

"Moving Oklahoma Forward"



















EXECUTIVE SUMMARY

Oklahoma Department of Transportation

OKLAHOMA LONG RANGE TRANSPORTATION PLAN 2015-2040

OKLAHOMA DEPARTMENT OF TRANSPORTATION

STRATEGIC ASSET AND PERFORMANCE MANAGEMENT DIVISION

200 NE 21st STREET

OKLAHOMA CITY, OK 73105



A MESSAGE FROM THE EXECUTIVE DIRECTOR

The Oklahoma Department of Transportation, with the help of many stakeholders, is pleased to share with you the 2015-2040 Long Range Transportation Plan (LRTP), "Moving Oklahoma Forward." The Department takes pride in its mission "to provide a safe, economical and effective transportation network for the people, commerce and communities of Oklahoma" and the 2015-2040 LRTP has been developed in this spirit.

In June 2014, ODOT initiated the 2015-2040 LRTP, which incorporated public involvement including convening advisory committees, hosting public meetings and sponsoring a project web site throughout the planning process. We would like to thank the various agencies and organizations for their cooperation as well as Oklahomans throughout the state for their input in developing the 2015-2040 LRTP.

Since 2010, Oklahoma has made great strides, evidenced by favorable trends in population, a rising Gross Domestic Product (GDP) and job creation. Oklahoma's population is expected to reach nearly 4 million in 2015. In 2013, Oklahoma's GDP was \$164 billion averaging a 2 percent growth annually for three years, a growth rate that is forecasted to repeat between 2013 and 2015. Employment is projected to reach a total of over 2.2 million jobs in 2015. However, future transportation needs and costs remain greater than projected revenue. Increased demand on Oklahoma's multimodal transportation system is leading to deterioration, congestion and potential safety concerns.

The 2015-2040 LRTP is a policy document that guides ODOT in the development, management and operation of the state's transportation system for the next 25 years. The department has completed the 2015-2040 LRTP to provide strategic guidance for our long term vision – to provide an intermodal transportation system that supports a thriving economy and improved quality of life for Oklahomans by providing safe and efficient movement of people and goods. The Department strives to attain this vision by achieving the 2015-2040 LRTP goals:

- Safe and Secure Travel;
- Infrastructure Preservation;
- Mobility Choice, Connectivity and Accessibility;
- Economic Vitality;
- Environmental Responsibility; and
- Efficient Intermodal System Management and Operation.

The 2015-2040 LRTP includes policies and strategies to help ODOT achieve these goals in addition to performance measures to help report our progress and enhance accountability.

The Department intends to follow Oklahoma's practical and progressive legacy as we incorporate the 2015-2040 LRTP policies and performance measures into ongoing programs such as the State Transportation Improvement Program and the Eight Year Construction Work Plan to address needed transportation improvement projects. We are grateful for the assistance of our federal and local partners, including but not limited to the Federal Transit Administration, Federal Highway Administration, the U.S. Army Corps of Engineers, the metropolitan and rural planning organizations, rural, urban and tribal transit providers, cities, towns, counties, and tribes. The public service and financial commitment of these entities is a vital part of building and maintaining our state transportation infrasturcture.

Thank you for your interest in the 2015-2040 LRTP. We invite you to remain engaged in shaping Oklahoma's transportation

future!

J. Michael Patterson

Executive Director



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The primary data sources and further information cited in this summary are available in the 2015-2040 Oklahoma Long Range Transportation Plan document. This document will be available at ODOT, Strategic Asset and Performance Management Division, 200 NE 21st Street, Oklahoma City, OK 73105 and on the Department's website: http://www.ok.gov/odot/Programs_and_Projects/Transportation_Programs/LRTP_2015-2040.html

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INTRODUCTION

Oklahoma's State transportation system provides options for commerce and communities. Positioned at the crossroads of Interstates 40, 35, and 44 in the middle of the Southern Plains states, it connects roads, streets, and highways to ports, airports, and railroads. The State is home to the nation's most inland ports on the McClellan-Kerr Arkansas River Navigation System (MKARNS); served by over three dozen urban, rural, and tribal transit systems; and features a growing number of paths and walkways for bicyclists and pedestrians.

WHAT IS THE OKLAHOMA LONG RANGE TRANSPORTATION PLAN?

The Oklahoma Department of Transportation (ODOT), with the help of stakeholders representing the various modes mentioned above, has developed the 2015-2040 Oklahoma Long Range Transportation Plan (2015-2040 LRTP), "Moving Oklahoma Forward." The 2015-2040 LRTP is a policy document that guides ODOT in the development, management, and operation of a safe and efficient transportation system for the next 25 years.

The 2015-2040 LRTP accomplishes the following:

- Updates ODOT's planning goals and objectives;
- Recommends performance measures which align
 Oklahoma values with national transportation goals;
- Describes the existing transportation system;
- Examines safety and security issues and current and future environmental impacts;
- Identifies current and future multimodal transportation system needs;
- Anticipates future federal, state, and local transportation revenues; and
- Updates ODOT's multimodal transportation policies.

Since the adoption of the 2010-2035 LRTP in 2010, Oklahoma has experienced growth in its population and employment, and improved quality in the transportation system. Not surprisingly, steady growth in population and the economy has a significant impact on ODOT's transportation facilities.

In 2012, legislation was passed by the State Legislature to provide additional funding to reduce the number of structurally deficient bridges and deteriorating roads on the state highway system. ODOT used this revenue to continue a bridge reconstruction effort that had been initiated by state legislative action in 2005.

Multimodal refers to the availability of transportation options within a system or part of the system. The modes discussed in the 2015-2040 LRTP are highway and bridges, rail, public transportation, bicycle and pedestrian, waterways, and airport access.

The State Highway System includes Interstate, U.S., and Oklahoma (State) highways within the State of Oklahoma.



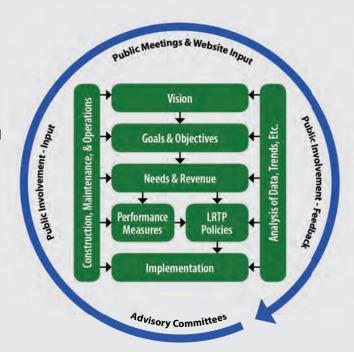
Not only because of the priority of fixing structurally deficient bridges, but also because of the magnitude of deterioration on the highway system, improvements to state highways over the past five years have not been able to outpace the continuing creep of pavement decline.



HOW WAS THE PLAN DEVELOPED?

The 2015-2040 LRTP planning process involved a number of steps completed over a one year planning period. Public involvement, to receive input and to provide information, was incorporated throughout this process.

