

# Oklahoma Long Range TRANSPORTATION PLAN



Moving Oklahoma  
**FORWARD**

Technical Memorandum

## Existing Conditions

Prepared for:

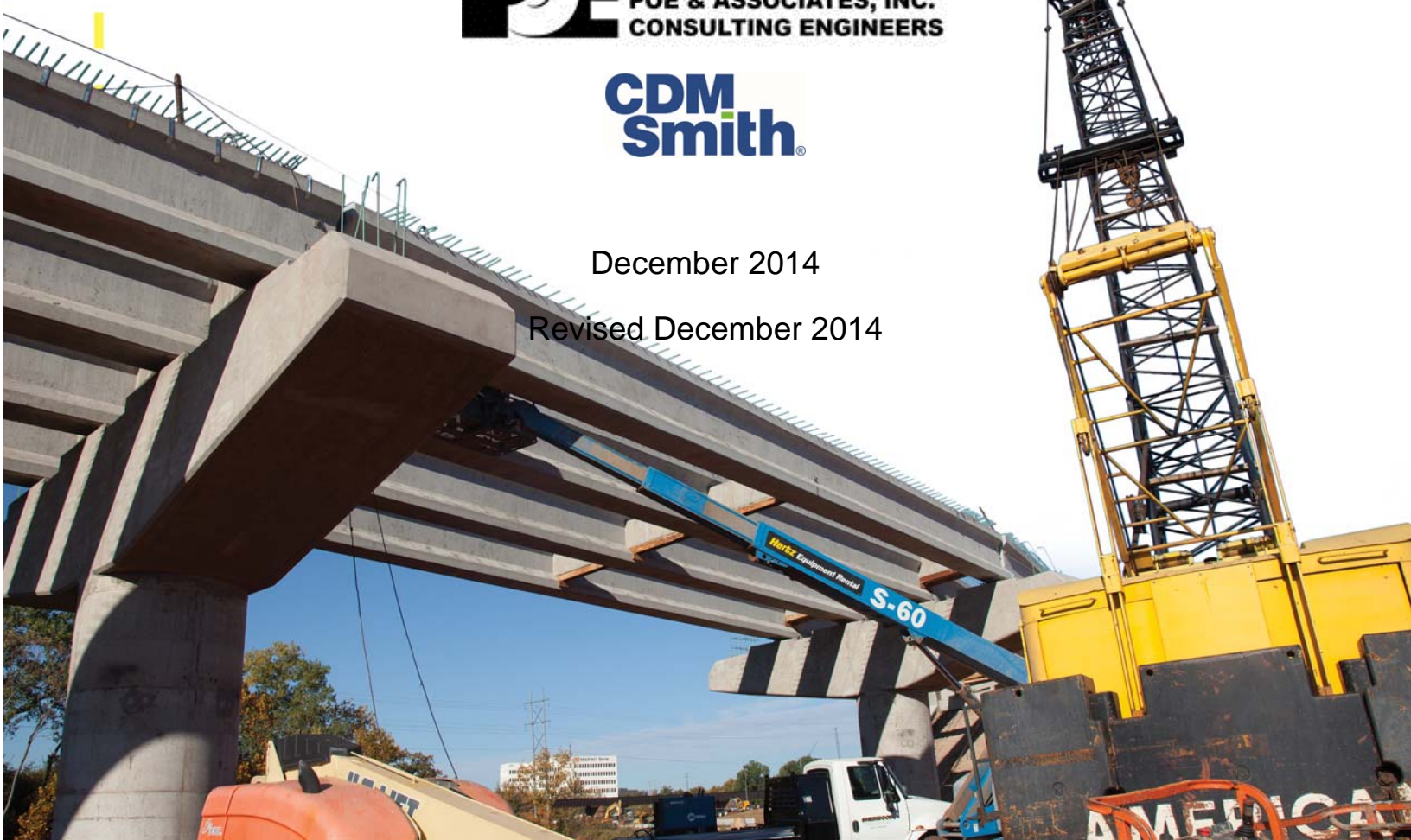
Oklahoma Department of Transportation

Prepared by:



December 2014

Revised December 2014





The Technical Memos were written to document early research for the 2015-2040 Oklahoma Long Range Transportation Plan (LRTP). Most of these memos were written in 2014; all precede the writing of the 2015-2040 Oklahoma LRTP *Document* and 2015-2040 Oklahoma LRTP *Executive Summary*.

The 2015-2040 Oklahoma LRTP *Document* and 2015-2040 Oklahoma LRTP *Executive Summary* were composed in Spring 2015.

If there is an inconsistency between the Tech Memos and the 2015-2040 Oklahoma LRTP *Document* or 2015-2040 Oklahoma LRTP *Executive Summary*, the reader should assume that the *Document* and *Executive Summary* contain the most current and accurate information.



# Oklahoma Long Range TRANSPORTATION PLAN

## Table of Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1-1</b>
<b>2</b>	<b>BRIDGES.....</b>	<b>2-1</b>
<b>3</b>	<b>HIGHWAYS .....</b>	<b>3-1</b>
	3.1 Rural Two Lane Highways.....	3-1
	3.2 Major State Highways .....	3-3
	3.3 Interstate Highways .....	3-3
<b>4</b>	<b>HIGHWAY SAFETY.....</b>	<b>4-1</b>
<b>5</b>	<b>FREIGHT ON HIGHWAY SYSTEM.....</b>	<b>5-1</b>
<b>6</b>	<b>FREIGHT RAIL .....</b>	<b>6-1</b>
<b>7</b>	<b>PORTS AND WATERWAYS .....</b>	<b>7-1</b>
<b>8</b>	<b>PUBLIC TRANSPORTATION .....</b>	<b>8-1</b>
	8.1 Passenger Rail .....	8-1
	8.2 Rural Transit.....	8-1
	8.3 Urban Transit.....	8-2
	8.4 Tribal Transit .....	8-3
<b>9</b>	<b>ENDNOTES .....</b>	<b>9-1</b>



# Oklahoma Long Range TRANSPORTATION PLAN

## List of Tables

Table 3-1: Miles and Daily Vehicle Miles Travelled on State Highway System (2013) .....	3-3
---	-----

## List of Figures

Figure 2-1. Structurally Deficient Bridges .....	2-2
Figure 2-2: Oklahoma's Structurally Deficient Bridges, 2001-2012 on Interstate, U.S., and State Highways .....	2-3
Figure 2-3. Bridges over 80 Years Old .....	2-4
Figure 3-1. Pavement Conditions .....	3-2
Figure 5-1: 2012 High Volume Truck Corridors .....	5-2
Figure 5-2: Proposed Ports of Entry .....	5-3
Figure 6-1: State-Owned Railroad Property.....	6-2
Figure 6-2: Oklahoma 2012-2013 State Railroad Map .....	6-3
Figure 7-1: Oklahoma Ports.....	7-2
Figure 8-1: Oklahoma Passenger Service Map .....	8-4



# Oklahoma Long Range TRANSPORTATION PLAN

## 1 INTRODUCTION

The Oklahoma Department of Transportation (ODOT) 2015-2040 Long Range Transportation Plan (LRTP) establishes a framework for the future using a policy approach to guide ODOT as it maintains and enhances an intermodal transportation system for the State of Oklahoma. This technical memorandum is intended to describe the existing conditions of Oklahoma's transportation system.

ODOT is charged with the planning, designing, construction, operation, and maintenance of Oklahoma's highway transportation infrastructure including the non-toll interstate highways, U.S. highways, and state highways. ODOT also maintains the state owned railroads. This infrastructure includes approximately 12,265 miles of highways and 6,828 bridges along with 320 miles of state owned railroad. ODOT administers a variety of other multi-modal programs including passenger rail, public transit, and waterways. ODOT also oversees other state and federal funds and programs directed to the county and city transportation systems.

ODOT is regionally organized with eight field divisions that correspond to the Transportation Commissioner Districts and a central office located in the State Capitol Complex in Oklahoma City. ODOT's executive staff, field divisions and central office cooperatively interact to locate, construct and maintain Oklahoma's transportation system.

Oklahoma highway system<sup>1</sup> bridge and pavement problems are readily recognized and are a direct result of many years of deferred maintenance attributable to a lack of sufficient transportation funding. Essentially from 1985 thru 2005, state and federal transportation funding was flat. As a result, the condition of the infrastructure experienced a consistent downward spiral and decline that will take many years of committed, focused and dedicated resources to correct. Prior to 2005, the problem quickly became overwhelming with no viable solution. At that time, highway pavements were deteriorating at a rate beyond the available funding to repair let alone reconstruct. In 2005, more than 1,500 of the highway system bridges were structurally deficient or functionally obsolete; 137 of those were load posted and unable to carry a legally loaded truck.

