, travel time, delays and vehicle operating cost, motor vehicle crash costs. Table 4 summarizes the findings of the benefit-cost analysis which yield a robust BCR ranging between 2.2 and 3.1. Economic Impacts

Table 4 [Summary of Benefit-Cost Analysis]

Cost Benefit Analysis			
Benefits	**2015 Dollars**	**7% Discount Rate**	**3% Discount Rate**
Reduction in Value of Time Costs	$126,136,903	$47,228,858	$80,513,714
Reduction in Non-Fuel Vehicle Operating Costs	$143,210,692	$53,581,084	$91,382,918
Reduction in Fuel Vehicle Operating Costs	$128,602,010	$48,075,528	$82,032,600
Reduction in Safety Costs	$106,014,838	$39,537,737	$67,557,470
Reduction in Emissions Costs	$92,215,103	$34,030,317	$58,494,733
Reduction in Logistics Costs	$129,262	$48,468	$82,557
Reduction in Repair Costs	$90,308,512	$33,815,456	$57,645,487
Total Benefits	**$686,617,320**	**$256,317,447**	**$437,709,480**
Costs			
Construction Costs	$135,500,000	$107,235,310	$122,249,231
Maintenance and Operations Costs	$25,889,136	$10,041,083	$16,835,889
Total Costs	**$161,389,136**	**$117,276,393**	**$139,085,121**
Benefits vs. Costs			
Net Benefits	**$525,228,184**	**$139,041,054**	**$298,624,359**
Benefit-Cost Ratio	**4.3**	**2.2**	**3.1**

Economic Impacts
The transportation cost savings arising from the Project will support additional economic growth and development in the region. It is estimated that the short-term impact of the increased construction spending will lead to an additional 1,762 jobs. In the long term, the Project will increase the overall competitiveness of the region, translating into an additional 120 jobs, $5.9 million in labor income, and $17.7 million in Gross State Product (GSP), annually.

Summary Benefits
The I-69 corridor project is estimated to provide significant benefit to the State of Arkansas as well as the nation as a whole. The new interstate will facilitate trade and lead over 435,000 fewer hours of travel for trucks in 2040. Improved mobility and reliability resulting from the project will support reduced air pollution and ensure the region and the state's economy grows bigger and faster. The Gross State Product (GSP), a measure of the size of the state's economy, is projected to grow by about $17 million more per year with the project than without it. The expansion in GSP translates into an additional 125 permanent jobs per year and nearly $6 million in additional personal income per year for residents throughout the state.

PROJECT READINESS / COMMUNITY AND ENVIRONMENTAL OUTCOMES

Within Arkansas, the Interstate 69 Corridor has received a Record of Decision (ROD) for all three segments within the state (see Table 5). This indicates environmental handling is proceeding as planned and scheduled. Additional environmental issues are not anticipated.

Table 5 [Environmental Clearance Status]

Corridor Segment	Date	Environmental Clearance Status
Louisiana State Line to Highway 82	April 2012	Record of Decision Approved
Highway 82 to Highway 65 (McGehee)	May 2006	Record of Decision Approved
Highway 65 to the Mississippi River Bridge Approach	June 2004	Record of Decision Approved

There are no anticipated or expected delays impacting the ability to let to contract the proposed corridor projects. There are no legislative actions required to proceed with these improvements. Construction projects will be let to contract when construction funding commitments can be met.

Information on two additional projects in the corridor is shown below:

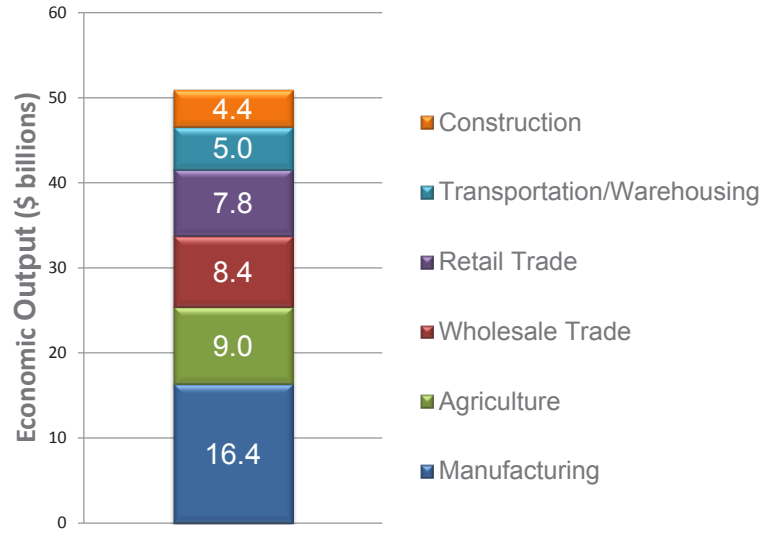
Arkansas was the lead state on the joint study with Mississippi to determine the location of the Interstate 69 Mississippi River crossing, Segment of Independent Utility (SIU) 12. Early evalua-

