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LINCOLN
COUNTY

LONG RANGE TRANSPORTATION PLAN



2018-2040 | CORTPO

Produced by:

Central Oklahoma Regional Transportation Planning Organization

CORTPO

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**Lincoln County Oklahoma
Long Range Transportation Plan
2018-2040**

CORTPO

In cooperation with:

The County of Lincoln County Oklahoma

The Oklahoma Department of Transportation (ODOT)

Federal Highway Administration (FHWA)

The Central Oklahoma Economic Development District

(COEDD) Council of Government

The 2040 Long Range Transportation Plan (LRTP) was developed through a cooperative effort among CORTPO, member jurisdictions, the Oklahoma Association of Regional Councils (OARC), the Oklahoma Department of Transportation (ODOT) and the Federal Highway Administration (FHWA).

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CORTPO Mission; Vision

A mission and vision were adopted by CORTPO, for planning a sustainable regional transportation system.

Mission

To work with public and private partners to develop and maintain the appropriate systems necessary for a safe, efficient, and convenient multi-modal transportation system that will effectively move people and goods on a coordinated transportation network that will advance and secure the economic prosperity and social equity for all residents, visitors, and businesses within the CORTPO region.

Vision

A comprehensive and coordinated multi-modal transportation environment based on the principles of inclusion, communications and innovation that will have the flexibility to respond to new technologies and methodologies to enhance the CORTPO region's position in the regional, national, and international markets as well as provide accessible and affordable transportation services and opportunities to all of the region's current and future residents.

Funding

This plan was developed through a cooperative effort among CORTPO, the member jurisdictions, the Oklahoma Department of Transportation (ODOT) and the Federal Highway Administration (FHWA).

“The current level of federal, state and local funds will be inadequate to ensure long term maintenance of regional roads, bridges, sidewalks, transit, multi-use trails and rail”

- CORTPO

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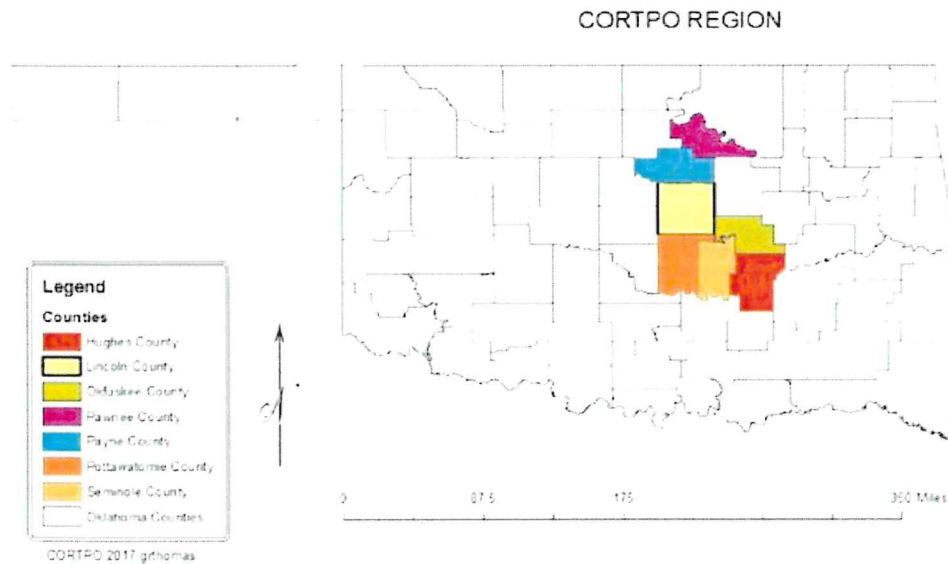
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Summary Comments

Transportation is fundamental to all aspects of community life. A healthy community and economy must have a transportation system that is stable, with sufficient funding for preservation, maintenance and needed improvement of all modes over time. Economic development, access to goods and services, housing, jobs, recreation, and natural resource management are all based on the transportation system. Together, these factors determine the quality of life in a community.

The purpose of the transportation system is to move people and goods in the safest and most efficient manner. Transportation must effectively allow individuals to conduct their personal lives, and provide for the efficient movement of goods to markets to support the county's economic vitality.

Funding

The primary challenge to improving transportation in Lincoln County is to secure adequate funding. The current level of federal, state and local funds will be inadequate to ensure long term maintenance of roads, rail, pedestrian facilities and transit. For that reason, it will be necessary to find additional funding in order to maintain or improve current service levels and accommodate the needs of the residential and business communities over the period of this Plan.

Sustainability

Long-term sustainability and resilience in transportation are needed to ensure that people and the economy can continue to function in the event of disaster or unpredictable future conditions. Near-total reliance on a single mode of transportation may be an insufficient foundation for a secure and healthy community.

"Sustainability" goals of the Long-Range Transportation Plan include maintenance and preservation of the current system, enhanced economic vitality, improved mobility, connectivity, safety and security. Infrastructure maintenance, transit, and enhanced recreational opportunities are perceived as necessary to both economic goals and long term community resilience.

LRTP Updates

The transportation policies and projects recommended in the LRTP are intended to be implemented over the next two decades. Over the period of the LRTP, it will be necessary to update the demographics, refine the policies and assess community progress toward the goals of the plan. A comprehensive update should occur every five (5) years.

Data Sources

The US Decennial Census has long been the accepted standard for demographic planning analysis. Due to the length of time since the 2010 Census, changes in Census Bureau practices, and the limitations of the data collected, we must increasingly rely on American Community Survey (ACS) data products published by the Census Bureau at one, three and five year intervals, in this case the 2012-2016 ACS data.

Other Census products were employed in this report for analytic purposes, including Traffic Analysis Zone (TAZ) data from Census Transportation Planning Products (CTPP), which sometimes carry a different date. An additional



The Lincoln County 2040 Long Range Transportation Plan (LRTP) is the first transportation plan with a focus on small municipalities and unincorporated portions of Lincoln County, Oklahoma. The LRTP identifies existing and projected transportation improvement needs and includes an assessment of the various modes of travel, issues, trends and challenges that may influence transportation in Lincoln County over the next few decades.



source of data was the 2016 East Central Oklahoma Economic Profile and Report available through the Oklahoma Department of Commerce. These regional economic system publications offer helpful labor force assessments and commute patterns.

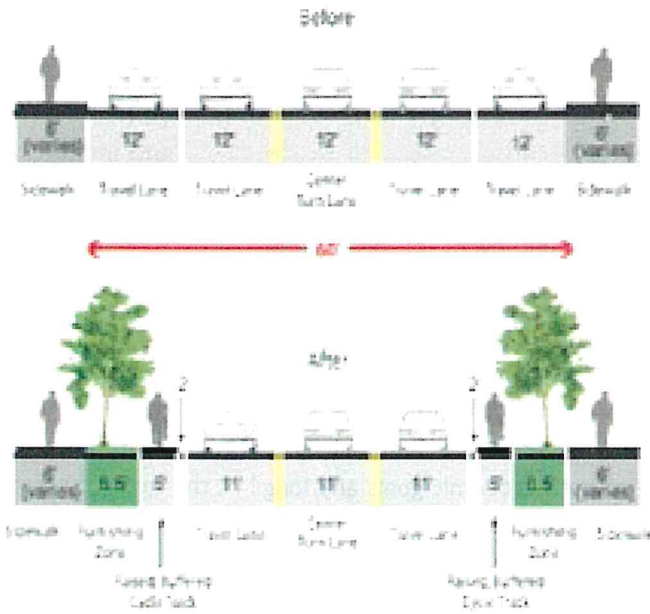
Therefore, while all the data comes together to present a comprehensive picture of the demographic and employment situation in Lincoln County, we ask the reader to forgive inconsistencies in hard numbers.

A Policy and Project Plan

Many of the transportation safety and access needs identified by the community can be addressed over time with a shift in policy to accommodate a wider range of modal options such as improved signage and painted line adjustments to existing pavement profiles. As an example, a “Road Diet” is illustrated in figure 1, below.

Proposed projects of the LRTP include intersection improvements, integration of bicycle and pedestrian signage with road projects, safe access, modernized crosswalks and studies to be conducted. A listing of project locations suggested by community comments are included below.

Concept Graphics



A reallocation of existing space can be a relatively low-cost way to accommodate bicyclists and improve pedestrian safety.

Variations of this method could be applied to rural 4 lane roads as well as city streets.