- 1. *Create the vision ...* to inform ODOT's decisions as it conducts the transportation planning, construction and delivery process.
- 2. *Update goals ...* to shape specific desired outcomes that reflect the state's vision and federal requirements.
- 3. **Develop performance measures ...** which use quantitative data to assess effectiveness in meeting goals.
- 4. *Identify transportation system needs and estimated costs ...* based on analysis of data, trends, and public input.
- 5. **Forecast revenues** ... to illustrate the amount of anticipated funding in comparison to the estimated cost of future transportation needs.
- 6. *Update policies ...* to address Oklahoma's multimodal transportation needs.
- 7. *Implement ...* and incorporate 2015-2040 LRTP policies and performance measures into ongoing programs.





ODOT MISSION

"The mission of the Oklahoma Department of Transportation is to provide a safe, economical and effective transportation network for the people, commerce and communities of Oklahoma."

The 2015-2040 LRTP vision was developed through consideration of a range of transportation guidance and documents. Such considerations include ODOT's overall mission and strategic direction, the goals from other ODOT modal and system plans, metropolitan planning organization (MPO) LRTP goals, and federal Moving Ahead for Progress in the 21st Century (MAP-21) requirements.

2015-2040 LRTP VISION

ODOT's LRTP vision is "to provide an intermodal transportation system that supports a thriving economy and improved quality of life for Oklahomans by providing safe and efficient movement of people and goods."



WHAT'S INCLUDED IN THE LRTP DOCUMENT?

- Introduction
- Goals and Direction
- Performance Measures
- Stakeholder Outreach
- Demographic, Socioeconomic, and Land Use Data
- Existing Transportation System and Conditions
- Freight Transportation and Economic **Conditions**
- Safety, Security, and Environmental Issues

- Transportation Needs
- Estimated Costs and Forecasted Revenues
- Policies and Strategies
- Conclusion

This represents the order of the 2015-2040 LRTP document. The materials in this Executive Summary are not in this order.

GOALS

The 2015-2040 LRTP goals were developed following a thorough review of the 2010-2035 LRTP goals, ODOT strategic and modal plans, MPO LRTPs, and the Federal transportation law MAP-21. The 2015-2040 LRTP goals are:



Safe and Secure Travel Infrastructure safety and security for system users.



Infrastructure Preservation Preserve and maintain Oklahoma's multimodal transportation system in a state of good repair.



■ Economic Vitality Provide an efficient and effective multimodal transportation system strengthen communities and support economic development.



■ Environmental Responsibility Minimize environmental impacts.



Mobility Choice, Connectivity and Accessibility Easy movement of people and goods, connectivity of regions and activity centers,

transportation.

access to different modes of

■ Efficient Multimodal System **Management and Operation** Maximize system performance and operation.



















EXISTING CONDITIONS AND NEEDS OF OKLAHOMA'S MULTIMODAL TRANSPORTATION SYSTEM

This section describes Oklahoma's multimodal transportation infrastructure inventory based on system data and attributes for highways, bridges, freight rail, ports and waterways, public transportation, passenger rail, and airport access. In addition, it identifies Oklahoma's multimodal transportation needs in light of the goals, existing trends, and desired future performance.

Highway and Bridge

Inventory and Existing Conditions:





- Eighty-nine percent of the State Highway System is classified as rural; 11 percent is classified as urban.
- Interstate highways and expressways in Oklahoma account for 6 percent of the miles; they carry 42 percent of the traffic.
- Of the over 9,500 miles of rural two-lane highways on the State Highway System, approximately 4,600 miles of these are two-lane facilities without paved shoulders.
- The number of fatalities on all roadways in Oklahoma has decreased from 750 in 2008 to 669 in 2014.
- Oklahoma has 6,828 bridges on the State Highway System. Approximately 3,830 are span bridges; about 3,000 are bridge boxes.
- In 2009, 797 bridges on the State Highway System were structurally deficient; by 2014, that number had been reduced to 372.



A **bridge** is a structure built to span a river, road, railroad track or other physical obstacle for the purpose of providing passage over the obstacle.

ODOT defines a **bridge box** as a reinforced concrete box greater than or equal to 20 feet wide measured along the center of the roadway.



2015 to 2040 Highway and Bridge Needs:

- Approximately 6,400 centerline miles of the State Highway System will need to be reconstructed between 2015 and 2040.
- Approximately 50 minor and 7 major interchanges require improvement.
- Approximately 13,300 centerline miles of the State Highway System will require preservation. Over the 25-year period, some segments will require several treatments.
- Safety improvements including, but not limited to, the following are needed:
 - median cable barriers 545 miles.
 - centerline rumble strips 5,000 miles.
 - guardrail upgrade or replacement 2,200 miles.
 - safety improvements at freeway ramps 35 locations.
- Six Ports of Entry were identified for construction.
- Nearly one-third (970) of the bridge boxes on the State
 Highway System will require replacement or reconstruction.
- 3,101 bridges will require some type of improvement: (includes bridge boxes and span bridges)

2020

- 1,843 bridge replacements.
- 846 bridge reconstructions.
- 412 bridge rehabilitations.



Ports of Entry are locations at the state border where commercial vehicles undergo electronic processing for weight and credential screening, tax and fee status, and safety inspections.



Proposed Number and Type of Bridge Improvements by Year Rehabilitate Reconstruct Replace 120 40 40

2025

2015

2035

2040

2030



Freight Rail

railroads.

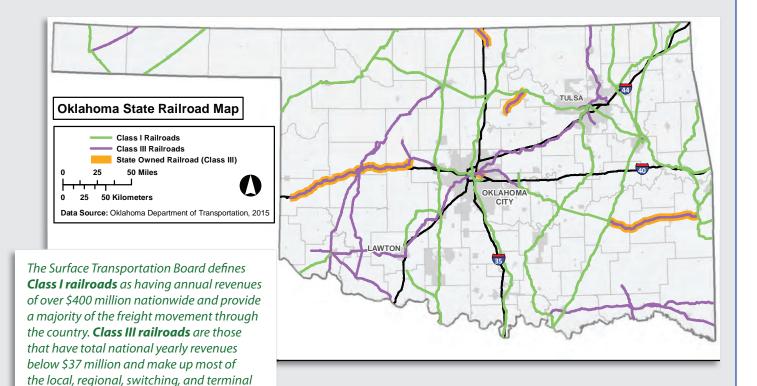
Inventory and Existing Conditions:

- Currently, three Class I railroads operate in Oklahoma, which include Burlington Northern Santa Fe (BNSF), Kansas City Southern Railway (KCS), and Union Pacific (UP).
- Oklahoma also has 19 Class III or short line railroads that provide regional service and connections to the Class I railroads.
- Approximately 68 percent of the state's rail line miles are operated by Class I railroads, and the remaining by short line railroads.
- Oklahoma is one of the few states in the country that owns rail lines. At its peak, the State of Oklahoma held title to 882 miles of rail line. ODOT currently owns 213 operating miles of rail line, 70 miles of which are under a lease purchase option that will mature in 2016.
- Rail tonnage increased by an estimated 64 percent in Oklahoma between 2010 and 2015, to 338.7 million tons.