tions indicated that the Great River Bridge would be the proposed crossing. The Environmental Impact Statement (EIS) was approved in July 2002. Location Public Hearings were held in September 2002 and Design Public Hearings were held in December 2002. The FHWA approved the Final EIS in March 2004. The Final EIS was made available for a 30-day public viewing period in April 2004. The ROD was issued in June 2004, establishing the location and conceptual design of SIU 12. The ROD documented that Interstate 69 will cross the Mississippi River at the Proposed Great River Bridge. Design of the Great River Bridge crossing of the Mississippi River of the Interstate 69 corridor near Arkansas City has been completed. When additional federal funding is made available, required Coast Guard and Corps of Engineers permits will be obtained, and construction can begin. The Arkansas Highway Commission has authorized the acquisition of the right-of-way for this project and acquisition activities are currently underway.

Location and environmental studies for the El Dorado, Arkansas and McGehee, Arkansas segment of Interstate 69, SIU 12, are complete. The Draft EIS, which evaluated five alternative alignments within a 2-mile wide "preferred corridor", was signed in May 2004. Location Public Hearings were held in June 2004 and in August 2004 the Department's Interdisciplinary Staff selected the preferred alignment, which will be located south of Monticello, Arkansas. The Final EIS was approved by FHWA in August 2005 and a ROD was issued in May 2006. In September 2011, a contract was let for the construction of 8.5 miles of grading and structures for the Monticello Bypass from Highway 425 to Highway 278 East. This project is estimated to be complete in mid-2017. Upon completion of the grading and structures project, a contract for the construction of the base and surfacing will be let. These two contracts will complete two lanes of the ultimate four-lane facility. Plan development is also underway for the section from Highway 278 West to Highway 425, including a connection to the Interstate 69 Connector near Wilmar. This section will also construct two lanes of the ultimate four-lane facility.

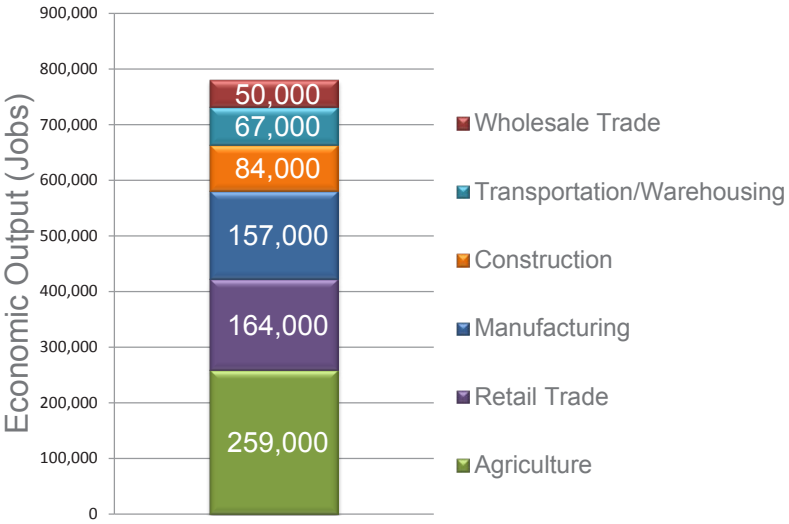
Across the state, transportation is a critical factor in the movement of freight. Of the total $119 billion in economic output, 43% or $51 billion is dependent on freight movement. Figure 4 details the sectors of the economy most dependent on freight.