In a rural setting, pedestrian and buffer space could be eliminated, while improved rumble strip placement adds safety

Graphic source: (McKisson, 2012)

Projects: Public Comments

The percentage of public comments regarding specific topics is shown below:

Topic of concern	
Percentage of Mentions	
Maintenance	18%
Intersection	11%
Improvement	8%
Pave	6%
Stop sign/light	6%
Bridge	5%
Safety	5%
RR Crossing	5%
Bicycle/Bike	5%
Transit	5%
Visibility	5%
School	4%
Sidewalks	4%
Pedestrian	3%
Handicap	3%
Drainage	3%
Speed	3%
Access	3%
Total	100%

Locations on Highways	
Percentage of Mentions	
26%	SH 18
25%	Route 66
20%	US 99
16%	SH 102
8%	SH 62
5%	US 177
1%	US 377

Person Biking on Route 66, April 2018

-Staff Photo




Table 1

Public comments; Project Locations

Specific Locations: County	Topic	Road
E 890 Road needs to be opened to Hwy 18 - only a 1/4 mile	Improve access	E 890
Signs and roads around Davenport to Tryon or Perkins	Signage/Maintenance	Vicinity Dav
970 Road is slick when it rains and almost impassable	Drainage	970 Rd
Maintain bus route roads better	Road improvement	Bus routes
Provide better roads for bus routes	Road improvement	Bus routes
830 has a water crossing 24/7 and needs a bridge fixed	Bridge	830 Rd
Between 3510 & 3520, 840 Rd needs Bridge fix	Bridge	840 Rd
Bridge out at Meeker for a long time, 1060 Rd 2 Mi E of Hwy 18, long detour	Bridge	1060 Rd
Pave 840 Road for heavy truck traffic	Pave county road	840 Rd
Farm to Market Road needs paved	Pave county road	910 Rd
Farm to Market Road 910 btwn Davenport & Hwy 99 needs paved	Pave county road	910 Rd
Davenport Farm to Market Rd needs paved	Pave county road	910 Rd
980 Road needs paved all the way from Hwy 18 to Hwy 177	Pave county road	980 Rd
Dangerous curves Kendrick Rd	Dangerous curves	Kendrick Rd
Kendrick Road 3503 @ 860 Rd has bad curves; Dangerous	Dangerous curves	Kendrick Rd
Curves on Kendrick/Davenport Rd	Dangerous curves	Kendrick Rd
850 Rd to Kendrick, condition is awful	Road improvement	Kendrick Rd
3500/3503 Rd Kendrick Rd bad condition	Road improvement	Kendrick Rd
Kendrick Road	Road improvement	Kendrick Rd
Kendrick Road	Road improvement	Kendrick Rd
Roads around Kendrick are full of potholes	Road improvement	Rural Kendrick
840 Road between Hwy 18 & SH 177 gets very muddy between gravel drops	Road Improvement	840 Rd
840 Road between Hwy 18 & SH 177 gets very rough with washboards	Road Improvement	840 Rd
3420 Road & Banker's Hill are horrible; deep holes everywhere	Road Improvement	3420 Rd
Sparks Rd 970 to Hwy 99	Road Improvement	970 Rd
N/S 3480 Road has bad washboards; and grading only makes it worse	Road Improvement	3480 Rd
Eastern Moccasin Trail rough surfaces, potholes	Road Improvement	Mocc Trl
Moccasin Trail needs to be fixed. Dangerous	Road improvement	Mocc Trl
Prague Lake Road is terrible	Road improvement	Prague Lake Rd
Prague Lake Road	Road improvement	Prague Lake Rd
Wilzetta Road NW of Prague	Road improvement	Wilzetta Rd

Table 2

Locations on State Highways

Specific locations: State Highways	Topic of concern	Road
Need clear and smooth access to roads and highways including Turnpike	General upgrades	All; TTPk
Realign Intersection of Manvel & 1st in Chandler	Align intersection	18
Slow traffic down at the Turnpike Gate in Chandler	Speed	18
Hwy 18 S out of Meeker move speed signs; creates a speed trap	Speed	18
Getting on Hwy 99	Access	99
Corner of SH 177 & Hwy 105; unlighted needs signs	Lighting, signage	177
Guardrails/ Shoulder needed between Meeker & Chandler; Deep ditches	Safety improvements	18
Banker's Hill S of Cemetery on Hwy 18, visibility	Visibility	18
Meeker Lake Rd meets Hwy 62, W bound on 62; too steep to see traffic	Visibility	62
Hwy 62 and White Rock Road, problem seeing traffic when turning	Visibility	62
Stoplight at intersection of Hwy 18 & 62 in Meeker	Stoplight	18 & 62
Put stoplight at 18 & 62	Stoplight	18 & 62
Need stop light at 18 & 62	Stoplight	18 & 62
Bike lanes needed on Route 66	Bike lanes	66
Route 66 E&W of Davenport needs Bike path or shoulder	Bike safety	66
Need bike lanes on Rt 66 for all the bikes that come through	Bike safety	66
Safety for Bikes on Rt 66; someone could be killed	Bike safety	66
Widen bridges on I-40 because it's too close when you pass	Widen Bridges	I-40
Hwy 18 between Chandler & Meeker	Can't pass	18
Hwy 18 to 62 (between Chandler & Meeker) needs 4 lanes	Needs 4 lanes	18
Mahoney in Sparks needs repair. It is 18B	Needs repair	18B
Hwy 102 needs repaved; pot holes	Re-Pave 102	102
Road to Paden from Prague is bumpy	Road improvement	62
Hwy 62 East toward Paden needs fixed	Road improvement	62
Rt 66 needs work through Chandler Main Street	Improve Rt 66	66
Rt 66 connecting to 66B to the west needs work	Improve Rt 66	66
Route 66 from Chandler to Wellston	Road improvement	66
Hwy 102 South from SH 66 to SH62	Unspecified problem	102
Red Hill Road & Hwy 18	Unspecified problem	18
Exit at Wellston & Rt 66	Improve exits and onramps	66
East gate Wellston on 66. Curve, Hill at OnCue; stop sign	Intersection improvements	66
Intersection of 177 & 105	Intersection improvements	105 & 177
Corner of Hwy 377 & the I-40 ramp at exit 200 S of Prague	Intersection improvements	377
18 & 66 Merges are confusing in Chandler	Intersection improvements	18 & 66
Hard to merge onto 66 after crossing tracks in Chandler	Intersection improvements	18 & 66

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Hwy 66 & 102	Intersection 66 & 102	66 & 102
Hwy 66 & 102	Intersection 66 & 102	66 & 102
Hwy 66 & 102	Intersection 66 & 102	66 & 102
Intersection 66 & 102	Intersection 66 & 102	66 & 102
The "Y" at 66 and 102 W of Wellston	Intersection 66 & 102	66 & 102
Intersection of Hwy 66 & Hwy 102 west of Wellston	Intersection 66 & 62	66 & 102
Intersection 66 & 177	Intersection 66 & 177	66 & 177
Hwy 66 & 177	Intersection 66 & 177	66 & 177
Hwy 18 between Chandler & Meeker	Needs shoulders	18
Shoulders needed on Hwy 18 between Meeker & Chandler	Need Shoulders	18
SH 18 Meeker to Chandler needs shoulders	Needs shoulders	18
Hwy 66 needs shoulders	Needs shoulders	66
Rt 66 needs shoulders	Needs shoulders	66
Hwy 66 need shoulders	Needs Shoulders	66
SH 66 Chandler to Davenport needs shoulders	Needs shoulders	66
Hwy 66 & 99 are too narrow Dangerous when trucks come through	Needs shoulders	66
Hwys 66 & 99 need shoulders	Needs shoulders	66
No shoulders on Route 66 between Stroud and Wellston	Needs shoulders	66
Hwy 66 & 99	Needs Shoulders	66
Hwy 99 & 66 too many wide loads, very unsafe	Needs Shoulders	66
Hwy 99 North and 66	Needs Shoulders	66
Hwy 99 needs wider shoulders	Needs Shoulders	66 & 99
North 99 from Stroud has no shoulder and a lot of wide loads	Needs Shoulders	99
Hwy 99 needs shoulders	Needs Shoulders	99
Hwy 99 needs shoulders	Needs Shoulders	99
Needs shoulders on 99 from 66 to 33; too narrow	Needs shoulders	99
Hwy 99 going north to Hwy 33	Needs Shoulders	99
Hwy 99 going north to Hwy 33 dangerous drop offs	Needs Shoulders	99
Oversized vehicles need a better road than Hwy 99	Narrow road	99
Hwy 99 north of Stroud	Narrow road	99
Hwy 99 North of Stroud is too narrow	Narrow road	99
Hwy 377/99 between Prague & Sparks Road	Narrow road	99
Hwy 102 S to McCloud needs sides fixed, ditches are dangerous	Needs Shoulders	102
Hwy 102	Unspecified Problem	102

Table 3

Rumble Strip Placement

In addition to providing enhanced safety at a relatively low cost, appropriate rumble strip placement adds sustainability and resilience to the regional transportation system. FHWA has published guidelines for rumble strip design. Placement on or near the right edgeline can provide additional seconds of warning to both drivers and bicyclists traveling in the same direction that a vehicle has strayed over the edgeline. Proper placement of rumble strips also provides a wider usable surface between the roadway and the unimproved roadside (ditch). FHWA information and a graphic illustrating preferred placement of rumble strips is shown in Appendix 5.6.



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Poor rumble strip placement reduces the utility of the shoulder; edgeline or near-edgeline strips are preferred. See Appendix 5.4

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CHAPTER 1: INTRODUCTION; KEY ISSUES & GOALS

Background Information

Regional Transportation Planning Organization (RTPO)

The Oklahoma Department of Transportation worked with the Federal Highway Administration to allocate a portion of the federal State Planning & Research (SPR) funding to the Oklahoma Association of Regional Councils (OARC) to fund rural transportation planning projects. The Central Oklahoma Economic Development District (COEDD) was selected to participate. Other participating Regional Councils of Governments in Oklahoma are NODA, SWODA, ASCOG and Grand Gateway.

In October of 2009, the COEDD board created the Central Oklahoma Regional Transportation Planning Organization (CORTPO) by Resolution #09-04. The CORTPO Region is composed of a seven county area, and includes Hughes, Lincoln, Okfuskee, Payne, Pawnee, Pottawatomie, and Seminole Counties (Map 1). CORTPO will develop transportation plans for each county, which will ultimately result in a Regional Plan. The region is predominately rural, with the majority of the population being within the incorporated cities of Seminole, Shawnee, Stillwater, and Tecumseh.