Needs Identified:

- State freight rail improvements, such as tie replacements, ballast upgrade, and switching repairs, are needed.
- Oklahoma has approximately 3,800 at-grade highway railroad crossings. At least 750 need to be upgraded.
- All passenger and Class I hazardous materials trains must have positive train control (PTC) technology installed by the end of 2015 according to federal law.
- Improving rail connectivity to other modes is paramount for the competitive and efficient movement of goods.





Passenger Rail

Inventory and Existing Conditions:

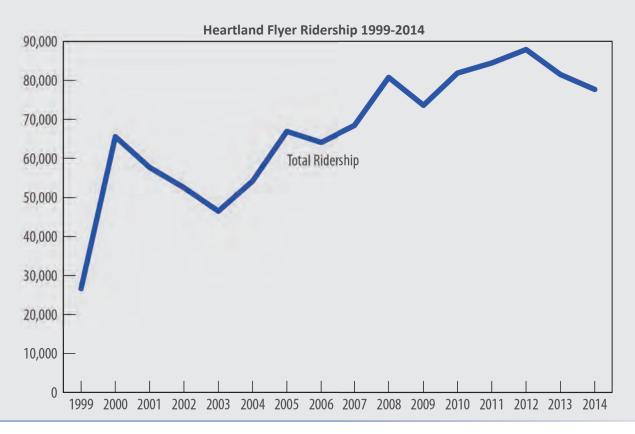
- The Amtrak Heartland Flyer operates round trip daily service between Oklahoma City and Fort Worth, Texas.
- The Heartland Flyer trip is 206 miles with intermediate stops in Norman, Purcell, Pauls Valley, Ardmore, Oklahoma and then Gainesville, Texas before arriving in Fort Worth.
- Ridership has steadily increased and the Heartland Flyer transports approximately 82,000 passengers per year.



- There is an interest in passenger rail service in Oklahoma; however the exact level of need cannot be quantified at this time. Routes that have been proposed include:
 - Heartland Flyer to Newton, Kansas.
 - New Daytime Service between Kansas City Oklahoma City – Fort Worth, Texas.
 - Tulsa Oklahoma City Intercity Passenger Rail.









Public Transportation

Inventory and Existing Conditions:

- Twenty rural public transportation providers operate in 73 of the 77 counties in Oklahoma.
- Rural public transit systems provide more than three million trips annually with approximately 25 percent of the trips made by the elderly and persons with disabilities.
- Oklahoma has five urban public transit systems that include Citylink in Edmond, the Cleveland Area Rapid Transit (CART) in Norman, EMBARK in Oklahoma City, Lawton Area Transit System, and Tulsa Transit.
- There are 14 tribal transit providers. These tribal transit agencies provided 231,123 regular trips in 2012.



- Public transportation needs include capital improvements, operations, and administration/planning services for rural, urban, and tribal transit systems in Oklahoma.
- The entire rural transit fleet of 1,012 vehicles will need to be replaced over the next 25 years.
- Residents of urban areas identified needs for greater service frequency, longer hours of service, weekend service, as well as more routes to serve employment and retail hubs. Urban transit needs are largely planned and met within the context of urban area transit services and metropolitan planning areas through the MPO long range transportation plans.







Bicycle and Pedestrian

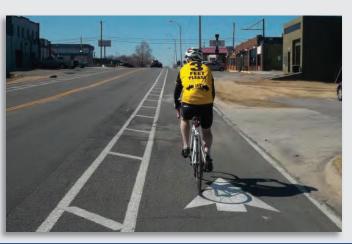
Inventory and Existing Conditions:

- Bicycle and pedestrian facilities throughout Oklahoma consist of multi-use trails, signed bicycle routes/lanes, and sidewalks.
- The planning and implementation of bicycle and pedestrian improvements are typically completed at the local government level, and/or through a MPO.
- Funding for bicycle and pedestrian improvements is typically from a combination of federal, local, private and/or non-profit sources.

Needs Identified:

 MPO Plans and public input identified that bicycle and pedestrian needs include additional multi-use trails, signed bicycle routes/lanes, and sidewalks.







Ports and Waterways

Inventory and Existing Conditions:

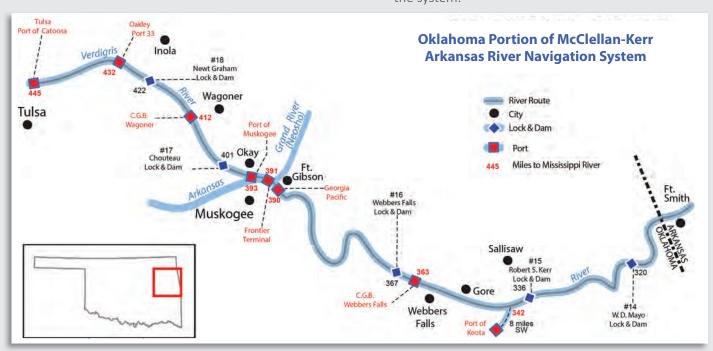
- The McClellan-Kerr Arkansas River Navigation System (MKARNS) is Oklahoma's primary navigable waterway originating from the Tulsa Port of Catoosa and flowing southeast through Arkansas to the Mississippi River.
- The Ports of Muskogee and Catoosa are the state's two public ports, and both are designated as Foreign Trade Zones.

There are 31 terminal facilities along the MKARNS waterway and most facilities are located near the Ports of Catoosa and Muskogee.



Needs Identified:

■ The primary needs for the MKARNS are: proceeding with critical maintenance; deepening the channel to 12 feet; addressing the navigation channel overflow issue at the confluence of the Arkansas, White, and Mississippi Rivers; and adding tow haulage to the locks. The U.S. Army Corps of Engineers is responsible for the operation and maintenance of the system.