Figure 4 [Freight Dependent Portion of Arkansas' Economy - Jobs]



Likewise, nearly 781,000 jobs or half of the total employment in Arkansas, is dependent on freight movement either as a resource for manufacturing or for delivery of finished goods for retail sales. Figure 5 displays the distribution of freight-dependent employment in Arkansas. Of course, agriculture is very heavily dependent on freight movement as both a sector of the economy as well as a major employer with over 259,000 jobs attributed to the agricultural sector.

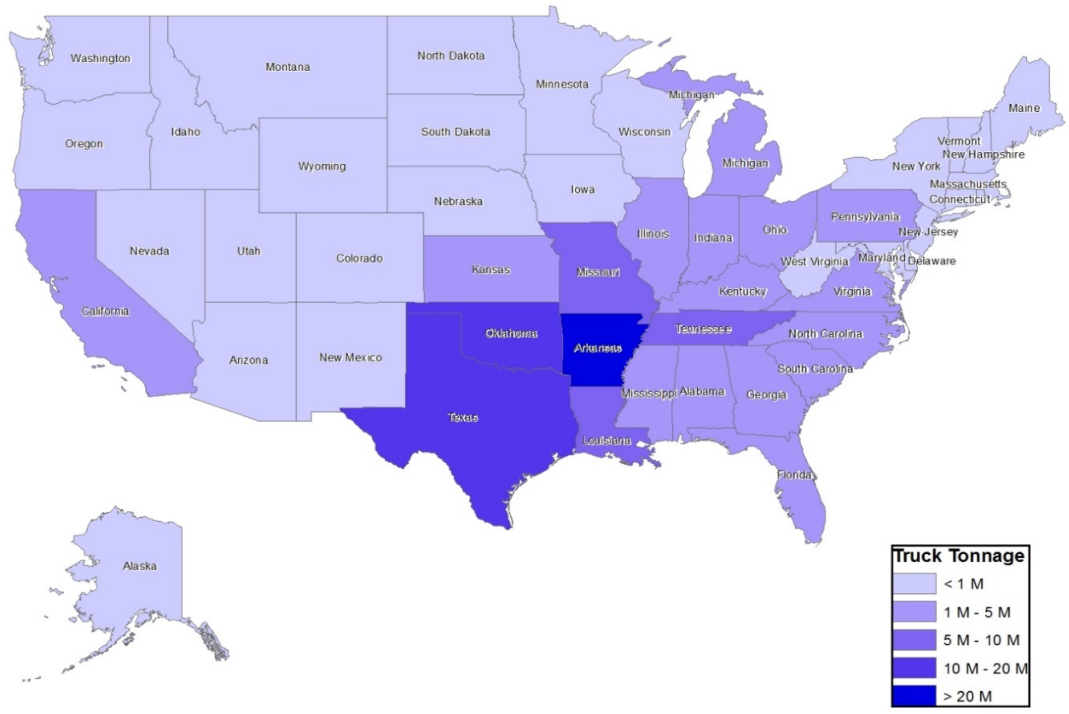
Figure 5 [Freight Dependent Portion of Arkansas' Economy - Jobs]



Relevant to this application are the truck-related freight movements in Arkansas. Figure 6 shows the top trading partners based on the tonnage of freight shipped by truck. Oklahoma and Texas qualify as the largest tonnage-based trading partners with more than 20 million tons being shipped by truck. Next on the list would be Missouri, Louisiana, and Tennessee. This is important as the Interstate 69 corridor provides direct access from Arkansas to Mississippi and Louisiana.