The development of this Long-Range Transportation Plan (LRTP) provides an opportunity for the community to identify priorities for Lincoln County in context of the greater CORTPO region.

Fixing America's Surface Transportation (FAST) Act

On December 4, 2015, President Obama signed into law the Fixing America's Surface Transportation Act, or "FAST Act." It is the first law enacted in over ten years that provides long-term funding certainty for surface transportation, meaning states and local governments can move forward with critical transportation projects, like new highways and transit lines, with the confidence that they will have a Federal partner over the long term. More information about the FAST Act is available in Appendix 1.1.

Purpose of the Plan

The Lincoln County Long Range Transportation Plan (LRTP) may be used to assist the community in focusing limited transportation funds on projects that provide the best return on investments, by developing realistic goals based on analysis of data and input from the community. By establishing the year 2040 as the planning horizon, the community is looking toward long range strategies to accommodate community needs over a significant period.

The transportation plan will provide a guide for the development of a safer, more efficient transportation network among population centers through both long-term transportation system objectives and short-term implementation of policies and projects. Realistic assessment of short range steps toward long range goals will support local fiscal planning and provide for long term coordination with state or federally funded transportation projects within the County

Use the LRTP when:

Public repairs are planned, or new development is proposed

- ✓ **Guiding Policy**
- ✓ **Project List**
- ✓ **Grant applications**

Requirements

The LRTP has been developed by CORTPO in cooperation with the federal, tribal, state, county, and member governments, ODOT, FHWA. Federal requirements have been incorporated into the Lincoln County LRTP, some of which are reproduced below:

The transportation plan must

- ✓ Address a twenty year planning horizon
- ✓ Identify needed pedestrian walkway and bicycle facilities
- ✓ Indicate, as appropriate, the transportation alternative activities within the area
- ✓ Include a financial plan that demonstrates the consistency of proposed transportation investments with sources of revenue already available

Planning Factors

The plan is intended to address the ten planning factors required by federal law 23 CFR 450.306 for the transportation planning process listed in Table 3 below.

Planning Factors 23CFR 450.306
1. Support the economic vitality of the United States, the States, nonmetropolitan areas, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase accessibility and mobility of people and freight.
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
6. Enhance the integration and connectivity of the transportation system across and between modes, people and freight.
7. Promote efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
10. Enhance travel and tourism

Table 4

Environmental Justice

Public involvement in development of the Plan must comply with Presidential Executive Order 12898, Environmental Justice. The Federal Highway Administration (FHWA) also follows federal policy to ensure federally funded activities (including planning, through implementation) do not have a disproportionate adverse effect on disadvantaged populations.

Poverty rates as defined by the U.S. Census Bureau ACS 2012-2016 were identified in Lincoln County. About 15% of the population was living below the poverty line; 20.5% of those under age 18 and 7.2% of those over age 65. The LRTP process identified additional environmental justice (EJ) populations through a comparison of the racial and ethnic composition of the county by Census area. Older neighborhoods (original town plats) typically have the most Zero-vehicle households and a higher density of minority populations. This information is further illustrated in Appendix 2.2 (Zero Vehicle Households) and Appendix 6.1 (Poverty).

Key Issues, Trends and Challenges

During the public participation process, the Lincoln County community identified key issues, trends and challenges that have an impact on the function of the transportation system.

Concerns of the community

Comments received during the public participation survey indicate that economic vitality, preservation of existing infrastructure and road surface maintenance are high priorities in both the county road and city street systems. Pedestrian routes to schools and shopping may be insufficient. Transit is needed. There are few existing accommodations for bicycle travel. Signage is perceived to be lacking or in need of repair.

Top Issues

- ✓ Funding limitation. Revenues continue to be limited to meet transportation system needs, while costs increase, especially for county road and bridge maintenance, rehabilitation or reconstruction
- ✓ Need for improved safety:
 - Pedestrian access to common destinations and schools
 - Increasing bicycle traffic is observed on rural roads
- ✓ A need for improved access: local and regional transit, pedestrian and bike accommodations, signage, sidewalks, benches, multi-use trails

Trends

- ✓ Decay of existing infrastructure among all modes of transportation
- ✓ Increased Tribal investment in development and transportation in Oklahoma
- ✓ Residents support local business and medical services
- ✓ Gradual population increase
- ✓ An increase in the proportion of residents over age 65
- ✓ A national and regional economic shift towards increased demand for recreational travel amenities;
 - trails, sidewalks, bike racks, bike lanes
- ✓ FHWA policy has placed greater emphasis on improving transportation for “traditionally under-served” population groups such as:
 - Non-drivers of any age, including the elderly, low-wage workers and zero-vehicle households
 - Bicycle and pedestrian users of the system

Challenges

Funding. The primary challenge identified by this study is funding of all aspects of the transportation system. Statewide, revenue allocated to transportation has fallen behind the investment needed to preserve and maintain the current system. Additional funding will be needed to keep people and goods moving effectively over the next two decades. Increases in the proportion of the population over age 65 can be expected to result in additional demand for transit. Expanded Regional Rail service and infrastructure improvements would offer an alternative to trucked freight and reduce wear on vulnerable state and county roads.

County Roads. The persistent challenge to the county road system is the cost of road maintenance; the daily costs of keeping more than 800 miles of roadway and signage in good condition.

Sidewalks and Pedestrian Safety. Sidewalks and proper crosswalks throughout the CORTPO region are absent or in a state of disrepair. The lack of safe paths to shopping, school and recreation is a common safety issue. Some Lincoln County towns and cities have made efforts to improve pedestrian conditions. These efforts should be continued and supported in every population center.

Transit. Low population densities and limited funding present challenges to establishing feasible routes and scheduling services so that a trip is acceptable to riders and not cost prohibitive. See Chapter 2, p. 24 for more information.

Rail. Some of the regional rail capacity has deteriorated to a point where the infrastructure is nearly lost. A great deal of research has been completed that demonstrates the value of rail infrastructure in central Oklahoma, and the direct economic benefits of existing and potential rail restoration investment in the CORTPO region. The following paragraph is excerpted from the Federal Highway Administration document titled "Planning for Transportation in Rural Areas;" relevant to Lincoln County connections to the regional and national economy:

"Business decisions by rail companies have resulted in the abandonment of many rural branch lines. The result has been loss of rail freight service to these areas and increased trucking on the rural road system to compensate for this loss. Increased trucking on rural roads ultimately increases road maintenance needs and reduces the financial capability of the rural area and state to keep the roads in adequate condition. (FHWA PTR, 2001)"

The reader is directed to the *Oklahoma Freight Transportation Plan 2018-2022*; the *2013 Oklahoma Rail Infrastructure Report Card*; the *Oklahoma Statewide Freight and Passenger Rail Plan*; current FHWA and ODOT policy, and other print and web resources.



General maintenance and repairs are the key factors in keeping annual costs of road work low.

According to the American Association of State Highway and Transportation Officials (AASHTO), every \$1 spent to keep a road in good condition avoids \$6-\$14 needed later to rebuild the same road once it has deteriorated (AASHTO, 2011)



Demographic Trends

Stable Population and Economy. Lincoln County is forecast to have a relatively stable population with a gradual increase over time. According to the public survey conducted in Lincoln County, most people work and shop within 30 to 50 miles of home. About 5% of all trips were reported to be more than 60 miles (one way), most of those for specialized medical care.

Aging. The projected number of people over age 65 in 2040, is expected to grow. In 2015, Lincoln County, 16.7% of the population was over age 65, somewhat higher than the percentage for the rest of the State (14.2%). This impacts travel, as fewer people are commuting to jobs and more non-drivers need access to medical services such as dialysis. For more information on changing demographics see Appendix 3.2.

The US Administration on Aging (AoA) Report projected that by 2030, the over-65 group will make up 24% of the population in the state (AoA, 2014).

If the balance holds true, Lincoln County may expect an aging population in excess of 25% of population.

LC Age Cohorts	2000	2010	2015
18 years and over	73%	74.5%	75.2%
21 years and over	69%	70.9%	71.8%
62 years and over	17%	18.9%	20.6%
65 years and over	14%	15.3%	16.7%
Median age	37.5	40.4	40.7

Table 5

Cultural trends and perceptions. “Quality of life” is an economic issue that impacts the long-term social and fiscal health of a community. The availability of preferred educational, recreational and transportation options has a direct impact on where individuals choose to invest valuable business and family resources. Continuing efforts to develop the county as a great place to live and work are a fundamental component of economic attraction.

Other Challenges that were identified by this study:

- ⇒ Safety and security for all legal road users has not been fully integrated into historic improvements
- ⇒ Improved integration of transportation goals with economic development goals could result in greater efficiencies of investment
- ⇒ Barriers to accessibility and mobility for under-served segments of the community – including able-bodied non-drivers – may have a negative impact on:
 - the local economy (customer access, worker stability)
 - community health, safety and welfare
 - perceptions of the quality of life available in Lincoln County

Local assets

In addition to the major highway and freight route represented by the Turner Turnpike (I-44), rail facilities, and the proximity to two major metropolitan areas, there are other local features that make Lincoln County stand out in regional transportation opportunities. First, Route 66 is an historic American route which passes through Chandler and is a significant tourist attraction. Second, there has been a lengthy effort to establish and operate a passenger rail commuter line between OKC and Sapulpa, Third, there are a large number of miles of abandoned RR lines that can still be detected on the landscape. Such routes could provide an opportunity for multi-use trail development in the future.