Airport Access

Inventory and Existing Conditions:

- There are 113 general aviation airports and 7 regional airports in Oklahoma.
- The three primary airports in Oklahoma are the Lawton-Fort Sill Regional, Tulsa International, and the Oklahoma City Will Rogers World airports.
- Tulsa International and Oklahoma City Will Rogers World airports are also cargo service airports. Tulsa consistently has a landed weight of over 300 million pounds and Oklahoma City consistently has over 200 million pounds.



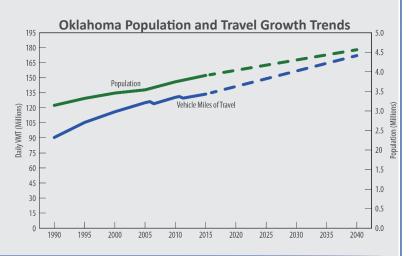
■ Improved airport access is needed and is important to local residents and businesses. ODOT assists in addressing airport access needs.

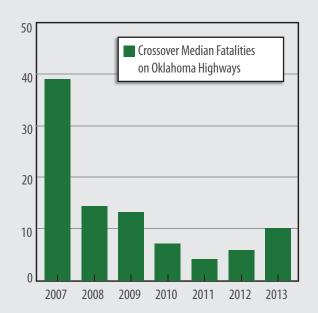




TRANSPORTATION TRENDS

Increasing population and employment are putting greater demand on the existing statewide transportation system. Mirroring the population and employment growth, vehicles miles travel (VMT) is projected to continue to increase. By 2040, VMT is forecasted to reach 172 million.



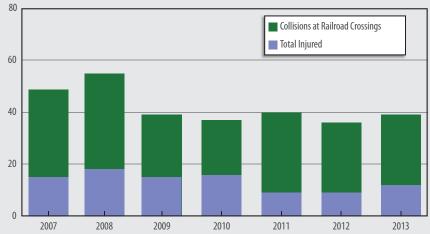


The number of fatalities at median crossovers in recent years has declined substantially due to installation of median cable barriers.



The number of collisions and injuries at railroad crossings has declined since 2008.







TRANSPORTATION SYSTEM USERS

Information on population, employment and business growth are important considerations in any long range transportation planning effort. Understanding the users of the transportation system and their mobility needs can help inform planning efforts and the delivery of transportation projects to address future travel demand and access to transportation facilities.

Long-term industry and employment projections help transportation decision-makers understand the types of industry that are depending on the transportation system, and how business needs may impact future transportation demand.

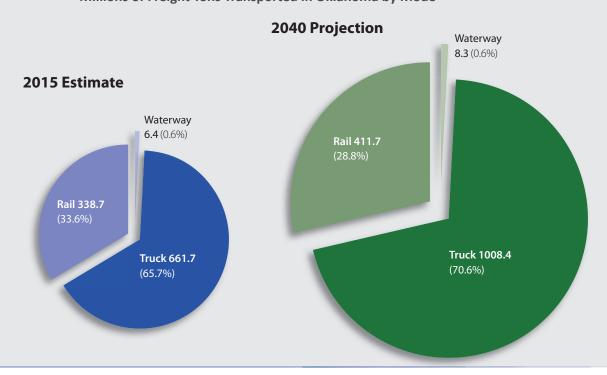






Total freight tonnage moving inbound, outbound, through and within Oklahoma is forecast to grow to 1.4 billion tons by 2040, up 42 percent from 2015. This is largely driven by a 52 percent increase in truck tonnage, followed by a 22 percent increase in rail tonnage, and a 30 percent increase in waterway tonnage. In the year 2040, trucks are forecast to carry 71 percent of all freight tonnage and rail is projected to transport 29 percent. Waterborne freight is expected to stay the same at less than 1 percent.

Millions of Freight Tons Transported in Oklahoma by Mode





PUBLIC OUTREACH AND STAKEHOLDER PARTICIPATION

Public involvement was an important part of developing the 2015-2040 LRTP. The LRTP public involvement process involved communicating with stakeholders, hosting open house meetings, and working with the Tribal, Personal Travel, and Freight Advisory Committees.





There were several key results from the public outreach that were important for the development of the 2015-2040 LRTP. These are linked to the goals shown in Table 1.

Web site

ODOT created a project web site to provide access to 2015-2040 LRTP information. The 2015-2040 LRTP documents are available at: http://ok.gov/odot/Programs_and_Projects/Transportation_Programs/

Table 1. LRTP Goals and Public Input

LRTP GOALS		PUBLIC INPUT
	SAFE AND SECURE TRAVEL	Highway safety was identified as a top transportation issue.
		The improvement of rural roads to include shoulders was identified as a vital transportation issue.
		Pedestrian and bicycle facilities improvements are needed to decrease the dangers that users face on the street.
	INFRASTRUCTURE PRESERVATION	Highway and bridge improvements were identified as priority needs.
		Need better maintenance of existing facilities – longer lasting, more durable repairs.
(A)	MOBILITY CHOICE, CONNECTIVITY AND ACCESS	More funding for rural transit operations.
		Passenger rail was identified as an important transportation issue.
		Provide multiple modes/options for transporting people and goods.
		Many rural transit vehicles have over 200,000 miles on them and need to be replaced.
E \$	ECONOMIC VITALITY	Transportation was identified as important because it helps economic development and supports existing businesses.
↔	ENVIRONMENTAL RESPONSIBILITY	Consider Complete Streets and Context Sensitive Design for inclusion in future transportation projects.
		Encourage use of environmentally friendly transportation options including public transportation and alternative fuel vehicles.
		The state and cities should protect roads and bridges from flood damage.
	EFFICIENT MULTIMODAL	Need good highways for efficient transport of goods.
	SYSTEM MANAGEMENT AND OPERATION	Improve connections between rural transit systems and intercity bus and passenger rail.



PERFORMANCE MEASURES

Performance management describes a wide framework in which leaders use measureable results to support decision-making, manage organizations, and provide accountability.

ODOT uses quantitative data to assess the agency's performance and effectiveness in fulfilling major elements of its overall mission .

Measuring performance at ODOT is being done in a manner that is consistent with MAP-21 requirements, the goals and objectives developed as part of the 2015-2040 LRTP, and the state's performance management framework, which is described on OkStateStat.

Regularly updated reports are part of performance management and ODOT participates in providing information to the Infrastructure subset of the Safe and Secure Communities goal area under the state's performance management outline.

Performance measures

provide a means to assess how the transportation system and/or a transportation agency is functioning and operating. They also provide an accountability mechanism for efficient and effective program implementation.

Performance measures are proposed for each 2015-2040 LRTP goal except the Efficient Multimodal System Management and Operation goal. Performance measures are proposed as shown in Table 2.