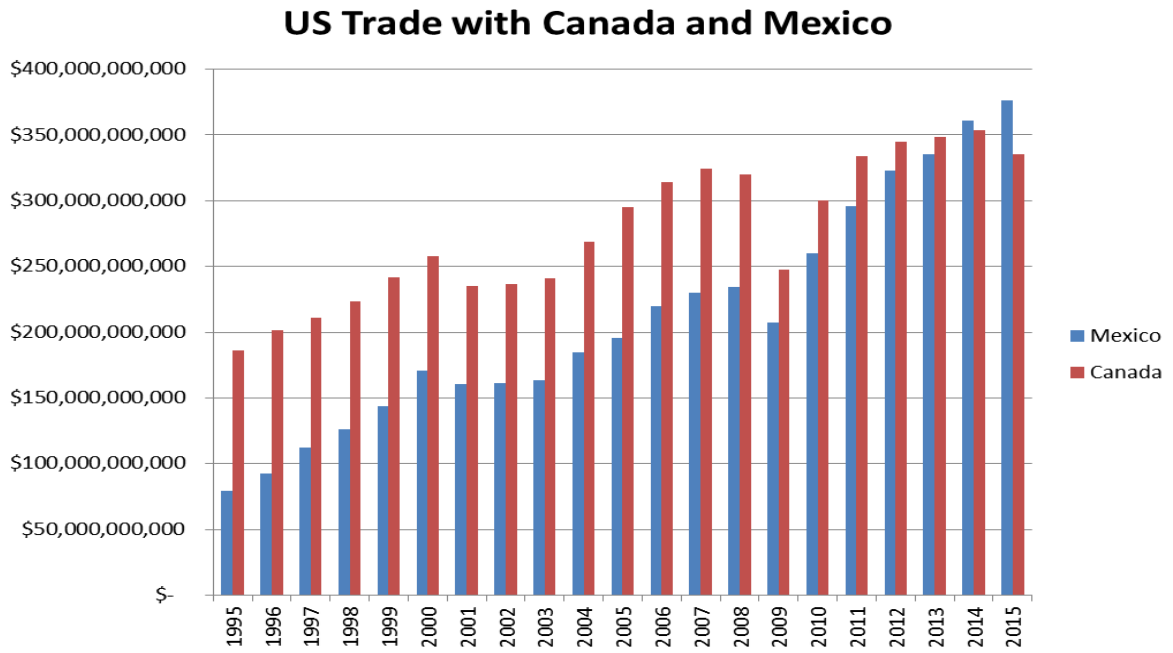
Freight traffic forecasts indicate the tonnage of freight shipped to, from, and within Arkansas will nearly double between 2012 and 2040 from 299 million tons to over 439 million tons. This brings with it additional commercial vehicles on the system, additional employees to handle the freight, and additional passenger traffic associated with the additional employees and their families.

Figure 6 [U.S. Truck Tonnage]



The Interstate 69 corridor will provide transportation options for freight movements from the United States to Canada and Mexico. Over the past 20 years, there has been a steady increase in international shipments with both Mexico and Canada. The annual average increase in the value of shipments to Mexico and Canada is 5.1 percent. Figure 7 shows the overall growth in North American freight movements.

Figure 7 [U.S. Trade with Canada and Mexico]



Source: http://transborder.bts.gov/programs/international/transborder/TBDR_QA.html

MOBILITY OUTCOMES

Based on the proposed alignment of the Interstate 69 corridor versus the use of existing routes, travelers along the entire length of the Interstate 69 corridor will realize nearly a 25 percent reduction in travel time, or nearly one day. The total mileage along the Interstate 69 corridor is approximately 1,660 miles. The average speed along the corridor is 65 miles per hour. When the Interstate 69 corridor is completed, travel time along the entire route is expected to be 27 hours. The average speed along the existing highways is 54 miles per hour with approximately 1,900 miles which puts the travel time around 35 hours. Table 6 details the expected time savings with the three different southern termini for the entire Interstate 69 corridor.

Table 6 [Existing Routes vs. Interstate 69 Proposed Corridor (in hours)]

Location	Google (1) Search	Proposed (2) Corridor	Time Saved
Brownsville, TX to Port Huron, MI	34	27	7
Laredo, TX to Port Huron, MI	35	27	8
McAllen, TX to Port Huron, MI	35	28	7

(1) Google Search is taken from Google Maps on existing highways.
(2) Proposed Corridor defined by The National Interstate 69 Steering Committee Study.

The United States, Canada and Mexico are part of the North American Free Trade Agreement (NAFTA). This enables these three countries to trade freely with each other without any barriers. Trade with Mexico has increased gradually since 2000 starting with a total number of exports and imports at $247.2 to $346.7 billion for the year 2007. Trade with Canada has increased gradually since 2000 starting with a total number of exports and imports at $409.7 billion to $565.8 billion for the year 2007. This is a 38.1 percent increase between Canada and the United States and a 40.2% increase between Mexico and the United States. With the Interstate 69 corridor, trade will be easier between the border countries.

Interstate 69 from Indianapolis to Laredo and the Lower Rio Grande Valley will establish an international trade route to serve NAFTA and other important economic functions.