Goals, Objectives and Policies

The LRTP includes goals, objectives and policies to assist Lincoln County in the planning and prioritization of transportation system investments.

Goals

The goals of the LRTP were developed from meetings held with the general public, key stakeholders, Technical Committee members, Policy Board members and are based on the current planning guidelines published by the primary funding agencies – the Federal Highway Administration (FHWA), and the Oklahoma Department of Transportation (ODOT). We applied the acronym *SMART* as a template for development of the objectives, policies and action steps of the LRTP, a standardized strategy published in 1981 by GT Doran.

Objectives

Objectives are specific, quantifiable components of community goals. Objectives should be *Specific and Measurable* and are more focused; typically more tangible statements related to attaining the set goals. It is expected that when all objectives are met, the Goal has been reached.

Policies

Policy statements and Action steps provide guidance for decisions that will help attain these goals and objectives. They are *Attainable and Relevant* in the twenty-year *Time* frame. Policies included in the plan were developed in coordination with member governments; partner agencies; technical committee and policy board members and are based on the current planning policies of the FHWA and ODOT. Policies and actions are implementation strategies; expected to result in the attainment of each objective.

Table 4 identifies the goal categories developed for the LRTP. The full text of the goals, objectives and implementation strategies developed for this plan are outlined below.

Lincoln County Goals	
1	Enhance Economic Vitality & Tourism
2	Increase Safety & Security
3	Maintain and Improve Existing Transportation Infrastructure
4	Protect the Environment and Enhance the Quality of Life

Table 6

Lincoln County Goals Objectives

GOAL 1: Enhance Economic Vitality and Tourism

- A Economic development is coordinated with strategic transportation investments
- B Retail establishments are located within Town/City limits
- C Employers have assurance that the labor force has reliable transportation options
- D Reliable access to shopping and services is realistic for all residents
- E Tourists easily find the services and locations available; streetscapes, wayfinding
- F Planning efforts result in continuous bikeways throughout the multi-county region
- G Tourism provides annual revenue for low cost transportation improvements
- H Route 66 is recognized as a National Adventure Cycling Route

GOAL 2: Increase Safety & Security

- A Local site development standards address safety for all legal road users
- B Persons using handicap mobility vehicles have safe access to common destinations
- C Bicyclists have improved safety in rural areas
- D Crosswalks have appropriate signage and visibility
- E Children and parents have safe routes to school
- F Bridges and RR crossings are modern, safe, and do not impede emergency vehicles

GOAL 3: Maintain & Improve Existing Transportation Infrastructure

- A Regional applications for all available transportation opportunities maximize annual funding
- B Multi-jurisdictional collaboration facilitates transportation improvements
- C New development is directed to appropriate roads and infrastructure
- D County Roads and structurally deficient bridges are prioritized for repair or replacement
- E Private companies with heavy truck traffic contribute to maintenance of county roads & bridges
- F County Road & Bridge maintenance budget Increased by 1.5 million annually (from 2018 level)

GOAL 4: Protect the Environment and Enhance the Quality of Life

- A Funding is balanced among modes to ensure sustainable mobility solutions
- B Transit is a preferred method of travel for a wider segment of the populace
- C Infill and downtown upper-story residential housing reduce the need for transportation
- D Connectivity of Bike routes, indicated with signage for improved regional mobility
- E Road and street improvements are coordinated with bicycle and pedestrian projects
- F Rail connections are in place for freight and passenger mobility
- G Right of Way areas are preserved for the future

Long range objectives:

- A Passenger rail to OKC and Tulsa
- B Improved intermodal rail freight opportunities

Implementation Policies and Action Steps are detailed in Chapter 6.

Chapter 2: Current Conditions

Lincoln County

Lincoln County is in east-central Oklahoma; part of the Oklahoma City Metropolitan Statistical Area. The county boundary crosses three tribal jurisdictions; the Sac & Fox, Kickapoo, and the Iowa Tribe of Oklahoma (Tribal jurisdiction Map, Appendix 2.1.).

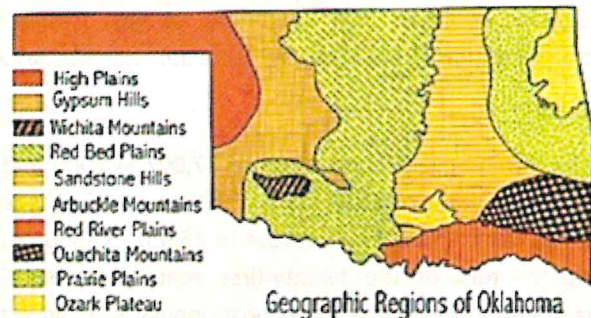
Much of the following information is sourced from the Encyclopedia of Oklahoma History and Culture, by William Mullins, 2009: Named for Pres. Abraham Lincoln, Lincoln County is bordered on the north by Payne County and on the south by Pottawatomie County. Creek and Okfuskee counties are to the east and Logan and Oklahoma counties border on the west. Interstate 44, the Turner Turnpike, crosses diagonally, east to west, through the county seat at Chandler.

Geography

The western portion of the county is part of the Red Bed plains, while the eastern part is in the Sandstone Hills geographic region (See Appendix XXX).

Ecology

Most of the county lies in either the Cross Timbers Transition (north and central) or the Northern Cross Timbers regions (southern portion). According to the U.S. Census Bureau, the county has a total area of 966 square miles, of which 952 square miles is land and 13 square miles (1.4%) is water. The Deep Fork of the Canadian River drains the county.



Economy

As documented by the Oklahoma Historical Society, for much of its history the Lincoln County economy has been based on agriculture. "The soil, thin and prone to erosion, was probably more fit for grazing than cotton growing, but cotton almost immediately became the dominant crop after white settlement. During the first decade of the twentieth century Lincoln County was one of the top two counties producing cotton in Oklahoma. However, by the 1930s sixty-five-thousand to seventy-thousand acres of land lay abandoned. By the end of the Great Depression the economy had become more diversified. Oil furnished one-third of county tax revenue, and production of cattle and pecans became important income sources. In 1997, 1,916 farms had 431,368 acres under cultivation. In 2018, Oil and Gas production remain fundamental industries of the local economy."

The balance of the Lincoln County non-agricultural economy is based primarily on professional services, small businesses, and service industries. Manufacturing has played a lesser role. Annual tourist events include the Sac & Fox PowWow in Stroud and the Kolache Festival in Prague.

Places

The county seat is Chandler. Other incorporated towns in the county include Agra, Carney, Davenport, Fallis, Kendrick, Meeker, Prague, Sparks, Stroud, Tryon, Warwick, and Wellston.

Historic Transportation

Transportation facilities have been crucial to the area's economy. In the late 1860s the West Shawnee Trail furnished a path for cattle drives to move through the center of the county (approximately along the route of State Highway 18) until drovers opted for the Chisholm Trail further to the west. Beginning in 1898 the St. Louis and

Oklahoma City Railroad (later St. Louis and San Francisco Railway) facilitated shipping produce to markets. The Atchison, Topeka and Santa Fe Railway and the Missouri, Kansas and Texas Railway came later (Mullins, 2009).

The Ozark Trail was a network of locally maintained roads and highways organized by the Ozark Trails Association that predated the United States federal highway system. These roads comprised the major highway system in the region until U.S. Highway 66 was built in the 1920s. In Oklahoma, portions of the section-line roads between Anadarko and Hobart are still referred to as "The Old Ozark Trail." U.S. Highway 66 (Route 66) ran through the heart of Lincoln County and generally followed the course of the former Ozark Trail. Interstate 44 has provided a major national transportation artery along the same approximate route since the 1950s .

Population

The county's population stood at 27,007 in 1900 and peaked in 1907 at 37,293; it declined to 33,406 in 1920, and 29,529 in 1940, reaching a low of 18,783 in 1960. Then, it rose to 26,601 in 1980 and to 29,216 in 1990. At the turn of the twenty-first century Lincoln County had 32,080 residents. Chandler was the most populated town in the county (Mullins, 2009).

As of the 2016 American Community Survey for the United States Census Bureau, there were 34,640 people estimated to reside in Lincoln County. The percentage of people who identified as White was 85.7%, 7.6% Native American, 1.8% Black or African American, 0.1% Asian, 0.5% other, and 4.3% of two or more races. About three percent (3.1%) were Hispanic or Latino of any race. Therefore, Lincoln County has more people who identify as White, and fewer people who identify as Native American, Black or Hispanic than does the state, in general. See Table 5 below.

Sixteen point seven percent (16.7%) of the population was over age 65. Twenty-four point eight percent (24.8%) of the population were children under the age of 18. The median age was 40.7. See Appendix 2.2.



“Ozark Trail” roads ran from St. Louis, Missouri, to El Paso, Texas, and Santa Fe, New Mexico, over a series of routes. These roads were maintained by both private citizens and local communities.

In one case, however, the US government was directly involved; it built the Ozark Trail Bridge in 1925 over the South Canadian River between Newcastle, Oklahoma, and Oklahoma City, as the first federal highway project built in Oklahoma (Wikipedia, 2017).