Table 2. LRTP Goals and Performance Measures/Recommendations

LRTP GOALS		PERFORMANCE MEASURES/RECOMMENDATIONS
SAFFTY	SAFE AND SECURE TRAVEL	 Reduction in traffic related fatalities and serious injuries Rate and number of traffic fatalities annually on all Oklahoma public roads Rate and number of traffic-related serious injuries annually on all Oklahoma public roads
	INFRASTRUCTURE PRESERVATION	Bridge Condition – Number of structurally deficient bridges Preservation of Pavement – Good/fair/poor condition index for NHS highways
(Spot)	MOBILITY CHOICE, CONNECTIVITY AND ACCESS	 Public Transit – Annual rural transit vehicle revenue miles Passenger Rail – Annual ridership and on-time performance for Amtrak Heartland Flyer
a s	ECONOMIC VITALITY	 Freight Movement Annual freight tonnage/value for truck, rail, barge modes Measure of freight travel time reliability and/or speed Congestion Travel time-based measure(s) of congestion
⊕	ENVIRONMENTAL RESPONSIBILITY	 Clean fuels and improved air quality – Clean fuels as a percentage of ODOT's total fleet fuel use in gasoline gallon equivalents Reduce roadway flooding and support improved water quality - Quantity of Litter/Debris (cubic yards or other measure of weight and volume) cleared from storm drains/culverts/roadsides

Source: Oklahoma Department of Transportation



COST VS. REVENUE

The 2015-2040 LRTP includes an analysis of expected costs to address state transportation needs over the next 25 years, as well as a forecast of reasonably expected revenue.

Estimated LRTP Cost 2015-2040

The 2015-2040 LRTP analysis estimated the costs to address the needs identified to construct and maintain Oklahoma's transportation system. This includes the costs for ODOT owned assets and functions such as the State Highway System, bridges, interchanges, and transportation appurtenances.¹ The total 2015-2040 LRTP also includes the costs for partner² transportation assets and functions addressed in the 2015-2040 LRTP, for which ODOT may provide assistance, but the leadership and primary responsibility is under the authority of partner entities. These include public transit, passenger rail, bicycle and pedestrian facilities, intermodal facilities, ports and waterways, congestion management, and the locally owned federal aid system.

Anticipated LRTP Revenue 2015-2040

The 2015-2040 LRTP revenue forecast estimates ODOT's state revenues, federal funds, and local matching funds for state owned transportation infrastructure investments over the next 25 years. To be consistent with the needs identification/cost estimate process, the 2015-2040 LRTP revenue forecast also separately

Table 3. Anticipated Costs and Revenues 2010-2040 (Millions of 2013 Dollars)

ODOT SYSTEM	ESTIMATED COSTS	PROJECTED REVENUES	DIFFERENCE: COSTS – REVENUES
BRIDGES	\$3,703	-	-
HIGHWAYS	\$16,849	-	-
INTERCHANGES	\$2,925	-	-
ODOT TRANSPORTATION APPURTENANCES ¹	\$8,756	-	-
ODOT SUBTOTAL	\$32,233	\$24,239	\$7,994
LOCAL, REGIONAL, FEDERAL PARTNER ² TRANSPORTATION ASSETS & FUNCTIONS	\$5,202	\$4,298	\$904
2015-2040 OK LRTP TOTAL	\$37,435	\$28,537	\$8,898

Table 4. What Can ODOT Get for \$1 Million?

ODOT ASSET	AMOUNT
HIGHWAY INTERSTATE URBAN	1/10 of a mile
HIGHWAY INTERSTATE RURAL	1/2 of a mile
TWO-LANE RURAL HIGHWAY	1 mile
BRIDGES	A typical 4-lane, three hundred foot bridge over a creek.
LARGE URBAN TRANSIT BUS	3 Buses
RURAL TRANSIT BUS	14 Buses
RURAL TRANSIT VANS	25 Vans
SIDEWALKS	2 - 4 miles
MULTIUSE BIKE PED TRAIL	1 - 2 miles
SAFETY CABLE BARRIERS	1 - 1 1/2 miles

documents ODOT and partner entity revenues (based on available information) that will be available to improve the partner transportation assets and functions. Both revenue components are added together for the overall 25-year projected revenue. ODOT acknowledges that these partner entities may have additional information, to expand or update the 2015-2040 LRTP financial information and that the partner entities should be considered the most knowledgeable source for their respective operations.

Total Cost and Revenue

The price tag for addressing needed improvements during the 2015-2040 LRTP is approximately **\$37.4 billion**. As shown in Table 3, total federal, state and local revenue is approximately **\$28.5 billion** to address the 2015 to 2040 LRTP needs. Thus the comparison of costs versus revenues shows that, without additional funding, there will be an approximate **\$8.9 billion** financial gap between the transportation needs and the resources to pay for them.

¹Transportation Appurtenances: In addition to the highway, bridge and interchange needs, transportation appurtenances (accessory items or items associated with the transportation system) require improvement. These include safety, maintenance, Ports of Entry, weigh stations, rest areas, Intelligent Transportation System (ITS), and state rail including at-grade highway railroad crossings.

²Partner entities include: ACOG, INCOG and Lawton MPOs; Oklahoma cities, towns and counties; Oklahoma rural, urban, and tribal transit providers; Amtrak Heartland Flyer and private freight and passenger rail operators; public and private port operators; and the US Army Corps of Engineers.



TRANSPORTATION POLICY RECOMMENDATIONS

The following policies and strategies are intended to guide ODOT in the transportation system development process. Categories include: highways and bridges, freight rail, passenger rail, public transportation, multimodal (policies and strategies address topics which encompass several or all modes), bicycle and pedestrian, ports and waterways, airport access.