Understanding that a world class transportation system is the cornerstone of a vibrant economy and a leading factor in growing and attracting new business, the Oklahoma legislature decided that investing in transportation infrastructure should be a priority of state government. In 2005, these policy makers set about the business of reversing the previous 20 years of flat funding through the crafting of several pieces of road and bridge transportation legislation. These legislative initiatives, described below, have introduced new state resources reserved solely for the construction, care, and maintenance of the state transportation infrastructure.



In 2005, the “Rebuilding Oklahoma Access and Driver Safety Fund” or “ROADS” Act, Ok. Statute 69-1521, began a multi-year funding increase for ODOT. It directed a FY 2006 appropriation to include an additional \$15 million for roads and bridges, \$2 million for passenger rail service and \$500,000 for public transit, for a total of \$17.5 million. Beginning in FY 2007, and for each fiscal year following, a maximum of \$35 million would be added to the previous year’s amount until total funding reached \$170 million – an amount which thereafter, will become the annual apportionment. The \$35 million will be added if the growth in the General Revenue Fund exceeded 3 percent.

In 2006, a Critical Bridge Repair and Replacement Fund (SB 1288) was signed into law (62 OS, Supp. 2005, Section 46.1). The law provided ODOT with \$100 million of funds that were directed toward the goal of replacing critical bridges across the entire state. The million dollar infusion was a one-time appropriation from the Special Cash Fund of the State Treasury to perform the duties imposed upon the Oklahoma Department of Transportation by law. The amount was transferred to the State Highway Construction and Maintenance Fund for “repair, renovation, rehabilitation or replacement of bridges on the state highway system”.

These key legislative initiatives have set the stage for Oklahoma to begin to improve the overall condition of its transportation system.



# Oklahoma Long Range TRANSPORTATION PLAN

## 2 BRIDGES

ODOT replaced or rehabilitated 823 bridges between 2006 and 2013. This investment followed on the heels of 20 years of stagnant funding with little or no investment in the state's 6,828 bridges. ODOT's priority today continues to focus on eliminating structurally deficient and functionally obsolete bridges, and consequently Oklahoma no longer leads the nation in poor bridge conditions. The current ODOT 2015-2022 Eight Year Construction Work Plan includes an additional 935 bridge replacements or major rehabilitations which will reinforce the continued investment in Oklahoma's bridges. In fact, this investment is triple the financial commitment made 10 years earlier in the 2004-2012 Eight Year Construction Work Plan.

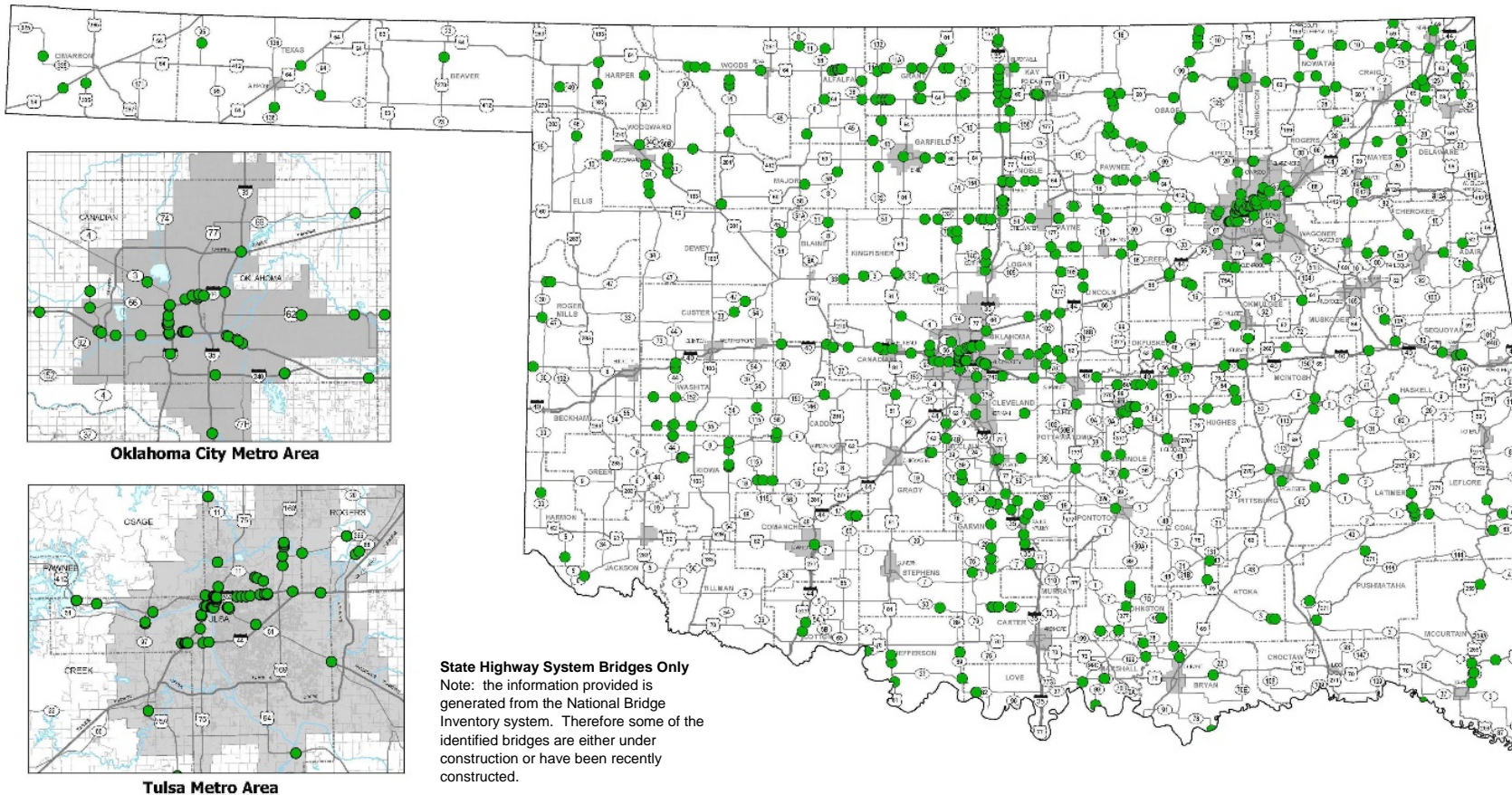
In 2004, Oklahoma led the nation in poor bridge conditions with 1,168 bridges (17%) classified as structurally deficient on the state highway system. As indicated in **Figure 2-1**, the structurally deficient bridges on the state highway system have shown a steady decline from 1,168 in 2004 to 556 in 2012. This reduction is a direct result of the increased legislative priority in transportation funding, as well as ODOT's strategic focus on improving the bridge condition throughout the state. Governor Mary Fallin instituted a funding plan in 2012 to reduce the number of structurally deficient bridges on the state highway system to nearly zero by the end of the year 2019. This is a very aggressive strategy that will greatly improve bridge conditions throughout Oklahoma.

The Department has long understood the need for an aggressive bridge rehabilitation program to extend the life of the thousands of deteriorating bridges; but in the past ODOT has not possessed the necessary financial resources to implement a sustainable bridge program. Recently, ODOT instituted a bridge specific program that is designed to be both flexible and reactive. This program is called the State Bridge Rehabilitation (SBR) Program and it dedicates \$40 million annually to extend the life of existing bridges and also to stretch the scarce regular maintenance and construction funds further. This program is a key component in managing the structurally deficient bridges in Oklahoma and in preventing many of the existing bridges from becoming structurally deficient in the near future.

**Figure 2-1** and **Figure 2-2** illustrate that the bridge problem is truly a statewide issue and not specific to any region or locale within the state. Additionally, the map illustrates bridges where investments have been made, and bridges reconstructed through the Eight Year Construction Work Plan, indicating the statewide nature of this matter.