POPULATION; RACE	State of OK %	Lincoln County %
Total population	100	100
One race	94.1	95.7
White	72.2	85.7
Black or African American	7.4	1.8
American Indian and Alaska Native	8.6	7.6
Two or More Races	5.9	4.3
Hispanic or Latino (of any race)	8.9	3.1
DP05 ACS data 2012-2016		

Table 7

Housing

The population resides in 13,047 occupied dwelling units. There were a total of 15,261 units of housing in the county, about 85.5% were occupied and 14.5 percent were vacant. Most vacant units are rental properties (5.7% of rentals are vacant), or are units that are not fit for habitation. A map in Appendix 2.2 shows the relative density of vacant dwellings by Block Group (US Census, 2016).

Of all occupied housing units, 10,240 (78 percent) were owner-occupied and about 2,807 (22 percent) were rented. Among total housing units, 72 percent were single-unit structures, about 4.4 percent were in multi-unit structures, and 22.2 percent were mobile homes. Sixty-four people were reported to be living in an RV, boat, or van. See Appendix 2.2.

Lincoln County	Total housing units	Occupied housing units	Owner occupied	Renter occupied	Vacant units	Percent Vacant	Avg hhd size
Y2016	15,261	13,047	10,240	2,807	2,214	14.5%	2.65

Table 8

Households

In 2012-2016 the average household size was 2.56 people. Twenty-five (25) percent of all households have one or more people under the age of 18; seventeen percent (16.7) of all households have one or more people aged 65 years and over.

Income

The 2016 median income for a household in the County was estimated at \$46,592, as compared to \$48,038 for the State of Oklahoma. Lincoln County has somewhat fewer people in poverty than does the State.

About 15% of the population was below the poverty line, including 20.5% of those under age 18 and 7.2% of those aged 65 or over. Appendix 2.2 and 5.5 include additional information and illustrate the relative density of poverty by Census block group (ACS 2015).

2016 Poverty comparison (All people)	
OK State	Lincoln Co
16.5%	15%

Table 9

Population Change; Incorporated Municipalities

Over the period since the 2000 Census, several communities appear to have gained or lost a significant portion of their population; however, the total number of persons in those areas is so small that the relocation of just a few people can represent a significant percent of total population.

Registered Motor Vehicles

According to the Oklahoma Tax Commission, there were 30,101 personal, government, commercial, farm, and business motor vehicles registered in Lincoln County in 2015. When the number of vehicles is divided by the estimated 2015 population, the rate of ownership is about .88 vehicles per person (nearly one vehicle per person of any age). The historical figures are similar when population is taken into account (OTC, 2015).

Population Change between 2000 and 2016					
	2000	2010	2016	# people	% change
County	32,080	34,273	34,640	2,560	8.0%
Carney town	652	487	322	-330	-50.6%
Agra town	347	908	638	291	83.9%
Chandler city	2,831	3,050	3,133	302	10.7%
Davenport town	869	852	846	-23	-2.6%
Fallis town	29	39	10	-19	-65.5%
Kendrick town	138	193	69	-69	-50.0%
Meeker town	951	1,237	1,231	280	29.4%
Prague city	2,096	2,703	2,301	205	9.8%
Sparks town	130	181	252	122	93.8%
Stroud city	2,800	2,705	2,721	-79	-2.8%
Tryon town	471	429	466	-5	-1.1%
Warwick town	216	268	123	-93	-43.1%
Wellston town	826	939	827	1	0.1%

Zero-vehicle Households

As of 2016, an average of 5% of households in the county have no vehicle. Block Groups (BG) 1, 3 & 4, Census Tract 9611 in the central parts of Stroud and in the rural NE corner of the county, show the highest percentages of zero-vehicle households, with about 13% (183 homes) where no vehicle is available. Block group 4 in CT 9617 (center of Chandler) also reflects a relatively high percentage of households without transportation (9%). BG 3 in CT 9612 (Carney area) comes in at 7%. Prague has a 7% rate of zero vehicle households, representing about 135 people. Meeker calculates at about 5% zero-vehicle households. See Map below and Appendix 2.2 p. 27 for more information about zero-vehicle households by Block Group.

Table 10

Educational Attainment

Lincoln County is part of the East Central Workforce Investment Area (ECWIA). Almost fifteen percent (14.8%) of ECWIA residents possess less than a high school education, compared to 13.8% of the state and 13.98% of the nation. At the Post-secondary level, persons who have some college are 24.7 % of the Lincoln County population as compared to 23.5% of the state’s residents, and 20.8% nationally. Locally, women tend to have slightly more post-secondary education than men.

Zero-Vehicle Households			
		# Hhd's	# People
Occupied housing units	13,231		
No vehicle	5%	613	1,624

Table 11

Those with an Associate’s degree represent 7.3% of the population of the ECWIA while that figure is 7.1% of the state and 7.9% of the nation. The greatest difference between educational attainment in the ECWIA as compared to the State of Oklahoma is for those who hold Bachelor’s degrees; 10.2% as compared to 15.9% in the State. More information is in Appendix 2.2. For education as it relates to projected employment opportunity into the year 2025 and beyond, see Chapter 3.

Educational Attainment	Total	%	Male	% Male	Female	% Female
Population 25 years and over	23,440		11,446		11,994	
Less than 9th grade	832	3.5%	425	3.7%	407	3.4%
9th to 12th grade, no diploma	2,651	11.3%	1,365	11.9%	1,286	10.7%
High school graduate (includes equiv)	9,096	38.8%	4,565	39.9%	4,531	37.8%
Some college, no degree	5,788	24.7%	2,681	23.4%	3,107	25.9%
Associate's degree	1,714	7.3%	812	7.1%	902	7.5%
Bachelor's degree	2,397	10.2%	1,123	9.8%	1,274	10.6%
Graduate or professional degree	962	4.1%	475	4.1%	487	4.1%

Table 12

Employment

Listed below are some of the typical employers in the region. Commerce in East Central Oklahoma is not primarily concentrated in any one area; however there are a significant number of manufacturing, education, and health and social service employers in the area.

Major Employers in East Central Oklahoma

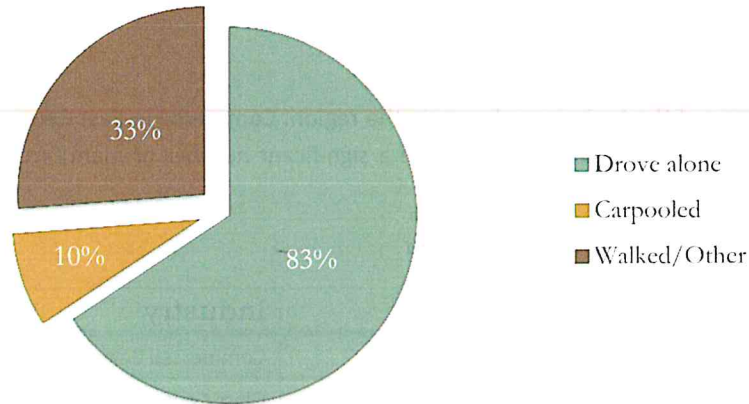
Regional Employers	City	Industry
American Heritage Bank	Sapulpa	Commercial Banking
Anchor Glass Container Corp	Henryetta	Glass Container Manufacturing
Ball-Foster Glass Container Co	Sapulpa	Glass Container Manufacturing
Bios Corporation	Sapulpa	Services for Elderly and Disabilities
Bristow Public Schools	Bristow	Elementary and Secondary School
Central Plastics Company	Shawnee	Pipe Manufacturing
Citizen Potawatomi Nation	Shawnee	Native American Tribal Governments
City of Shawnee	Shawnee	Local Government
Creek Nation Health Systems	Okmulgee	General Medical and Surgical Hospital
Davis Correctional Facility	Holdenville	Correctional Institution
Eaton Hydraulics	Shawnee	Power Pump and Motor Manufacturing
Express Temporary Services, Inc.	Shawnee	Temporary Help Services
Jindal Films	Shawnee	Plastic Film and Sheet Manufacturing
McCloud Public Schools	McCloud	Elementary and Secondary School
Med-Corp Plus	Muskogee	Home Health Care Services
Miller Truck Lines	Stroud	General Freight Trucking
Muscogee Creek Nation	Okmulgee	Native American Tribal Governments
Oklahoma Baptist University	Shawnee	College, University, and Professional School
Paragon Industries	Sapulpa	Iron and Steel Pipe Manufacturing
Saint Anthony Shawnee Hospital	Shawnee	General Medical and Surgical Hospital
Sapulpa Public Schools	Sapulpa	Elementary and Secondary School
Service King Manufacturing	Stroud	Sheet Metal Manufacturing

Table 13

Commuter data

Lincoln County has a relatively high percentage of workers that commute outside of the ECWIA region (38%). The county is part of the Oklahoma City Metropolitan Statistical Area. Stillwater, a University town, is within the ECWIA Region in adjacent Payne County, and the Tulsa Metro, outside the ECWIA Region is also within commuting distance to the northeast. Only about one tenth of one percent of people utilized Public transportation (Transit) for work (0.1%).

Means of Travel to Work



Traffic Analysis Zones (TAZ)

The Traffic Analysis Zone (TAZ) Program is used to produce Census Transportation Planning Products (CTPP). TAZ data are based on the 2010 US Census and are designed to allow planning agencies access to specific data for transportation system analysis and creation of geographic information layers suitable for planning purposes.

CORTPO uses Traffic Analysis Zone (TAZ) boundaries in analysis of socio-economic data. Geographically, the study area was subdivided into seven Census TAZ which (in Lincoln County) were equivalent to the Census Tracts (CT) and numbered identically to the CT's.