The domestic highway freight tonnage in 1998 was 499,278,000 which is projected to increase to 819,623,500 in the year 2020. This is a 64.2% increase in 22 years. It is projected that Interstate 69 will carry 52 percent of U.S. truck-borne trade with Mexico and 33 percent of truck-borne trade with Canada. The efficiency along the corridor will enable products to be shipped in a timely manner.

There are approximately 118 ports along the Interstate 69 corridor. These ports will aid in transporting goods from the countries within NAFTA to the ports along the corridor where they then will be shipped by freight or rail. This will significantly enhance efficiency along the corridor by providing more and better transportation opportunities for NAFTA trade.

The Interstate 69 corridor will greatly aid in the travel time saved from Mexico to Canada. It will also encourage greater shipping from Canada and Mexico to the U.S. Interstate 69 will enhance efficiency, reduce costs and allow the U.S. to be competitive in the global economy. The corridor will be an important part of a sound highway network connected to other modal hubs and the resulting benefits can be closely tied with the nation's economic future.

As a new location corridor, there are no existing traffic volumes to present. However, previous analyses for innovative financing have estimated the traffic volumes along this section of the project. The traffic volumes for 2040 and the accompanying forecast Levels of Service is shown in Table 7.

Table 7 [Summary of Preliminary Analysis – 2040 Non-tolled Traffic Volumes and Projected LOS]

Segment of Independent Utility	Existing Facility	Preliminary 2040 Traffic (AADT)	2040 LOS
12	New Location	9,000	A
13	New Location	7,000	A

Source: Interstate 69 Innovative Financing Study – Final Findings.

SAFETY OUTCOMES

The safety performance of Interstate 69 is expected to be greater than existing parallel Interstate freight corridor of I-30 and I-40 in Arkansas (Texarkana to West Memphis). The most recent three years of crash data (2011-2013) show that this existing 274 mile corridor experienced a crash rate of 0.61 crashes per million vehicle miles (mvm). This existing corridor also experienced a fatal (K) plus serious injury (A) rate of 4.91 crashes per 100 million vehicle miles (100mvm) over the same time period. These rates are about 50 percent and 30 percent higher, respectively, than the average crash rates for rural freeways—which is comparable to Interstate 69—in Arkansas (0.40 crashes per mvm and 3.77 crashes per 100mvm, respectively) over the same time period.

The relatively high crash rates, including KA rates, along the existing I-30 and I-40 corridor in Arkansas can be attributed to several factors.

- The existing I-30 and I-40 corridor travel through three urbanized areas in Arkansas—Texarkana, Little Rock, and West Memphis—which helped contribute to the high number of total crashes.

- There was a major construction work zone between Little Rock and West Memphis in this time period, which resulted in higher number of crashes than in previous years. This construction activity involved reconstruction of existing pavement which, without an adequate alternative route for freight traffic, resulted in a number of rear-end collisions due to congestion as a consequence of the lane reductions.

- The large number of trucks in this existing corridor helped contribute to the high number of KA crashes. Of the 72 fatal crashes in this corridor from 2011 through 2013, 29 (40 percent) involved a large truck. A large truck collision with a passenger car at freeway speeds increases the likelihood of a KA crash.

Interstate 69, when completed, will provide a safer facility for not only freight movements but passenger vehicles as well. It skirts urbanized areas that typically have higher volumes and more interchanges, which lead to greater conflicts and decision points and thus higher risks of crashes.

PARTNERSHIP AND INNOVATION

Public support for this project and the overall corridor implementation is evidenced by the letters of support submitted as an attachment to this application. The recognition of the need for freight-related improvements demonstrates the understanding of the importance of efficient freight movement by various members of both private and public sectors.

WAGE RATE CERTIFICATION
FOR
FIXING AMERICA'S SURFACE TRANSPORTATION ACT

Pursuant to the Fixing America's Surface Transportation Act (Pub. Law 114-94), I, Scott E. Bennett, Director of Highways and Transportation for the State of Arkansas, certify that all laborers and mechanics employed by contractors and subcontractors on projects funded directly by or assisted in whole or in part by and through the federal government pursuant to the Act shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of Chapter 31 of Title 40, United States Code, the Davis-Bacon Act.

I understand that the Arkansas State Highway and Transportation Department may not receive FASTLANE 2016 funding unless this certification is made and posted.

Scott E. Bennett, P.E.
Director of Highways and Transportation

4-11-16
Date