**Figure 2-1. Structurally Deficient Bridges**



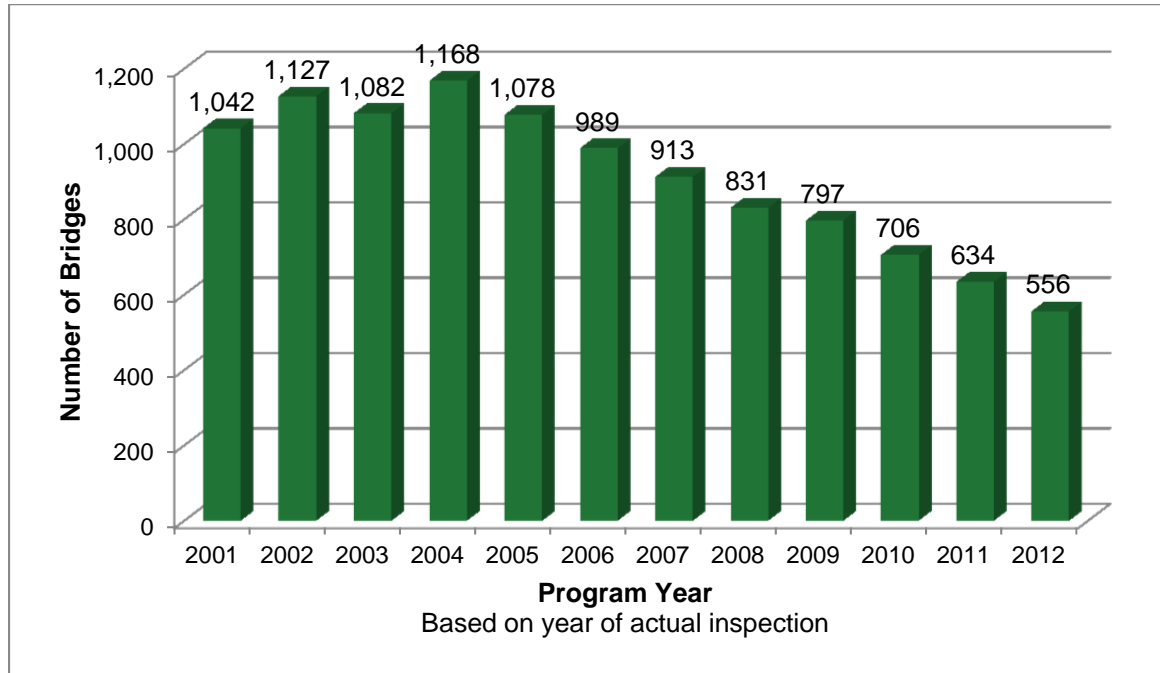
**556 Structurally Deficient Bridges**  
As reported at the end of 2012  
All are in the 2015-2022 Construction Work Plan

Source: ODOT Bridge Division





Figure 2-2: Oklahoma’s Structurally Deficient Bridges, 2001-2012  
on Interstate, U.S., and State Highways



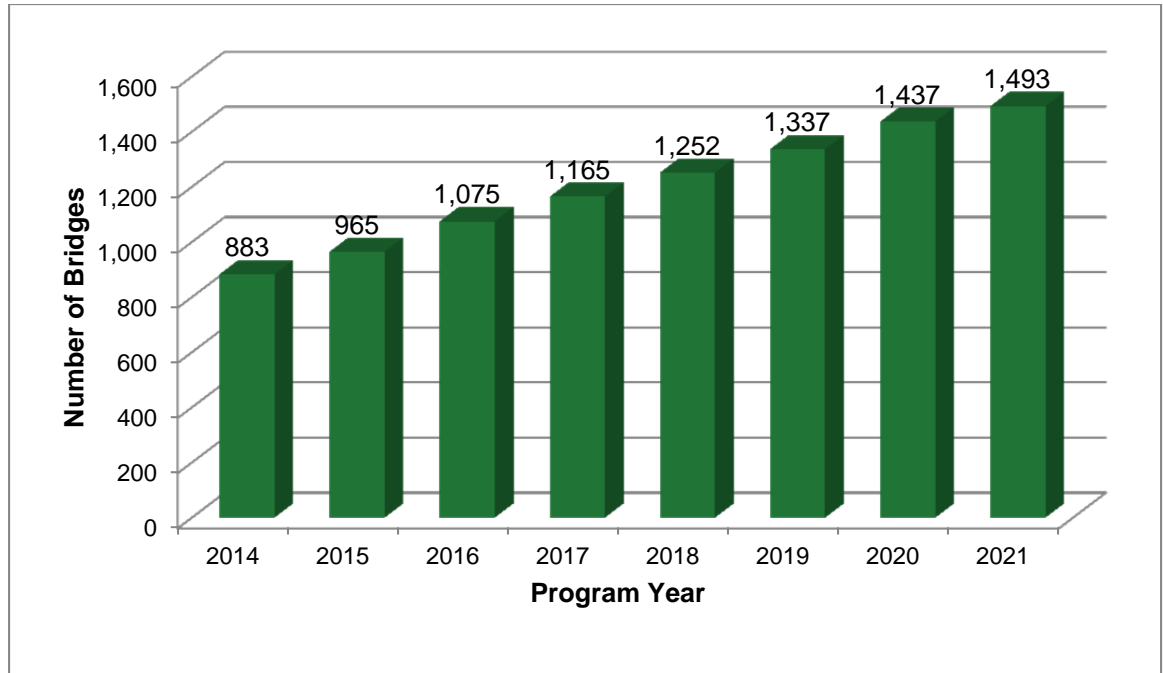
Source: ODOT Bridge Division

Figure 2-1 shows the location of the remaining 556 structurally deficient bridges and related projects in the 2015-2022 Eight Year Construction Work Plan, which indicates that there is still a tremendous amount of work to be completed to reduce the total number of structurally deficient bridges.

While the State of Oklahoma has made a commitment to minimize the number of structurally deficient bridges on the state highway system, it is important to note that even with this investment, the number of bridges over 80 years old continues to grow from 883 bridges in 2014 to an anticipated 1,493 in 2021. This trend is shown in Figure 2-3 and clearly illustrates the need to continue with a sound, dedicated bridge construction, rehabilitation, and maintenance program.



**Figure 2-3. Bridges over 80 Years Old**



Source: ODOT Bridge Division



# Oklahoma Long Range TRANSPORTATION PLAN

## 3 HIGHWAYS

Oklahoma's 12,265 mile State Highway System is mostly rural in nature with two major metropolitan areas (Oklahoma City and Tulsa) that have urban highways and expressways.

### 3.1 RURAL TWO LANE HIGHWAYS

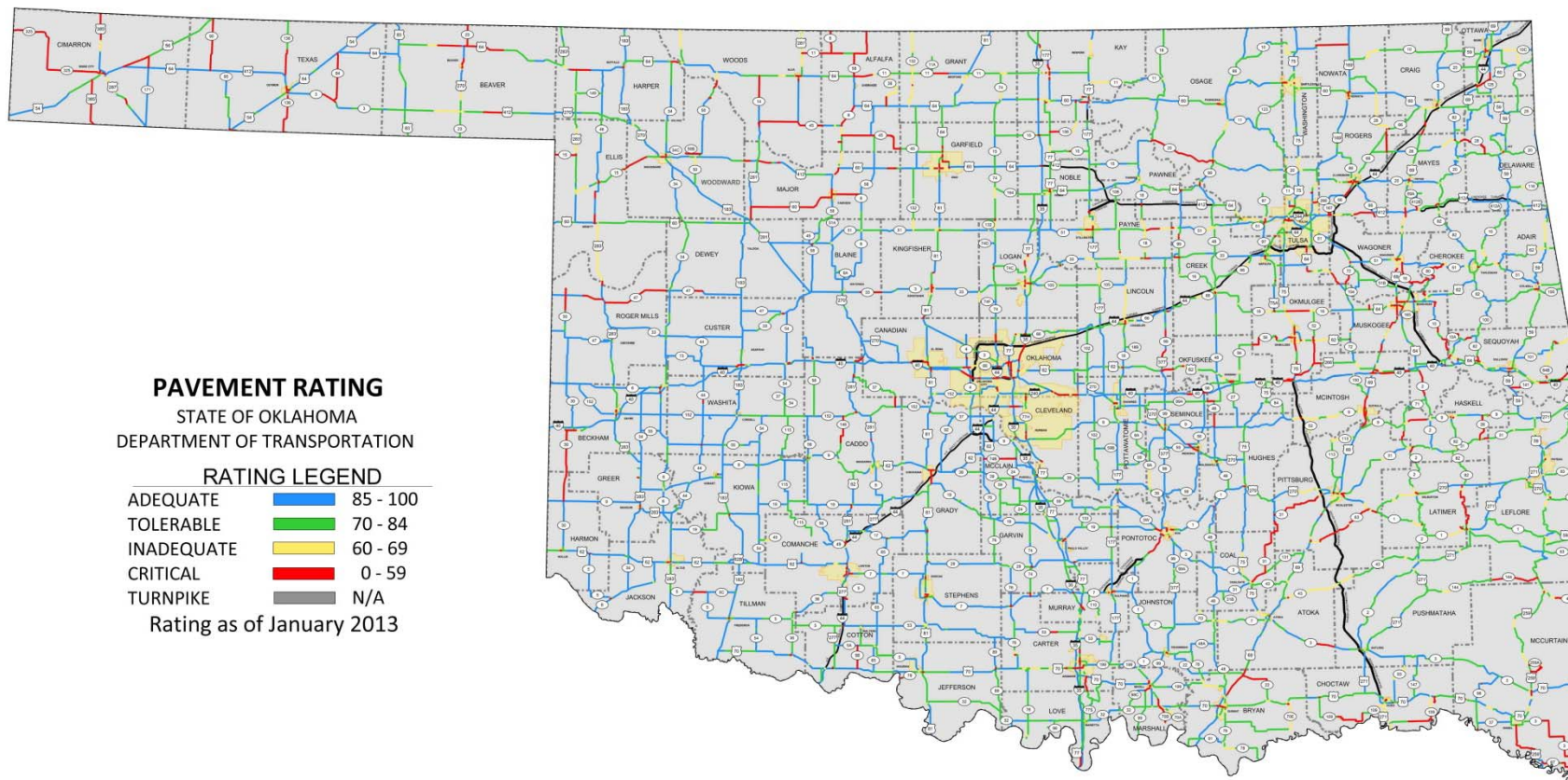
The rural highways have historically been used for the energy and agricultural based economy and many of these highways have been converted from farm to market roads over time. While these rural roads were ideal for transporting livestock and crops to market 70 years ago, they are not built to withstand the quantity and weight of today's increased legally loaded trucks, increased traffic demands, and higher speed limits. Over 4,600 miles of the state highway system are two-lane facilities without paved shoulders.