One of the tasks of this planning effort was to identify more detailed TAZ, based on census block data for the rural areas of the state. Census data is organized by County, Census Tracts, Block Groups and the smallest units, Tabulation blocks. Fifty-five (55) TAZ were delineated based on block data, split along Tabblock lines; each capturing populations numbering from approximately 400 to 600 people. See Appendix 2.3 for more information.

County and Community Development

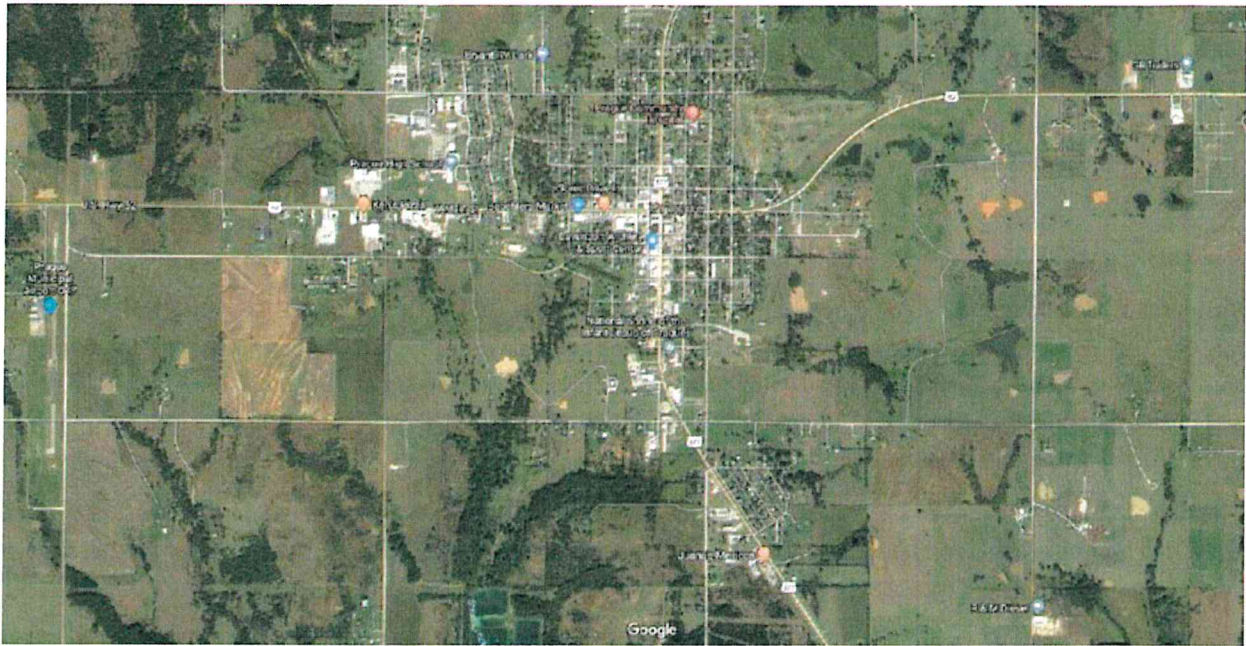
Changing land uses affect the flow of traffic throughout the community. Over recent decades, most residential and industrial growth has occurred in and near incorporated municipalities, adjacent to State Highways. This is a preferred development strategy which efficiently utilizes existing infrastructure.

Growth within the Cities of Chandler, Prague and Meeker is guided by Zoning. Lincoln County itself has no zoning or subdivision regulations; the county does regulate road standards for new development.

Some areas are common destinations that may generate additional demands on the transportation system. Such activity-generators include grocery, retail, business and industrial sites, agencies, schools, universities, and recreation centers. The destinations in the county that draw the most concentrated traffic are; in Chandler, along

Route 66 as is enters the town at the Northeast corner, passes through the town heading south along Main Street (original downtown), then turns West at the South west corner of town; in Prague, Downtown, along N/S US 377, and on SH 62 West from downtown to the vicinity of the High School, towards the Airport; in Meeker, development primarily is concentrated along Highway 18, north and south through town and along SH 62, the east-west route. Smaller communities enjoy isolated pockets of development activity. In every Town and City, travel is auto focused; sidewalks and crosswalks lack connectivity.

In the aerial view of Prague below, commercial development is indicated by lighter areas due to the presence of concrete and other impervious structures. State Highway 62 crosses US 377 downtown. The Prague Airport is visible to the west.



Aerial view depicting development areas of Prague

Sidewalks and safe routes for pedestrians are often lacking. An example is shown in the photo at the bottom of page 30, where it is perilous for pedestrians or persons using handicap-mobility vehicles to travel between a Housing development south of town to access common shopping destinations. This is a common regional problem.

Physical Development Constraints

Various factors can affect whether a site is appropriate for development. Some of these conditions may include the location of water and sewer infrastructure, existing roads and buildings, land ownership and tribal jurisdictions, legally established rights of way, floodplains, wetland areas, habitats or regulations.

Environmental features

Lincoln County is home to environmental features and natural resources which influence the transportation system. Gas and oil fields underlie much of the region. Protection of these and other resources must be an integral part of early project development, as required by the National Environmental Policy Act (NEPA), and other State and Federal laws.

The county has a gentle topography. This rolling topography, together with the presence of numerous streams and rivers, influenced the number of small county bridges that were originally built; many of which are now in need of rehabilitation and replacement. Floodplain areas are mapped by FEMA throughout the County. Lincoln County includes Zone A flood hazard areas (Effective date 8/19/2010). The location of these special flood hazard areas can be viewed at the FEMA Map Service Center, or check with the local Flood Plain Administrator for current flood maps. Local knowledge can also provide additional valuable information to developers planning projects.



American Peregrine Falcon
 Photo by Roy W Lowe USFWS

Lakes

Residents of Lincoln County enjoy a number of lakes and reservoirs, of which Bell Cow Lake near Chandler, is the largest. “Bell Cow Lake on Bell Cow Creek was built for flood control, water supply, recreation, and fish and wildlife purposes. Its 2,000 acres, 1,000 filled with water, and four recreation areas are ideal for boating, fishing, swimming, camping, picnicking, and horseback riding” (Lakes, 2008). Other lakes and reservoirs include Chandler Lake, Brown’s Lake, Clark Lake and Todd Lake.

The City of Chandler website says “Chandler Lake on Bell Calf Creek was constructed in 1954 and has 129 surface acres and four miles of shoreline. Adjacent to the golf course, this small lake and its surrounding wooded-areas are popular for fishing, hiking, picnicking, and primitive camping.”

Prague Lake has a boat ramp, covered fishing dock, camping areas, horseback riding trails, restrooms, drinking water, electrical hook-ups and picnic areas. Fishing is popular, with the most plentiful species being striped bass, sand bass, black bass, small mouth bass, crappie, and catfish. Fauna around the lake include: white-tailed deer, raccoon, bobcat, coyote, beaver, squirrel, cottontail rabbit, quail, dove, ducks and geese (Godfrey, 2006).

Endangered Species

Group	Common Name	Scientific Name	Status
Birds	Whooping crane	Grus americana	Endangered; Experimental Population
Birds	American peregrine falcon	Falco peregrinus anatum	Species in Recovery
Birds	Piping Plover	Charadrius melodus	Threatened
Birds	Least tern	Sterna antillarum	Endangered
Birds	Red knot	Calidris canutus rufa	Threatened
Insects	American burying beetle	Nicrophorus americanus	Endangered

(FWS, 2018)

Table 14

National Register of Historic Places (NRHP)

Forty-three local properties are included on the National Register of Historic Places. Most historic properties in the county are so designated due to architectural style. Others are noteworthy for periods in Native American history; some are of special interest for well-known people who were associated with a place. WPA building projects are noted for preservation as well. Most are within the municipal limits of a town. See list Appendix XXX .

Bicycle and Pedestrian Network

The 2012-2016 American Community Survey showed that few people walked or rode bikes to work in Lincoln County. While the proportion of the pedestrian and biking public in addition to workers has not been measured, it can be stated that those who prefer sustainable or healthy forms of transportation, low-income workers, students and other diverse non-driver adults would benefit from increased safety. No bike routes have been identified or signed.

Modest pedestrian safety improvements are evident in most of the Towns and Cities. Crosswalks are marked in many areas throughout the County. Curb modifications have been made to improve accessibility, and painted lines indicate the pedestrian area. Painted areas must be maintained annually.

There appear to be sidewalks in most of the older neighborhoods and areas associated with original town plats. These have deteriorated in utility over many decades since construction. Additional sidewalks may be buried under layers of accumulated soil and grass. Newer neighborhoods were often built with few if any sidewalks. Sidewalks that have been built internal to a development lack connectivity to general destinations outside the development.

In Davenport, a limited amount of sidewalk connects the downtown to the Schools.





Above: Park Road looking West near the Elementary School, Chandler. Chandler schools are removed from the high traffic areas of town, but no sidewalk is present. A trail can be seen along the North side of the road (right) indicating that a people walk along the road there. School Buses also travel this route.



Public Transit

Low population density complicates the delivery of public transportation in rural areas. There is consistent need for transit to reach local sites and larger population centers such as Oklahoma City, Stillwater, Shawnee, or Tulsa, where workplace, shopping and medical services are frequent destinations. Federal, state and local funding is limited, which restricts the type and level of service that can be provided.