Table 5. Highway and Bridge Policies

POLICY 1. Improve safety and bridge conditions by replacing or rehabilitating structurally deficient bridges on the State Highway System. (Existing Policy)

Strategies/Action Items

- a. Implement adopted schedule for replacing or rehabilitating structurally deficient bridges on the State Highway System. (Updated)
- b. Pursue methods of rehabilitating and replacing fracture-critical bridges. (Updated)
- c. Develop a programmatic approach to identify and address potential preservation issues on noteworthy historic bridges, including, but not limited to, truss-style bridges, working collaboratively with community partners. (Existing)

POLICY 2. Preserve and improve the condition of highways and bridges by implementing asset management systems. (*Updated Policy*)

Strategies/Action Items

- a. Further develop the State's Bridge Management System (PONTIS). Utilize data from the Bridge Management System to highlight specific areas requiring action in relation to safety, rehabilitation, reconstruction, and replacement. (Updated)
- b. Continue to utilize the bridge rating system as a tool to identify "at risk" structures, and incorporate them into the Bridge Maintenance Program. (*Updated*)
- c. Utilize the Pavement Management System as a tool to enhance pavement condition on the State Highway System. (Updated)
- d. Assess the impact that increased truck size, weight, and axle configurations will have on the State Highway System. (Updated)
- e. Implement the regulations outlined in MAP-21 as they pertain to performance measures and asset management for bridges and pavements. (New)

POLICY 3. Reduce fatalities and serious injuries on Oklahoma highways through appropriate engineering solutions and systemic improvements. (Updated Policy)

- a. Improve safety of roadway infrastructure by taking the following actions: (Updated)
- i. Continue to add shoulders on two-lane rural highways where high collision rates have been identified.
- ii. Continue to install cable median barriers on high volume divided highways with high crossover collision history or appropriate geometric characteristics.
- iii. Continue to implement approaches outlined in the Oklahoma Strategic Highway Safety Plan to address four emphasis areas: unsafe driver behavior, intersection crashes, crashes involving young drivers, and lane departure crashes.



Pavement Conditions - Poor/Cracked



Pavement Conditions - Freshly Paved







POLICY 4. Improve operational performance of highways through increased use of traveler information systems. (Existing Policy)

Strategies/Action Items

- a. Utilize operational strategies to reduce the impact of congestion-causing incidents on transportation systems. These include effective traffic incident management, traveler information systems, and technologies to manage safety in work zones, among others: (Updated)
- i. Consider utilization of internet-based systems and emerging technologies for managing traveler information and user notifications.
- ii. Improve Intelligent Transportation System (ITS) communications and the use of variable highway message signs to inform motorists of congestion, bottlenecks, and work zones.
- b. Investigate the use of emerging technologies such as autonomous vehicles and explore their impact on operational and safety performance on highways. (New)

POLICY 5. Provide for a safe, efficient, and effective National Highway System (NHS) to improve commercial motor vehicle mobility and connectivity. (*Updated Policy*)

- a. Continue the use of Oklahoma Permitting and Routing Optimization System (OKie PROS) to provide assistance to oversize, overweight commercial motor vehicle users for making safe and efficient route choices. (*Updated*)
- b. Continue development of Ports of Entry—technology-based commercial motor vehicle weigh and credential screening stations located at major highway entry points to the State. (Existing)
- c. Implement an Intelligent Transportation System (ITS) program to monitor and manage congestion in cooperation with commercial vehicle industry and other stakeholders. (New)
- d. Make targeted investments on the National Highway System to accommodate traffic growth on truck routes and strengthen system safety and efficiency for truck operations. (*Updated*)
- e. Pursue opportunities to partner with the private sector to enhance truck stops/rest areas by providing overnight parking availability information, identifying locations, etc. (New)
- f. Analyze freight truck travel time data to assist in decision-making about freight related system improvements on the National Highway System. (New)







Table 6. Freight Rail Policies



POLICY 1. Improve rail operations and operational effectiveness by encouraging public-private partnerships. (Updated Policy)

Strategies/Action Items

- a. Support identification and elimination of bottlenecks both on main lines and classification yards (the multi-track facilities where freight cars are transferred from one engine to another based on their destination) by the use of Class I railroads. (Updated)
- b. Support double tracking and signal/operations improvements to mitigate freight rail congestion and to meet projected increase in rail traffic. (Existing)
- c. Maintain coordination between government agencies and Class I railroads. (Updated)
- d. Support upgrades to state-owned Class III track and structures to permit use of 286,000 pound standard rail cars and larger, which in turn will support Class I service and improve service efficiency. (Existing)
- e. Develop options for statewide programs to target preservation and upgrading of Class III lines. (Updated)

POLICY 2. Improve rail conditions, operations, and safety through continued support and refinement of the Oklahoma Statewide Freight and Passenger Rail Plan. (Updated Policy)

Strategies/Action Items

- a. Periodically, perform an analysis of Oklahoma's rail network to identify future connectivity gaps based on changing freight patterns and the Oklahoma Statewide Freight and Passenger Rail Plan. (Updated)
- b. Update the existing rail crossing inventory with current rail and highway traffic data and review accident exposure ratings using the Federal Railroad Administration (FRA) safety program. (see Passenger Rail #2c) (Existing)
- c. Provide technical assistance to local communities planning to improve rail-highway crossing facilities, including crossing surfaces and signal devices. (see Passenger Rail #2d) (Existing)
- d. Continue efforts to evaluate the consolidation of at-grade crossings to further improve safety. (see Passenger Rail #2e) (Existing)

POLICY 3. Improve rail-highway-port connections to facilitate intermodal freight movement. (Existing Policy)

- a. Monitor and promote opportunities for development of intermodal and transmodal facilities in Oklahoma. (Updated)
- b. Support the development of intermodal freight corridors that connect major population centers with freight generators and international gateways. (Existing)
- c. Encourage industrial development near rail corridors to enhance intermodal freight movement. (New)









POLICY 1. Preserve and maintain existing service to provide people with multimodal options for intercity travel. (Existing Policy)

Strategies/Action Items

- a. Cooperate and coordinate with Amtrak, BNSF, and the State of Kansas in evaluating potential passenger rail service by means of an Oklahoma City to Newton or Wichita, Kansas, Amtrak route. (Updated)
- b. Evaluate current ridership trends and train frequencies to improve the existing Amtrak passenger rail service. (Updated)

POLICY 2. Improve passenger rail as a modal choice by improving travel time, safety and reliability of the service. (Updated Policy)

Strategies/Action Items

- a. Proceed with planning activities to determine feasibility of passenger rail service between Oklahoma City and Tulsa. (Updated)
- b. Identify, develop, and secure funding that promotes and enhances passenger rail system investment. (New)
- c. Update the existing rail crossing inventory with current rail and highway traffic data and review incident exposure ratings using the FRA safety program. (see Freight Rail #2b) (*Updated*)
- d. Provide technical assistance to local communities planning to improve rail-highway crossing facilities, including crossing surfaces and signal devices. (see Freight Rail #2c) (Existing)
- e. Continue efforts to evaluate the consolidation of at-grade crossings to further improve safety. (see Freight Rail #2d) (Existing)

POLICY 3. Increase intermodal passenger travel choices by improved connections at passenger rail stations with intercity bus services, public transportation, and park- and-ride facilities. (Updated Policy)