**Figure 3-1** illustrates that the deteriorated pavement condition is a statewide issue on all types of highways and not limited to one region or locale of the state. The pavement surfaces require systematic rehabilitation in order to maximize highway life cycles. Until recent years, it has been impossible for ODOT to consider such systematic approaches and programs to extend the life cycle of the pavements. The current investment made by ODOT on the state highway system for pavement surface rehabilitation is \$75 million annually.

In addition to pavement surface, there are other key components that are inherent to the condition of a highway. These include such things as passing opportunities, adequate sight distances, existence of paved shoulders, recovery areas for errant vehicles, and the severity of steep hills and sharp curves. Currently, 3,862 miles (31%) of the state highway system are rated as critical or inadequate which includes 3,364 miles of two-lane highways. Even with scheduled improvements in the current Eight Year Construction Work Plan, over 3,680 miles of inadequate highway will remain unaddressed. Additionally, an unintended consequence of the dedication of more resources to the structurally deficient bridges has been a slight decrease in funds available to address the condition of pavement on the state highway system.



Figure 3-1. Pavement Conditions



Source: ODOT Pavement Management



### 3.2 MAJOR STATE HIGHWAYS

Traffic on the major state highways has increased dramatically over the past 20 years with the exception of the recession years of 2008 and 2009. Freight traffic has experienced this same dramatic growth and is expected to continue to compound in growth for the foreseeable future. The daily vehicle miles travelled on highways with four-lanes or more was over 42 million miles in 2012. This represents over 72 percent of the total vehicle miles travelled every day on Oklahoma's state highway system.

Improvements to these multi-lane and frequently urban highways are often the most expensive, as well as time and resource consuming. Over 301 miles of the 673 miles of interstate pavement have experienced significant rehabilitation or reconstruction since 2003, and an additional 178 miles are scheduled for improvement in the 2015-2022 Eight Year Construction Work Plan. The Eight Year Work Plan has \$2.3 billion of improvements programmed over the next eight years on high volume expressway type highways.

### 3.3 INTERSTATE HIGHWAYS

The Interstate Highway System is the highest class of highway and is designed to be the national defense and national commerce viaduct that moves large volumes of people and goods across the United States. While Oklahoma's 673 miles of interstate highway account for only 5.2 percent of the centerline miles of the state highway system, it carries 30 percent of the miles travelled.

The needs of the highway system are continuously assessed in order to program appropriate reconstruction, rehabilitation, and maintenance improvements in a fully integrated and systematic manner; and regular maintenance extends the life cycle of the facilities. Rehabilitation and reconstruction activities that are encompassed in the Asset Preservation Program and the Eight Year Construction Work Plan are necessary to be delivered in a timely manner to support maintenance investments. The Asset Preservation Plan is similar to the Eight Year Construction Work Plan but it is only four years of more reactionary and flexible improvements that total over \$442 million in the years 2015-2018. The combination of these integrated programs is the lifeblood of the continuous operation of the 12,265 mile state highway system.

**Table 3-1: Miles and Daily Vehicle Miles Travelled on State Highway System (2013)**

	Miles	%	DVMT	%
Interstate (non-toll)	672.86	5.2	22,370,675	29.7
Other 4-lane Highways	2614.91	20.3	33,773,525	44.9
2-lane Highways	9572.82	74.5	19,125,667	25.4
<b>Total</b>	<b>12,860.59</b>	<b>100.0</b>	<b>75,269,865</b>	<b>100.0</b>



# Oklahoma Long Range TRANSPORTATION PLAN

## 4 HIGHWAY SAFETY

The safety of the travelling public, regardless of vehicle type or highway system classification is of paramount importance to ODOT. Safety strategies are developed based on an analysis of many possible contributing factors including crash data and highway inventories. When undesirable patterns become evident, specific counter measures are identified and evaluated for possible implementation. Almost all safety measures on the highway system involve the integration of the 3 E's: Engineering, Enforcement, and Education. Engineering most commonly is the design of safe facilities, driver notification, and proper maintenance. Enforcement is undertaken to require adherence to existing traffic laws and speed limits tailored to locations and time periods of known crash types. Educational measures are implemented to ensure the operators and drivers take the responsibility of operating motor vehicles seriously and that they are properly prepared for safe travel.

The greatest potential for tragic crossover crashes exists on high volume, high speed, divided highways. In 2007, Oklahoma experienced 39 fatalities as a result of crossover crashes. In an effort to drastically reduce these terrible crashes, ODOT began an initiative in 2007 to install cable median along divided, high volume, high speed highways. Since that time, ODOT has constructed 635 miles of cable median barrier. In contrast to 2007, in 2012 there were six fatalities resulting from crossover crashes, a reduction of 84 percent in five years. Although one fatality is too many, this investment in cable median barrier has been very successful.

State highways with no paved shoulders are also a significant safety concern to ODOT and the travelling public. These facilities allow for little to no room for driver correction due to poor weather, darkness or hazards. Over 4,000 miles of state highway have no paved shoulders. In the 2015-2022 Eight Year Construction Work Plan, ODOT has 743 miles of roadway scheduled for shoulder and roadway improvements.

In recent years, ODOT has also made a significant investment in strategically placed, permanently mounted dynamic message signs to assist the public with highway conditions that may include inclement weather, accident ahead, detours, and other significant events that may require driver awareness. While the direct impact of these signs to improve safety is difficult to measure, they most certainly reduce secondary crashes and allow the driver opportunities to take alternative routes as necessary.



Oklahoma, like many other states, has experienced a significant increase in fatalities on the state highway system involving motorcycles. Motorcycle involved fatalities have risen from 75 in 2006, to an average of 98 fatalities per year from 2008 through 2012. In an effort to reduce this trend, ODOT and the Department of Public Safety utilized the Education portion of the 3 E's and implemented a Statewide Motorcycle Safety and Education Program in 2011 that seeks to reduce motorcycle crashes that result in fatalities and injuries. Oklahoma has committed \$400,000 annually, over a three year period, to this program. It seeks to curb aggressive driving and speeding by motorcycle users through educational opportunities that assist riders in developing enhanced skills and behaviors.

Additional information about Safety and Security issues will be documented in a separate Technical Memo.



# Oklahoma Long Range TRANSPORTATION PLAN

## 5 FREIGHT ON HIGHWAY SYSTEM

As ODOT looks to the future, a major focal point will be to assess and project the growth of freight throughout the State of Oklahoma. ODOT considers major trucking corridors to be any highway with 5,000 or more trucks daily or where a highway average daily traffic contains more than 40 percent trucks. While I-40 in central Oklahoma carries the highest volume of trucks daily, there are other truck routes that carry a very high percentage of trucks such as US-69 in southeast Oklahoma, I-35 south of Oklahoma City to the Red River, and US-287 in the Oklahoma panhandle, which has over 50 percent trucks daily. **Figure 5-1** illustrates the daily traffic and the truck traffic associated with these routes.

The high volume truck corridors were instrumental in the crafting of the Ports of Entry <sup>2</sup> program which was born on January 22, 2008 with a partnership between the Oklahoma Corporation Commission, Oklahoma Turnpike Authority and ODOT. This partnership was an effort to upgrade Oklahoma's port of entry facilities. Utilizing \$96 million of state funds from various sources, ODOT set a goal of developing eight new Port of Entry facilities at strategic locations at the Oklahoma borders (**Figure 5-2**).