First Capital Trolley, based in Guthrie provides demand-response (curb to curb) transit service in Lincoln County. FCT operates from schedules, and most rides must be scheduled in advance. The trolley typically operates four vehicles which provide about 793 passengers with rides totaling more than 32,000 miles each month. Transit trips are available in towns for about \$3 and around the region for one-way fare, which, at \$1 per mile, is often cost prohibitive. From a home in Wellston, a 25-mile trip to Edmond would result in a \$50 round trip fare. For a dialysis patient, such a trip may be required three or more times each week. Medical trips for patients with *SoonerCare* are subsidized. Senior buses are also available in some towns to transport riders to the community meal site and run errands on weekdays.

Highways

Interstate, US highways, state and county roads are the framework of mobility. The location and condition of state highways in the county may drive development decisions. Several two-lane no-shoulder roads in the county are identified as locations for ODOT improvements over the next few years (see Map Appendix 2.15).

The Turner Turnpike (I-44) provides efficient access to OKC and connects to Interstate 35. To the east, it's a direct link to the Tulsa Metropolitan area and the Port of Catoosa. Other primary roads include US 62, 66, 177, 377, and State Highways 18, 99, and 102. Route 66 is an historic east west route through the central part of the county, running generally along the same route now covered by the Turner Turnpike (I-44). See Map in Appendix 2.13 depicting the location and Functional Classification of roads; Appendix 2.15 shows Traffic counts.

Truck Freight

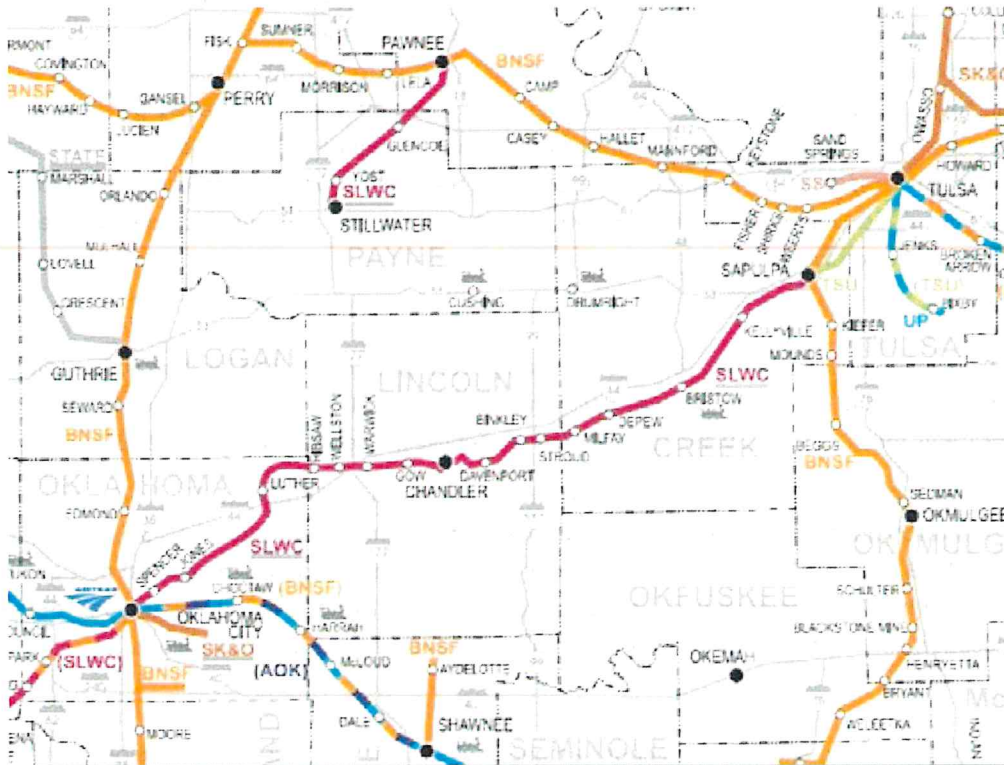
Reliable freight transportation enables connections among business and markets in the County, in Oklahoma, the United States and the global economy. According to the 2015 ODOT report titled Freight and Goods Movement, freight activity has rebounded from an economic slump that occurred between 2008 to 2012, and is expected to continue to grow.

Interstates 35 & 44 are high volume truck routes through East Central Oklahoma as identified by ODOT. Interstate Highway 44, the Turner Turnpike, carries the bulk of the freight that passes into, out of, and through Lincoln County, connecting to Interstates 35 & 40 in Oklahoma City and the Indian Nation Turnpike (US 75) in the Tulsa Metro to the East (ODOT FGM, 2015).

Rail Freight

The location of active or inactive rail facilities in the county may influence development decisions. Connectivity of rail service in the CORTPO region deteriorated after the peak of rail service in the early twentieth century. In the last few decades, public and private rail investments have been made to preserve lines and restore service. Burlington Northern Santa Fe (BNSF) and Stillwater Central RR (SLWC) operate freight shipping through Lincoln County, with a terminal and storage facility at Stroud. Freight service was available in Chandler and Wellston at one time, but that infrastructure is currently idle. The orange line on the map below indicates the BNSF lines; the pink line shows the Stillwater Central Railroad (ODOT FGM, 2015). BNSF operates with trackage rights on the SLWC as it runs between Sapulpa and OKC. That line is also the proposed route for the Eastern Flyer commuter rail; see page XXX Chapter 3.

The Stillwater Central is a Class III railroad. According to the WATCO company website, the SLWC operates over 275 miles of track in Oklahoma, stretching from Tulsa in the upper northeast corner to Duke in the southwest, with an additional branch running from Pawnee to Stillwater. The SLWC transports commodities such as fuels, minerals, and industrial products across the Sooner State. Transloading facilities in Stroud, Lawton and Oklahoma City have added to the services available on the SLWC line. See also Chapter 3, Projected Rail Improvements page 31.



Abandoned Rail

The *Cover Illustration* of this document shows a map of rail lines through the county that were operational in 1915. Many of these lines and stops across the county were ultimately abandoned after the 1930's. In Lincoln County, a number of these old rights-of-way remain visible on aerial photos. The presence of these old ROW areas can be a valuable resource for future multi-use trails and must be preserved, especially considering the proximity of the county to the Tulsa Metro, Oklahoma City and Stillwater, all of which have projected extensive networks of bike routes that may ultimately be connected through Lincoln County to improve recreational travel and community resilience.

Aviation

The county is home to three municipal airports, in Chandler, Prague, and Stroud. Six small airports are privately maintained. The Stroud community hospital operates a heliport for medical emergencies. A Map in Appendix 2.9 shows Airport locations.

Public Safety Issues

Road and Highway safety issues are based on a variety of factors, many of which cannot be addressed by local transportation system planning, but are under ODOT jurisdiction. ODOT has collected extensive data and identifies sites for improvements annually to improve safety conditions throughout the State.

The ODOT data in Table 4 depicts Lincoln County Collision data from 2013 through 2017. There were a total of 1,747 reported vehicle accidents of all types over the 5 year period. The number of all collisions per year has been fairly steady since 2013 with a total of 267 crashes occurring in 2013; 261 in 2014, with 268 in 2015, 263 in 2016, and 210 in 2017 (which data may be incomplete at this writing). Forty-six vehicle accidents resulted in the deaths of 53 individuals in Lincoln County over the five year period; 162 people were severely injured, 713 were injured, another 503 possibly injured and 929 collisions (53%) caused property damage only.

During the years 2013 through 2017, an average of two point six percent (2.6%) of Lincoln County accidents resulted in death. In comparison, for the State of Oklahoma during this time period, total fatal crashes averaged about 2%. The Lincoln County fatality rate has remained fairly steady, with between 9 and 14 people killed each year.

Lincoln County Oklahoma collisions 1-1-2013 through 12-31-2017

(odot 2018)

	Study Total					Total
	Fatality	Individual/No Injury	Severely/Significant Injury	Possible Injury	Property Damage	
Collisions	49	125	344	362	929	1747
Persons	53	162	551	500		1266

Table 15

Most collisions and nearly all fatalities happen on state highways in rural areas; including along the Turner Turnpike (I-44), see Map, Appendix 2.7. A significant number of collisions occur on county roads as well. Of the 1747 collisions that were analyzed for this plan, 1396 (80%) were on highways. Fifteen percent (254 collisions) occurred on rural county roads; about 6% (97) were documented on streets within incorporated city limits. Almost 80% of collisions occurred during dry conditions; most happened during daylight hours in dry conditions (970 accidents), with another 333 recorded in dry conditions after dark.

The fewest accidents occur between 1 a.m. and 6 a.m. (11.4%) on any given day. Accidents seem to be spread fairly evenly among the middle hours of the day with the exception of the peak traffic period between 4 and 6 p.m. Accidents most frequently occurred on Friday; about 334 collisions (19.1%). The fewest happened on Wednesdays, at 11.8%, or 206 of all 1747 accidents tracked.

Causes

Many accidents (40.4%) have no specific cause attributed. The primary identified cause of accidents and fatalities was DUI, the cause of more than 13% of all collisions and 14% of fatalities. Following those, about 11% of all accidents were caused by negligent driving; 7.4% involved failure to stop. Unsafe speed and inattention were other attributed causes.

Twenty-eight percent (491) of all crashes and a third of fatalities were a result of collision with a fixed object. The next most frequent cause of fatal collisions was rear-end collision, followed by vehicle rollovers.

Pedestrian; Bicycle

Of total collisions over the five year period, 2 pedestrians were killed, 8 were injured; one bicyclist was killed and 4 injured. Those accidents represent one-half percent (.5%) of all collisions during the 5 year period (odot 2018).