- a. Encourage expanded and improved connections to passenger rail stations from rural, tribal, and urban public transit, intercity buses, and airport terminals. (see Public Transportation #1a) (Existing)
- b. Coordinate schedules to provide better connections between local and regional public transportation systems and to provide seamless and convenient transportation throughout the State and region. (*Updated*)

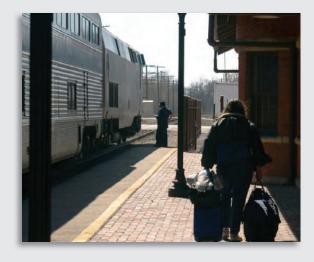






Table 8. Public Transportation Policies

POLICY 1. Improve public transportation system operations and performance by promoting coordination and connections statewide among rural, urban, tribal, and intercity bus services. (Updated Policy)

Strategies/Action Items

- a. Expand and improve connections between rural transit systems and tribal systems, intercity bus stops/terminals, urban transit system transfer points, airports, and Amtrak Heartland Flyer stops. (See Passenger Rail#3a) (*Updated*)
- b. Continue collaboration with stakeholders in development of an electronic database and mobility management system regarding the State's transit service routes and locations. (*Updated*)

POLICY 2. Support multiple modes of transportation connecting residential areas and employment locations, health services, and other activity centers. (Existing Policy)

Strategies/Action Items

- a. Encourage improved coordination between land use and transit planning, including pedestrian and bicycle connections to transit routes, practical transit stop locations, transit shelters, park-and-ride lots, access for elderly and disabled, and transit oriented development. (New)
- b. Investigate potential for agreements between rural transit systems and health and hospital systems, social service providers, and major employers to expand transit service options. (Existing)
- c. Coordinate with health and human service agencies and others to expand paratransit services for special needs populations and individuals with disabilities. (Existing)
- d. Conduct a study to identify demand for off-peak intercity transit service. Include consideration of need for transport between rural transit areas, and between rural and urban parts of the state. (*Updated*)

POLICY 3. Protect Oklahoma's investment in the public transportation system by seeking additional/dedicated funding. (Updated Policy)

Strategies/Action Items

- a. Encourage continued cooperation and collaboration among ODOT, the tribal transit agencies, and the urban transit systems and appear as one voice to the Oklahoma legislative delegation on Federal Transit Administration (FTA) funding requests. (Existing)
- b. Promote development of dedicated transit funding sources beyond the existing Public Transportation Revolving Fund. (Existing)
- c. Support metropolitan area transit, including passenger rail initiatives, and dedicated transit funding. (New)

POLICY 4. Develop a Statewide Public Transportation Plan that identifies and targets opportunities for strategic improvements to services. (Existing Policy)

- a. Develop Statewide Public Transportation Plan to analyze statewide transit network with recommendations for improvements to existing services as well as locations for new services. (Existing)
- b. Prepare a statewide program of FTA-eligible capital projects and operational needs every five years. Identify non-Federal match for FTA-eligible projects. (Existing)









POLICY 1. Establish a vision to support bicycle and pedestrian modal choices and promote healthy affordable modes of transportation. (Updated Policy)

Strategies/Action Items

- a. Continue to pursue opportunities to bring State highways in small communities into compliance with the Americans with Disabilities Act. (Existing)
- b. Incorporate bicycle facility design standards into the next version of the ODOT Roadway Design Manual. (Existing)
- c. Develop a statewide bicycle plan that emphasizes safety and builds and expands upon the work of the Metropolitan Planning Organizations. (*Updated*)

POLICY 2. Improve modal choices and safety by incorporating pedestrian and bicyclist facilities in accordance with approved design standards. (Updated Policy)

Strategies/Action Items

- a. Continue to provide pedestrian signals, warning beacons, signage, striping, and lighting at intersections of state routes with high-volume pedestrian crossings. (*Updated*)
- b. Support inclusion of bicycle and pedestrian facilities into new and renovated intermodal facilities and connection points, such as train depots, bus terminals, etc. (Existing)
- c. Support efforts by local governments, public transit providers, passenger rail systems, and others to expand and improve bicycle ways and walkway connections. (*Updated*)
- d. Assess and respond to needs for pedestrian and bicycle infrastructure on or adjacent to state highways concurrent with related highway improvements, and as a part of the project development process. (*Updated*)
- e. Inform bicycle/pedestrian community about coordinating with the state's bicycle and pedestrian coordinator and about the public involvement process. (New)

POLICY 3. Promote and support public information outreach and education regarding safe and accessible transportation routes for bicyclists and pedestrians. (New Policy)

- a. Continue to educate communities about sidewalk and trail requirements associated with the Americans with Disabilities Act. (New)
- b. Promote statewide and local-area education programs to make transportation users aware of pedestrian and bicyclist rights and responsibilities. (Existing)
- c. Support efforts by health departments, educational facilities, and public safety agencies to provide bicycle and pedestrian safety lessons/workshops. (New)
- d. Encourage local communities that are planning or constructing new facilities for pedestrians and bicyclists to seek technical support from the state's bicycle and pedestrian coordinator. (Existing)



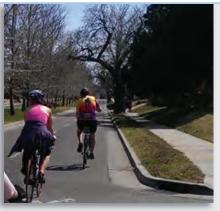




Table 10. Multimodal Policies



POLICY 1. Protect Oklahoma's investment in transportation by seeking to preserve and enhance current and/or new funding mechanisms for all modal systems. (Updated Policy)

Strategies/Action Items

- a. Develop and maintain information on historical trends and provide this information to State government leaders and the Oklahoma Congressional Delegation to support their search for new funding sources for the transportation system. Continue to assist government leaders in determining appropriate transportation funding and improvement priorities. (Existing)
- b. Explore various alternatives for funding the State's surface transportation program, such as: securing increased percentage of state Motor Vehicle Revenue, increasing diesel tax, increasing freight fees, considering vehicle miles traveled fee and innovative tolling. (*Updated*)
- c. Provide information to State government leaders and Oklahoma's Congressional Delegation to assist them in finding additional sources of funding for rural, urban, and tribal transit, passenger and freight rail service improvements, aviation improvements, and waterways improvements. (Existing)
- d. Continue to work with sovereign Native American Tribes and Nations to leverage resources for transportation improvements. (*Existing*)
- e. Cooperate and coordinate with local governments to research possible new funding partnerships for transportation projects of mutual interest. (Existing)

POLICY 2. Improve efficiency, economic vitality, and intermodal connectivity by developing a comprehensive State Freight Plan. (Updated Policy)

Strategies/Action Items

- a. Develop a comprehensive State Freight Plan by expanding and continuing meetings with freight stakeholders from various modes and industries and incorporating highlights of recently conducted freight studies. (New)
- b. Collaborate with freight stakeholders and utilize latest technologies and data to identify freight bottlenecks and prioritize investments to eliminate the bottlenecks. (*Updated*)
- c. Support investments to improve linkages between the airports, highway, railway, and water systems. (*Updated*)

POLICY 3. Enhance modal choice for people and provide favorable conditions for transit ridership growth by identifying and improving intermodal connection points for travel by public transportation, intercity bus, passenger rail, airport, walking, bicycling, and automobile. (Updated Policy)

Strategies/Action Items

a. Identify gaps and opportunities in urban, tribal, and rural public transportation, intercity bus, passenger rail, airports, automobiles, and bicycle and pedestrian facilities and operations. (*Updated*)



State gas tax in Oklahoma has **remained at the same level since 1987** (17 cents per gallon).