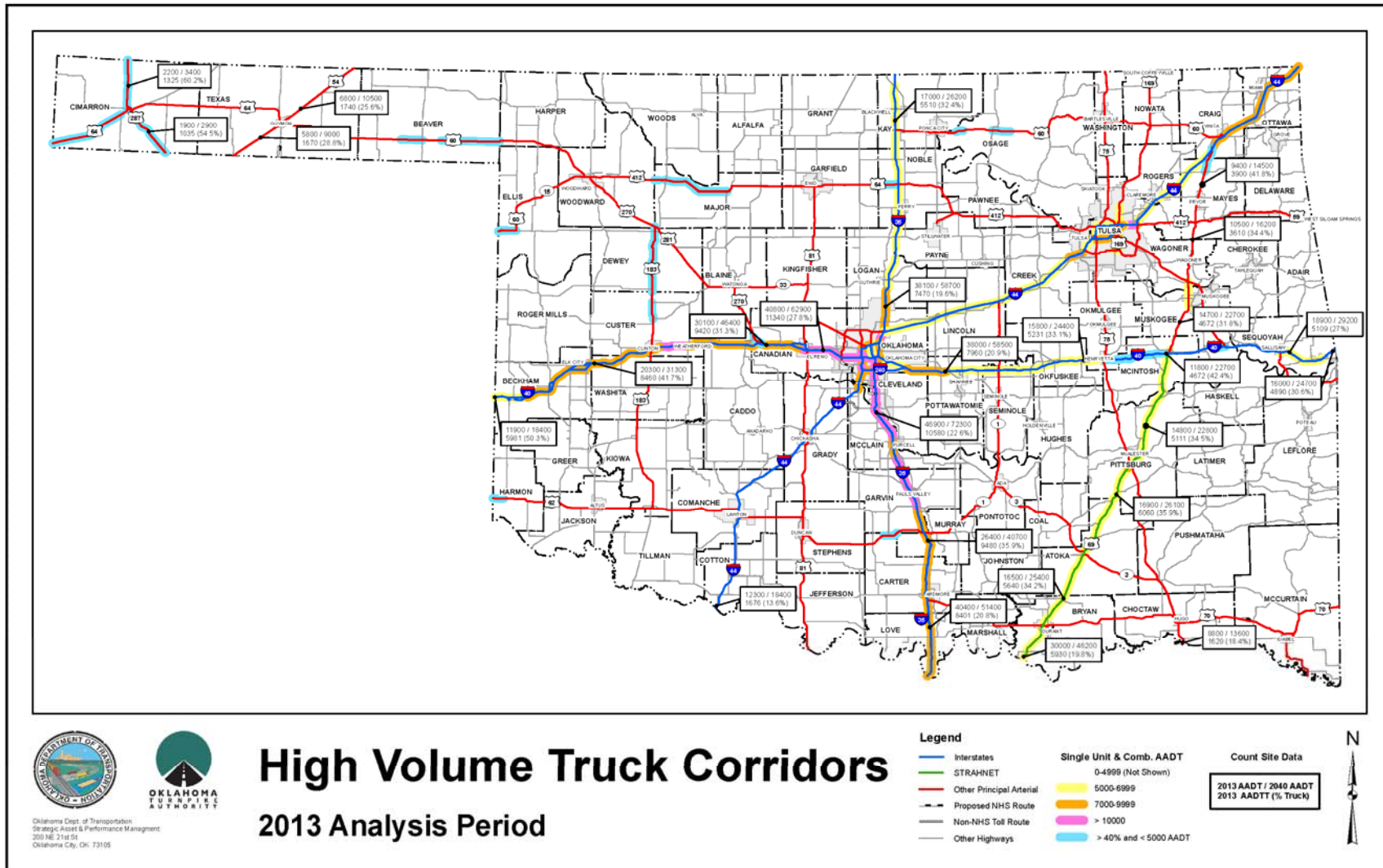
Illegally loaded or operated trucks have an adverse impact on the condition of the transportation system and the safety of the travelling public. Overweight trucks significantly reduce the intended design life of a highway, and result in extra costs to maintain the highways in a serviceable condition. State of the art facilities at the Ports of Entry establish an access point into Oklahoma that is necessary to create a more controlled freight transportation system and to preserve the investments in the highways and bridges. By closely monitoring freight ingress at the state line, Oklahoma can better enforce vehicle and freight laws and regulations, and ensure proper truck registration.

Another integral part of Oklahoma's commitment to closely monitor the truck freight on the highway system is the recent implementation of the Oklahoma Permitting and Routing Optimization System (Okie PROS) for oversize/overweight trucks. The agriculture and energy industries power much of the Oklahoma economy. As a result of the growth in the energy sector and changes in the commercial vehicle shipping industry, the Department of Public Safety receives requests for hundreds of thousands of oversized and overweight trucking permits annually. As the volume of issued permits grew rapidly and DPS could not process these requests manually in a timely manner, there was a vital need for a new automated system. In the first full year of operation, 2011, this system processed and approved 251,161 permits.





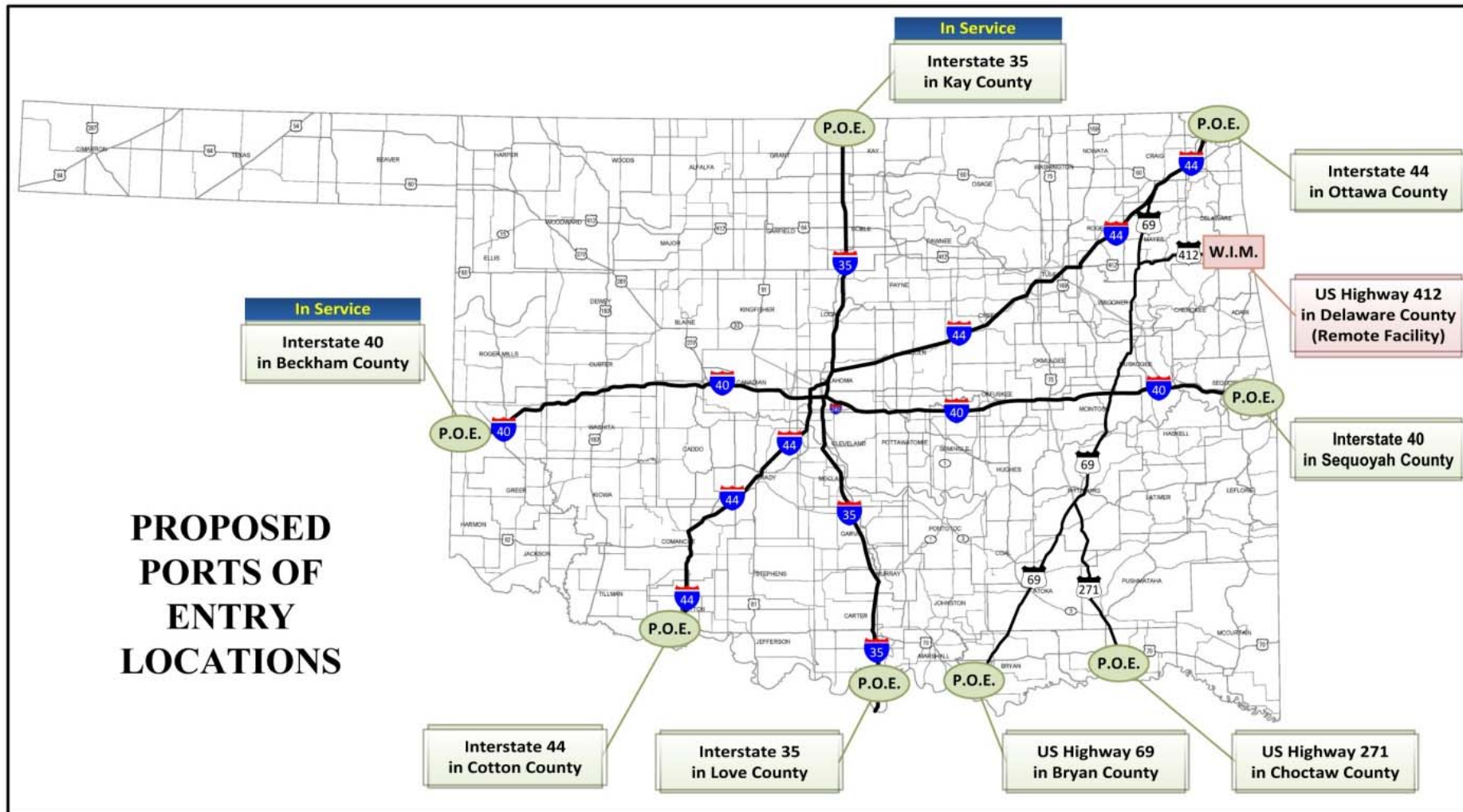
Figure 5-1: 2012 High Volume Truck Corridors



Source: Oklahoma Department of Transportation, Traffic Monitoring Section, Engineering Services Branch.



Figure 5-2: Proposed Ports of Entry



Source: Freight and Goods Movement, Oklahoma Department of Transportation, January 2014



Over 50 percent of these permits took less than 10 minutes to obtain. This turnaround time has resulted in two benefits because the trucking companies will now obtain these permits rather than contemplate running illegally because it might take too long to get the permit, and secondly, the state-maintained highway system is protected from illegal oversize and overweight trucks.

The current statewide focus on improving structurally deficient bridge infrastructure also has a targeted effect on both legal and permitted loads. The focus on these bridges ensures that they are in a condition that can support the safe and efficient travel of a growing economy without unnecessary delays or detours.



# Oklahoma Long Range TRANSPORTATION PLAN

## 6 FREIGHT RAIL

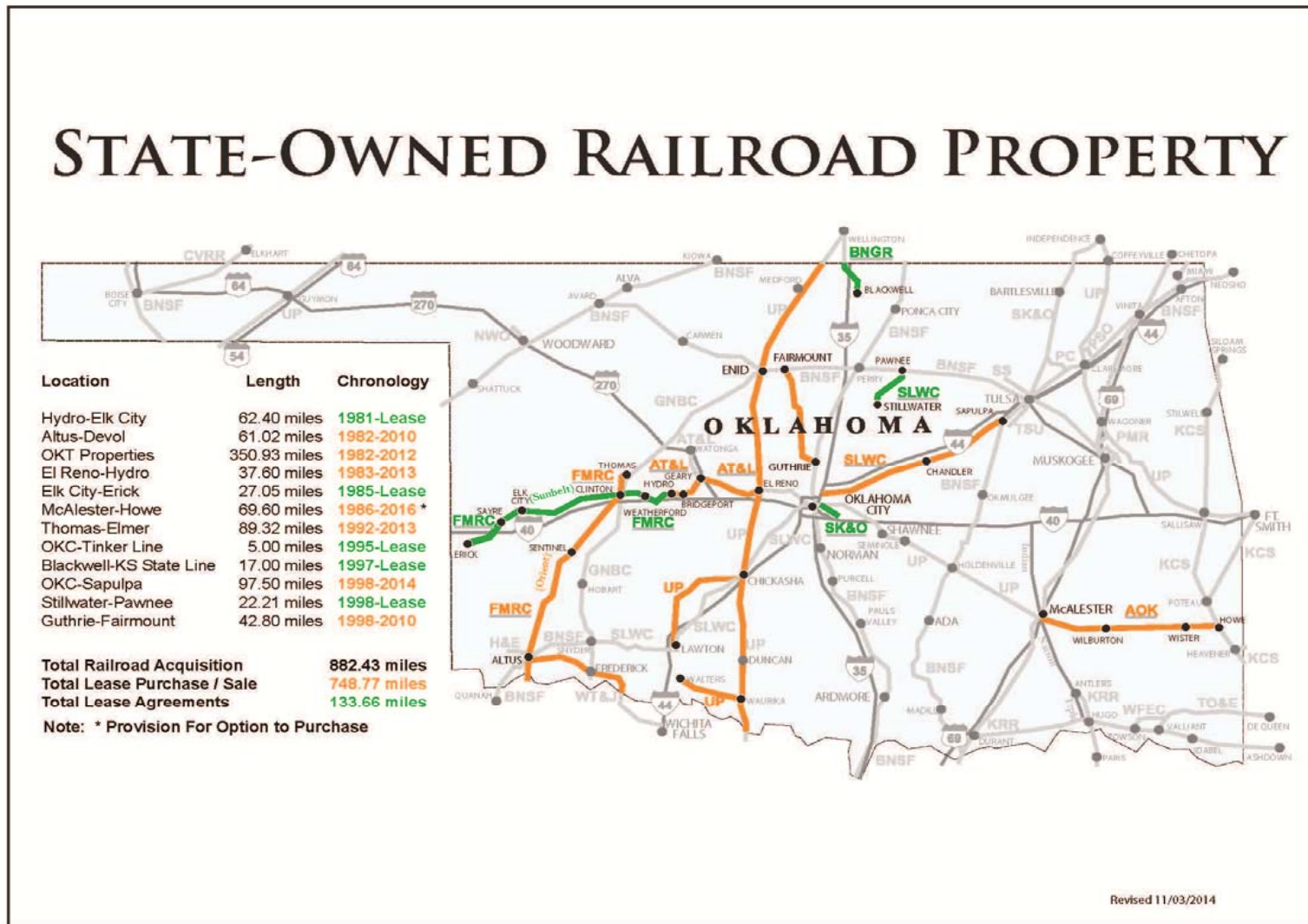
ODOT's rail program includes managing the state owned rail property and track, overseeing and monitoring the FHWA's grade crossing safety program (this provides federal funds to make safety improvements to the 3,800 at-grade rail / roadway crossings), and overseeing coordination with railroad companies on ODOT's Eight Year Construction Work Plan. The Rail Programs Division also seeks and utilizes federal funding opportunities to improve Oklahoma's freight rail system, and to manage improvements for the Heartland Flyer AMTRAK passenger rail service between Oklahoma City and Fort Worth. The passenger rail component will be covered later in this report. The following section pertains to freight rail.

Oklahoma is one of the few states in the country that owns rail lines. In the late 1970s and early 1980s the Oklahoma State Legislature appropriated funding and empowered ODOT to actively assist in saving many rail lines from being completely abandoned and dismantled after Class I railroads were declared bankrupt. The majority of the acquisition during this time was the purchase (for salvage value) of the old Rock Island Railroad of nearly 500 miles of rail line. Since that time, ODOT has periodically acted on the legislation -- and additional appropriations authorizing the acquisition of additional strategic abandoned, or soon to be abandoned rail lines and properties for salvage value -- with the intent of preserving the connected rail network for the future benefit of Oklahoma. The premise of these acquisitions was not to place the state in direct competition with private rail companies, rather to save the rail rights of way, corridors, and tracks for future private sector use, operation and ownership as the economic times dictated. At the peak time, the state of Oklahoma held title to 882 miles of rail line that most likely would have otherwise been abandoned and those corridors lost forever. **(Figure 6-1)**

Hand-in-hand with the ownership of these acquired rail lines, ODOT has pursued and entered into agreements with many private sector rail companies to operate, revitalize, and improve these rail assets. The largest of these agreements was the 30 year lease / purchase agreement with the Union Pacific railroad for over 300 miles of the old Rock Island Rail line that followed the US-81 alignment. The agreement was signed in 1981 and completed in 2011, and this line is now back in the hands of private ownership. All other state owned rail lines are operated by short line rail companies. More than 580 miles of the state owned rail system has been returned to private ownership and an additional 70 miles is under a lease / purchase agreement that will mature in 2016. **(Figure 6-2)**



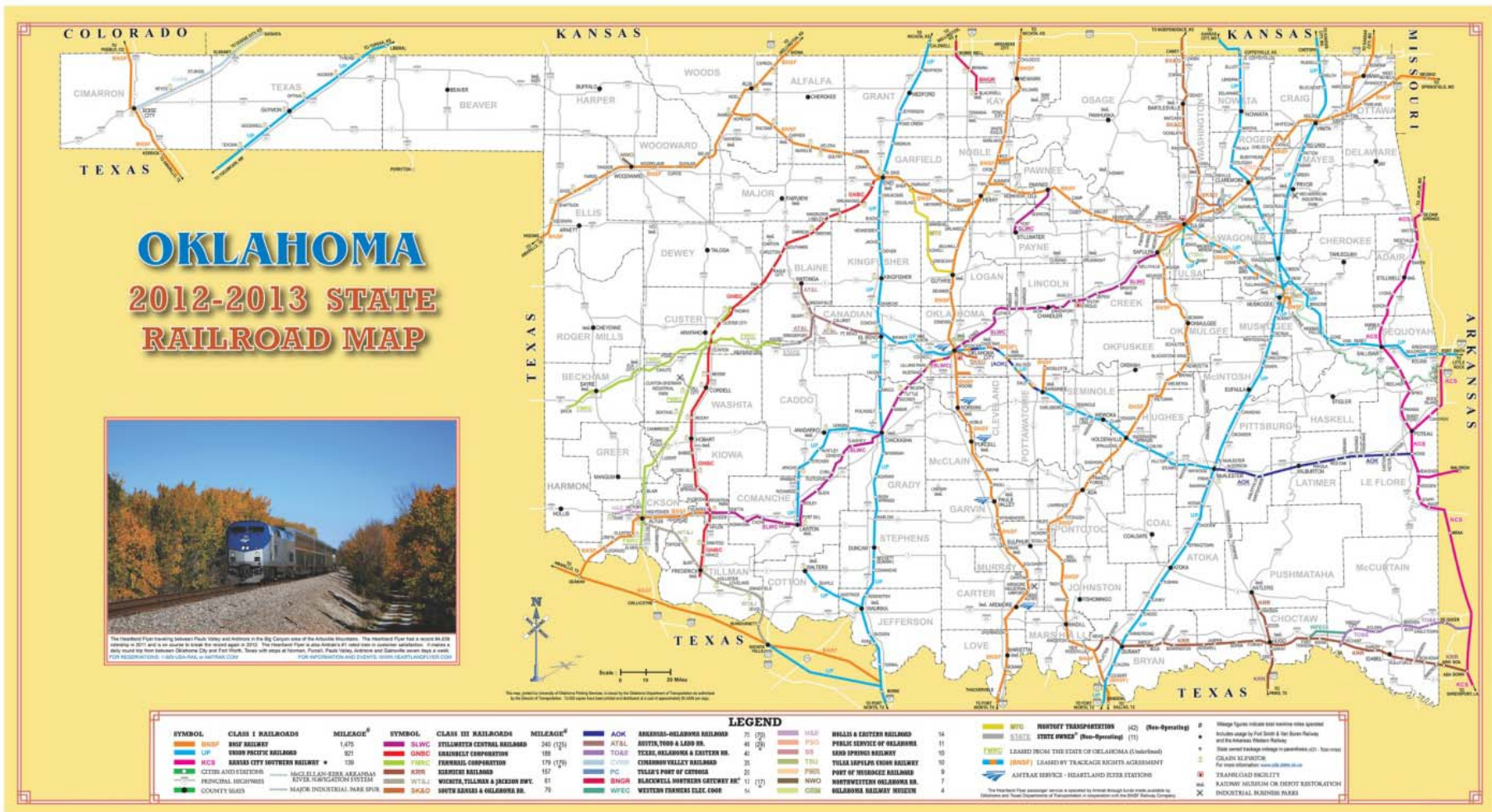
**Figure 6-1: State-Owned Railroad Property**