The average state tax rate nationally is **30 cents per gallon**.

Oklahoma's state gas tax is **not indexed to inflation**.

ODOT receives about **48 percent of total state gas tax** revenues collected.



Table 10. Multimodal Policies (continued)



Strategies/Action Items

- a. Assess current ODOT practices in construction, maintenance, and agency operations to identify areas for potential energy conservation. (This could include installing light emitting diode traffic signals, reducing roadside mowing, using warmmix asphalt, etc.) (Existing)
- b. Focus efforts to assist the traveling public in conserving fuel, such as developing efficient traffic operations, traffic signal optimization, and work zone design to minimize idling time, etc. (*Updated*)
- c. Improve air quality by reducing traffic congestion and bottlenecks that result in increased emissions. (Existing)
- d. Support the use of clean fuels by ODOT, other state agencies, and the public. (Updated)

POLICY 5. Improve and promote security across all transportation modes through adoption of emergency preparedness protocols for managing natural and man-made threats to human resources, transportation capital assets, and information. (Updated Policy)

Strategies/Action Items

- a. Contribute to the public's safety by coordinating with the Oklahoma Department of Emergency Management, U.S. Departments of Homeland Security and Defense, and the U.S. Department of Transportation to plan for the restoration, and ensure the availability, of transportation services after a disaster and during times of national emergencies. (*Updated*)
- b. Improve the security and resilience of the transportation system, including highways, transit, rail, ports and marine, air cargo, and passenger aviation, through identification of "safety-critical" assets. (Existing)
- c. Develop alternate routes and transportation system redundancy to maintain mobility during emergencies or natural disasters. (Existing)
- d. Maintain and improve urban area programs to remove debris and litter from drains, culverts, and roadsides to minimize roadway flooding. (New)

POLICY 6. Develop a comprehensive performance management framework for ODOT to align with State and Federal partners. (New Policy)

- a. Strengthen working relationships with Oklahoma's Metropolitan Planning Organizations (MPOs) in relation to performance measures. (New)
- b. Monitor national rules for pavement condition and bridge performance, and begin to develop appropriate capability to report data for the national pavement condition and bridge performance measures. (see Highway and Bridge #2b and 2c) (New)
- c. Monitor federal rulemaking for freight planning, system performance, and congestion reduction; and begin to develop appropriate capability to report freight, system performance, and congestion measures. (New)
- d. Create an electronic performance measures dashboard as part of ODOT's website and update regularly. (New)

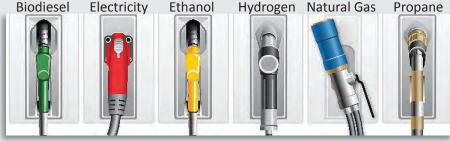


Image courtesy of the Alternative Fuels Data Center www.afdc.energy.gov



Table 11. Ports and Waterways Policies



Strategies/Action Items

- a. Continue to work with federal and state officials to obtain funding for the maintenance of existing locks and dams. (New)
- b. Continue to work with federal and state officials from Oklahoma and Arkansas to protect the confluence of the White and Arkansas Rivers. (Updated)
- c. Continue to work with federal and state officials to authorize the deepening of the MKARNS channel. (Updated)

POLICY 2. Enhance intermodal connectivity by targeting improvements to truck corridors and railroads that provide access to MKARNS ports. (Existing Policy)

Strategies/Action Items

a. Work collaboratively with the Ports and other stakeholders to address issues related to transporting "super" loads from the Ports. This could include improvement to bridge structures and pavement on routes to accommodate the "super" loads. (Updated)

POLICY 3. Facilitate modal choices for goods movement and provide a sustainable budget for marketing and development of Oklahoma ports and waterways. (Existing Policy)

Strategies/Action Items

a. Seek partnerships with private sector user groups, economic development associations, and other stakeholders to support promotion of the MKARNS channel. (*Updated*)







Table 12. Airport Access Policies

POLICY 1. Improve intermodal freight connectivity through maintenance and improvement of access to air cargo hub facilities. (*Updated Policy*)

Strategies/Action Items

a. Coordinate with MPOs, chambers of commerce, the Oklahoma Trucking Association, defense installations, Oklahoma airport operators, and other stakeholders to support access to new and existing air cargo hubs and related transmodal center(s) in Oklahoma. (*Updated*)

POLICY 2. Improve intermodal choices for people through improved connection to airports via car, truck, bus, and passenger rail. (Updated Policy)

Strategies/Action Items

- a. Coordinate with local stakeholders and public transportation providers to expand and improve connections to airports from rural, tribal, and urban public transit, buses, and passenger rail stations. (*Updated*)
- b. Support efforts to obtain regional air service for strategically located rural communities that would benefit from and sustain such airport facilities. (New)

CONCLUSION AND NEXT STEPS

The 2015-2040 LRTP is a policy document that guides ODOT in the development, management, and operation of a safe and efficient transportation system for the next 25 years. The 2015-2040 LRTP includes several items that will help move improvements to Oklahoma's transportation system forward. These include:

- Goals that are consistent with federal law;
- Performance measures to gauge ODOT's effectiveness and to provide measurable results to inform state and federal decision makers:
- Identification of Oklahoma surface transportation improvement needs between 2015 and 2040;
- Estimate of costs and forecast of revenues associated with Oklahoma's transportation needs over the next 25 years; and
- Policies and strategies that have been developed for all modes of transportation to assist with addressing the goals, performance measures and needs.

ODOT will now move into an implementation phase following the adoption of the 2015-2040 LRTP by:

- Updating and implementing the ODOT Eight Year Construction Work Plan;
- Refining performance measures and tracking ODOT's progress in achieving performance targets; and
- Developing activities to implement the policies and strategies.



"Moving Oklahoma Forward"