Source: Rail, Oklahoma Department of Transportation, February 2014.



**Figure 6-2: Oklahoma 2012-2013 State Railroad Map**





The rail safety program works with all active railroads in Oklahoma and is comprised of three primary focuses to include single high priority rail crossing locations, statewide minimum rail safety standard projects, and rail corridor safety improvements. These programs aim to either improve "on the ground" safety conditions or close and eliminate highly active rail crossings that rise to the top of the annual ranking and inspection reports.

The State-Owned Rail Construction and Maintenance Work Plan (State Rail Work Plan) is funded through the Railroad Maintenance Revolving Fund established through the passage of the Railroad Revitalization Act in the state legislature in 1978. Funding comes from both the Oklahoma Freight Car Tax and from the lease/purchase agreements with rail operators in the state. Annual contributions to this fund have historically been around \$1.8 million per year, but because of recent state owned rail line lease purchase maturities and the sale of some state owned rail lines, this amount will drop significantly. Projects in the State Rail Work Plan are prioritized based on safety considerations and infrastructure deficiencies.

The Rail Programs Division provides services as needed to integrate improvements and/or modifications to elements that are a part of a highway/bridge/rail project. Examples may include providing for improved crossing safety, grade separations where warranted, or modified bridge heights. Funding for these improvements typically comes through a combination of sources including both federal, state, and local government resources as well as railroad corporation resources.

Freight rail transportation in Oklahoma is provided by three major (Class I) railroads and 18 short line railroads (Class III), each a private corporation. While the state owns some of these rail lines, all of the rail miles in Oklahoma are operated by private companies. Maintaining and improving the lines is a shared burden. In the past five years, Oklahoma has been successful in garnering federal TIGER (Transportation Investments Generating Economic Recovery) funds for improvements to two short line railroads in western Oklahoma. Matching funds were provided by the State of Oklahoma and the private operator. As a result of this cooperative effort, the freight trains are able to carry more cars at a higher speed, and improve transport services for the agriculture and energy sectors in western Oklahoma.

Freight rail has proven to be vital in maintaining and improving both the state and national economies. Nearly three-quarters of all of the rail traffic in Oklahoma is through traffic, without an Oklahoma destination. The majority of this freight rail movement is for the transportation of coal from Wyoming to Texas. Freight rail brings finished goods and raw materials to and from Oklahoma businesses, and moves material through and across the state. This system has proven valuable to the agricultural and energy industries, as well as to Oklahoma military bases.



# Oklahoma Long Range TRANSPORTATION PLAN

## 7 PORTS AND WATERWAYS

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 MKARNS was completed at a cost of \$1.2 billion and dedicated in 1971 by President Richard Nixon. The waterway contains 18 locks and dams to traverse the 445 mile trip with an elevation change of 420 feet from Tulsa to the Mississippi River. The five dams in Oklahoma provide numerous benefits, one of which is preventing flood damage that is estimated at a savings to Oklahoma of \$165 million. Additional benefits include hydropower generation, recreation, fish and wildlife conservation and most importantly navigation. Transporting products by barge is the most economical, safe and environmentally friendly way of shipping bulk and oversize cargo.

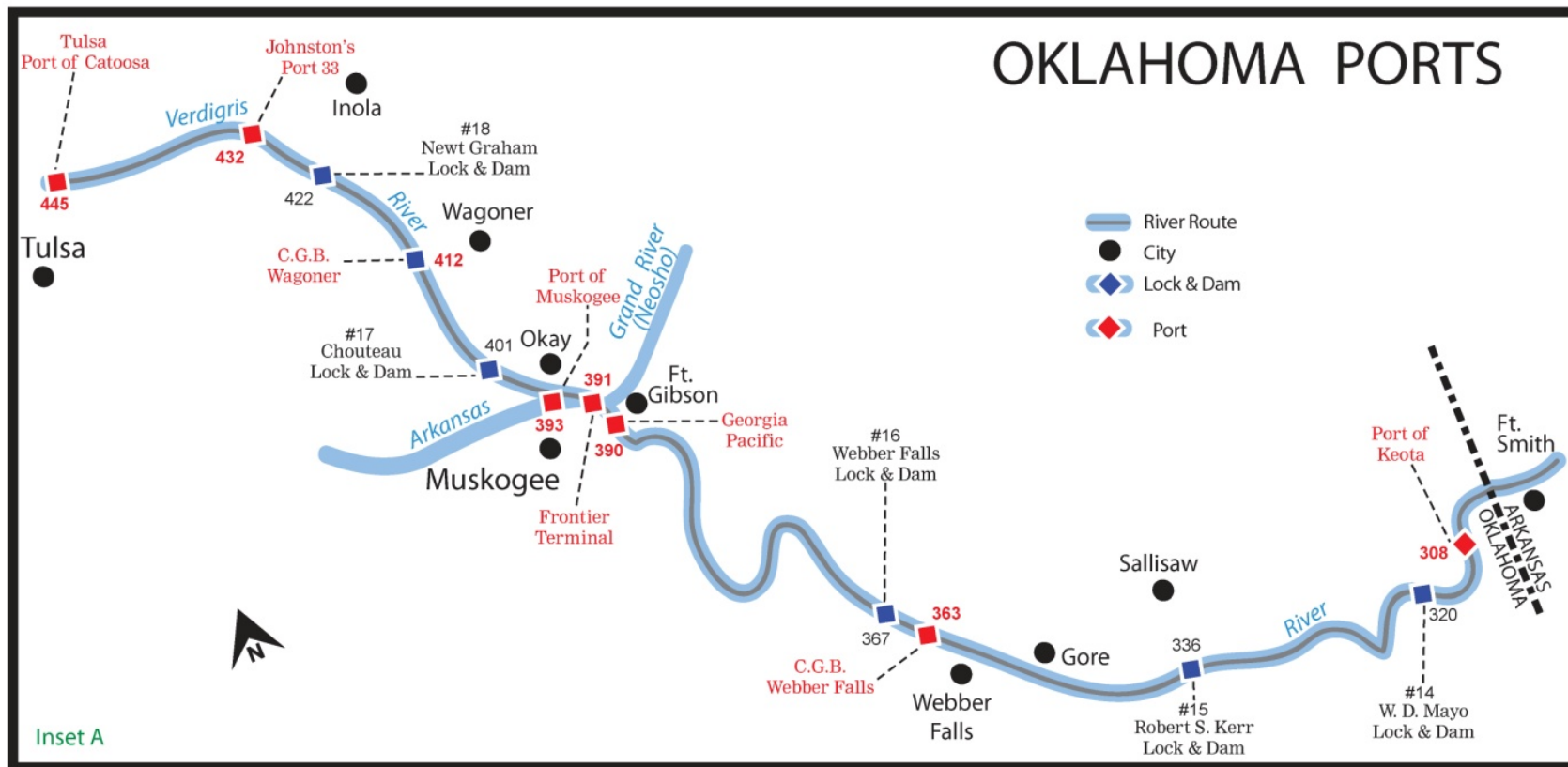
The Ports of Muskogee and Catoosa are the state's two public ports, and both are designated as Foreign Trade Zones. In addition, there are several other private port operations along the MKARNS as shown in **Figure 7-1**. Oakley's (previously Johnston's) Port 33 is a large privately owned port facility located south of the Port of Catoosa adjacent to US-412 near Inola. There are 31 terminal facilities along the waterway within Oklahoma and most of these facilities are clustered along the Ports of Catoosa and Muskogee. Both of the public ports have rail access in and out of their industrial parks, where industries lease property from the ports and often ship liquid and bulk materials and project cargo from across the world.

MKARNS is managed by the United States Corps of Engineers (USACE). USACE is responsible for the operation and the maintenance of the system and defines "critical maintenance" as projects needed to avoid a likely (greater than 50 percent probability) system failure within the next five years. The available funding has not kept pace with the demand over the years, and wear and tear continues on the locks that are now over 40 years old. Faced with decreased federal funding, there have been discussions regarding contributions from the stakeholders, not only with funds, but other shared resources including equipment, labor, and materials.





Figure 7-1: Oklahoma Ports



Source: ODOT Waterways



The importance of maintaining this vital waterway infrastructure to Oklahoma's economy is undeniable. ODOT has two dedicated MKARNS staff members that are responsible for marketing, coordinating with Arkansas and the federal government, and facilitating the efforts associated with the productive operation of the waterway. ODOT and the Arkansas Waterways Commission are jointly funding a Regional Economic Impact Study that is being conducted with the assistance of two universities, one from each state. The study will illustrate the estimated economic impact of the MKARNS to Oklahoma and Arkansas economies, as well as other benefits such as employment and reducing rail and highway congestion. It is also anticipated that many other indirect impacts will also be revealed in this study, scheduled for completion in 2015.

ODOT has continued the support of the ports and associated freight through the implementation of many projects in the Eight Year Construction Work Plan. Since the year 2000, ODOT has awarded 226 contracts in excess of \$644 million within a ten mile radius of the Port of Catoosa, Port of Muskogee, and Oakley's Port 33. Looking forward, over the next seven years, the ODOT has 96 projects totalling \$150 million within a ten mile radius of the three ports.



# Oklahoma Long Range TRANSPORTATION PLAN

## 8 PUBLIC TRANSPORTATION

### 8.1 PASSENGER RAIL

Passenger rail returned to Oklahoma in 1999 after a 20 year absence. The Amtrak Heartland Flyer runs from the Santa Fe Depot in downtown Oklahoma City every morning to Fort Worth Intermodal Transfer Center and returns each night. Ridership has steadily increased annually to welcoming the one millionth rider in 2013 and averages approximately 87,000 riders per year.

The Heartland Flyer trip is 206 miles with intermediate stops in Norman, Purcell, Pauls Valley, Ardmore and then Gainesville, Texas before arriving in Fort Worth. The Flyer is a state sponsored Amtrak operated train with both Oklahoma and Texas jointly sponsoring this service for a cost of about \$2.5 million per year for each state. Amtrak operates this service, but is reimbursed a reasonable share of the service's loss by the sponsor. Reasonable share was defined as 100 percent of the operating deficit. The Passenger Rail Investment and Improvement Act of 2008 (PRIIA) further refined the local sponsorship provisions by requiring Amtrak to establish a standardized methodology for allocating the operating and capital costs for the locally sponsored services. In summary, this could result in a substantial increase in the annual costs to Oklahoma and Texas to continue to operate the Heartland Flyer.

### 8.2 RURAL TRANSIT

Oklahoma has twenty rural public transportation providers that operate in 73 of the 77 counties geographically spread across the entire state (**Figure 8-1**). These rural transit systems provide more than 3 million trips annually with approximately 25 percent of the trips made by the elderly and persons with disabilities. Many of the rural transit operators utilize ADA compliant and standard mini-vans as well as buses to provide the service. The rural transit program is instrumental in providing needed transportation to citizens all across the State. It may be for a ride to work, a medical appointment, or to shop for necessary items.

The financial assistance programs for the rural transit operators are administered by ODOT's Transit Programs Division and include funding from the federal government and from Oklahoma's Public Transit Revolving Fund. The federal Nonurbanized Area Formula Grant Program (Section 5311) provides approximately \$10 million annually in formula funding for rural public transportation in Oklahoma. The state's Public Transit Revolving Fund provides over \$3 million annually to the rural transit programs.



Local governments, private non-profits, and fares produce more than \$20 million annually resulting in a grand total of funding to these programs of approximately \$30 million. Even with these funds, the rural transit operators are continually strapped for operating money, and are often times the only transportation available in some of the more rural locations in Oklahoma.

### **8.3 URBAN TRANSIT**

Oklahoma has six urban transit systems. They are EMBARK in Oklahoma City (formerly Metro Transit), Citylink in Edmond, Tulsa Transit, Lawton Area Transit System (LATS), and the Cleveland Area Rapid Transit (CART) which serves the City of Norman and the University of Oklahoma.

The City of Oklahoma City established the Central Oklahoma Transportation and Parking Authority (COTPA) in 1966. The public transit portion of COTPA changed it's name from Metro Transit to EMBARK in April 2014. EMBARK is the largest transit agency in the state and has at least 20 interconnecting bus routes as well as the "Oklahoma Spirit Trolleys" covering the Oklahoma City Metropolitan Area. EMBARK also includes paratransit ADA bus service and specialized transit services. The total funding available annually for EMBARK is approximately \$23 million. Citylink in Edmond, runs five local routes serving the University of Central Oklahoma (UCO) campus and a large portion of the City of Edmond, as well as a express route to and from downtown Oklahoma City.

The Metropolitan Tulsa Transit Authority (Tulsa Transit) was established in 1968. Tulsa Transit delivers approximately 10,000 passenger trips each weekday utilizing 21 routes.

The Lawton Area Transit System (LATS) operates fixed route and paratransit services for the City of Lawton and the Fort Sill area. Two buses operate the fixed routes and five vehicles are used for paratransit services. These vehicles provide an average of approximately 160 passenger trips each weekday.

The Cleveland Area Rapid Transit (CART) was founded in 1986 and serves the City of Norman and the University of Oklahoma. In 2007, CART's service area and hours of operation were increased substantially. This increase required an additional investment of nearly \$7 million in capital and operating costs.

These urban transit systems in Oklahoma are active in their respective Metropolitan Planning Organization (MPO) for the purposes of long range planning efforts, and greater detail on their current and future services will be captured in the MPO's long range plans which in turn will be incorporated into the ODOT Long Range Transportation Plan.



## **8.4 TRIBAL TRANSIT**

Oklahoma has seen a substantial growth in the Tribal Transportation Programs since the last Oklahoma Long Range Transportation Plan was completed approximately five years ago. Oklahoma has over 35 tribes and many of these tribes are active in developing tribal transportation systems.

In 2014, 10 Oklahoma tribes received funds under Section 5311(c) Public Transportation on Indian Reservations Apportionment through the Federal Transit Administration. These funds totaled approximately \$7.4 million for the entire state with a breakdown of \$3.4 million in Tier 1, \$1.7 million in Tier 2, and \$2.3 million in Tier 3 funds. The tribes receiving these funds were the Cherokee, Cheyenne & Arapaho, Chickasaw, Choctaw, Citizen Potawatomi, Comanche, Delaware, Muscogee (Creek), Ponca, and Seminole Nation.

In addition to the Section 5311(c) funds from the Federal Transit Administration (FTA), some of the Oklahoma tribes have been successful in obtaining Tribal Transit Program discretionary projects through the FTA. The most recent discretionary allocation to Oklahoma for the Tribal Transit program totaled \$2.6 million for the tribes in Oklahoma. The tribes receiving these transit funds included the Cherokee, Cheyenne & Arapaho, Choctaw, Citizen Potawatomi, Miami, and the Muscogee (Creek). These discretionary funds combined with the Section 5311(c) funds have allowed the tribes to make great progress with their transit programs.

According to the Oklahoma State University Southern Plains Tribal Technical Assistance Center, 2012 tribal transit statistics for Oklahoma indicate a total of 3.1 million revenue miles; 231,123 regular trips; and 108,036 revenue trips. The ODOT Transit Programs Division, which administers the Rural Transit Program, has begun reaching out to the Tribal Transit Programs to look for opportunities to coordinate transit services across rural Oklahoma.



Figure 8-1: Oklahoma Passenger Service Map



Source: ODOT Transit Programs



# Oklahoma Long Range TRANSPORTATION PLAN

## 9 ENDNOTES

<sup>1</sup> The Oklahoma Highway System or "State Highway System" refers to Interstate, U.S., and Oklahoma (State) highways within the State of Oklahoma. It also includes non-toll turnpikes.

<sup>2</sup> Ports of Entry are locations at the state border where commercial vehicles are processed for a number of items, including but not limited to driver credentials, weight, tax and fee status, and safety.