Deteriorating Pavements and Deficient Bridges

Lincoln County roads are rated as being in relatively poor condition. The Oklahoma DOT has assigned county roads an average score of 105 on the International Roughness Index (2014), a measure of the pavement performance standards for good and acceptable ride. A score below 95 is in the good category.

State transportation infrastructure investment did not increase between 1985 and 2005. According to the 2014 Update on Oklahoma Bridges and Highways published by ODOT, in 2005 highway pavements were deteriorating at a rate beyond the available funding to repair, let alone reconstruct, and more than 1,100 of Oklahoma highway bridges were *structurally deficient* or *functionally obsolete* (see Appendix C; Definitions). The Oklahoma Legislature enacted legislation to begin to correct the problem.

ODOT initiated a goal to have near zero structurally deficient bridges in Oklahoma by 2020, and has replaced or rehabilitated more than 1,200 bridges since January 2006. All such bridges on State highways are targeted for repair and replacement by ODOT over the next few years. Therefore, much of the annual funding for road repairs and improvements in the ODOT 8-year Plan (2015-2022) is necessarily dedicated to bridge work. See Appendix 3.6 for scheduled improvements in the ODOT 8-year Plan.

Bridges

Aging bridges are scattered throughout the county. Structurally compromised bridges may be weight restricted. Some bridges may be structurally sound, but have narrow road beds which are considered functionally obsolete by modern standards.

Total Bridges	# Structurally Deficient	# Functionally Obsolete	Total Deficient
495	178	59	237
NBI 2016			

Table 16

Structurally Deficient; Functionally Obsolete

The National Bridge Inventory tracks all bridges that are more than 20 feet long. The NBI database records a total of 495 bridges in Lincoln County. Of those, 237 are considered either deficient or obsolete, most constructed during the 1920's and 1930's. These bridges are identified and categorized by sufficiency rating in Appendix 3.8

One hundred seventy-eight (178) of Lincoln County bridges are structurally deficient, 59 are functionally obsolete; which can have a negative impact not only on public resources and safety, but also on the economic development potential of properties in the county. A bridge is classified as structurally deficient if the deck, superstructure,

substructure, or culvert is rated in "poor" condition. A bridge can also be classified as structurally deficient if its load carrying capacity is significantly below current design standards, or if a waterway overtops the bridge during floods.

Functionally Deficient bridges have lane widths, shoulder widths, or vertical clearances that are not fully functional to serve current traffic demand. While not unsafe for all vehicles, older design features cannot adequately accommodate modern traffic volumes or vehicle sizes and weights. Low traffic counts are an indication that the bridge serves a limited number of properties; therefore, a correspondingly low tax base for repair or reconstruction of these bridges can be assumed.



In some cases, weight limits on county bridges may be too low to safely support

Fire response vehicles, resulting in a situation where trucks may have to be indirectly routed in a fire emergency.

In the event of fire in a location that is not readily accessible to a fully loaded water tanker, water may have to be shuttled across the bridge.





The bridge pictured left is a Pony Truss bridge over 4-Mile Creek on E0840 Road, about 2.2 miles NE of Kendrick. It was built in 1920, has a deck width of 14 feet.

With a sufficiency rating of 22.9 (of 100), as of 2016, this bridge was Closed. A detour around it on the section line roads is required. Replacement of bridge; estimated cost of work: \$225,000 (Bridge Reports). Photo by Gene McClure 2009.

(<http://bridgereports.com/1424256>)

“The problems of 40 years of underfunding cannot be overcome in a few years,” said ODOT Executive Director Mike Patterson. “ODOT is grateful to the Legislature and the public for investing in the system’s bridge needs. Unfortunately, it will take a sustained effort to truly dig out of this hole and put Oklahoma back on track to meet its citizens’ transportation needs.” (Hill, 2015)

Chapter 3: Projected Conditions

Population and Employment Projections

US Census data indicate total population is expected to grow at a gradual pace. Other demographic factors are expected to remain stable. A table on page 14 of this document and graphics on Page 62 in Appendix 3 show the historic changes in population and projected changes through 2075.

Aging Population

The percentage of people in the general population from birth to adults age 44 has fallen, while the percentage of population between 45 and 75 years of age increased significantly between the 2000 and 2010 Censuses. Data collected for the 2012-2016 ACS Census has shown a similar trend. This change is attributable to the aging status of people born during the post-WWII population spike (Baby Boomers). This demographic group will likely include many additional non-drivers over the next two decades. See Appendix 3.2.

Employment projection

Lincoln County is part of the East Central Workforce Investment Area (ECWIA) economic region. The Oklahoma Department of Commerce identified occupational categories in Oklahoma important to the economy to generate wealth, have employment growth potential, or where the state has a competitive advantage. They are Aerospace and Defense, Energy, Agriculture and Bioscience, Information and Financial Services, and Transportation and Distribution. Those and three others, Health Care, Construction, and Manufacturing are key sectors for the ECWIA. Within each broad category, there are a variety of critical occupations necessary for future growth and advancement in a range of companies and organizations.

Projection of job growth in key sectors by 2020

By 2020, the number of Jobs in the region is expected to grow at a gradual pace in each of 8 major employment sectors. The Table below illustrates the projected growth in these categories.

Category	2014	2020 projection	# of additional jobs:	Average wage
Aerospace & Defense	2,380	2,600	220	\$44,260
Energy	5,950	6,800	850	\$70,050
Agriculture & Bioscience	2,520	2,640	120	\$47,270
Information & Financial	3,350	3,480	130	\$48,730
Transport & Distribution	4,670	5,010	340	\$52,790
Health Care	7,830	9,150	1,320	\$39,400
Construction	12,560	13,730	1,170	\$46,920
Manufacturing	10,300	11,170	870	\$61,050

Table 17

Workforce Education Projection

Current projections indicate that by 2020, 44% of jobs in East Central Oklahoma will require a high school degree or less and 37.5% will require post-secondary training. Currently 31% of individuals in East Central Oklahoma have some post-secondary training. If projected trends continue, by 2020 there will be a training gap for jobs that require post-secondary education or an Associate's Degree, and a surplus of individuals with a high school degree or less to fill jobs that require a high school education level. Fortunately, there are colleges and universities in the region to provide necessary skills to residents and alleviate the training gap. There is a small surplus of individuals

in the Grad Degree or higher category compared to projected job requirements in that sector in 2020. If these projections are correct, some of these individuals may have to accept jobs below their educational level.

Projected Growth Areas and new Housing

Residential, commercial and industrial growth is projected to continue to be concentrated in and near the Cities of Chandler, Prague and Meeker. Wellston may be poised for residential development, absorbing young families who work in Oklahoma City, but prefer small town life. Some smaller communities have set aside areas that are appropriate for Industrial Park use. Additional senior and low-income housing units would contribute to the long-term economic vitality of these communities and meet the needs of additional retired residents.

Highway improvements

Improvements planned for state roads in the county include upgrade of two-lane roads. ODOT has targeted specific 2-lane roads for the addition of shoulders, to improve safety on these roads. A map illustrating the location of these roads may be found in Appendix 2.15.

Pedestrian Routes

Towns and Cities have worked with the County and Tribal Nations to improve pedestrian safety by undertaking rehabilitation of existing sidewalks and crosswalks. These efforts, together with additional sidewalk construction projects are intended to be implemented over time.

Projected Bicycling

Anecdotally, the presence of bicyclists on both paved and gravel roads is increasing, consistent with national trends. There are no signed Bike Routes in the county, and currently, no such routes have been identified. Because of the unusually high number of original rail lines, many miles of abandoned RR rights-of-way are present across the county. The presence of these ROW areas may be a valuable resource for future trails and must be preserved. Action should be taken to preserve these, with a long term plan to develop connectivity with bike routes in adjacent counties, and ultimately with regional existing and proposed bike systems.

Recreational Cycling

Bicycle tourism is a growing segment of the Midwest economy; in 2012, the State of Iowa reported that recreational biking was generating nearly a million dollars a day in direct and indirect revenue to the State (Wyatt, 2012).

Public Transportation

Survey results indicate that regular riders of the transit service are expressing a need for increased availability of trips, and increased access and affordability for medical transit and shopping. Transit systems may encounter increased operational demand as the aging and low-income populations continue to grow.

Home Routes & Maps U.S. Bicycle Route System

U.S. Bicycle Route System

(ACA, 2018)



We're building the largest official cycling route network in the world.

Projected Truck Freight

The Federal Highway Administration's Office of Freight Management and Operations projects Oklahoma freight tonnage to, from, within and through the state on all transportation modes to increase about 1.3% per year over the 2015 to 2035 forecast period. Highway freight tonnage is expected to increase its share of total freight tonnage from 51 percent in 2007 to 57 percent in 2035, driven mainly by strong growth in imports and exports. The State's growth in exports is expected to be concentrated in agricultural products, durable goods, and live animals. Freight tonnage is also expected to grow fastest in areas of the State outside of the Oklahoma City and Tulsa Metropolitan Areas.

Annual truck traffic in Oklahoma on I-35, I-40, and I-44 is projected to grow at a 1.6-percent annual pace over the 2015 to 2035 forecast period. By 2035, roughly 13,000 and 14,500 trucks per day are expected to use I-35 and I-40, respectively, throughout the State; and 8,500 trucks are expected to use I-44. This compares with roughly 8,500, 9,500 and 5,300 vehicles in 2007 (ODOT NHS, 2010). These forecasts further indicate an increase in truck traffic on the smaller highways that connect with the interstate network as well.

Rail Improvements

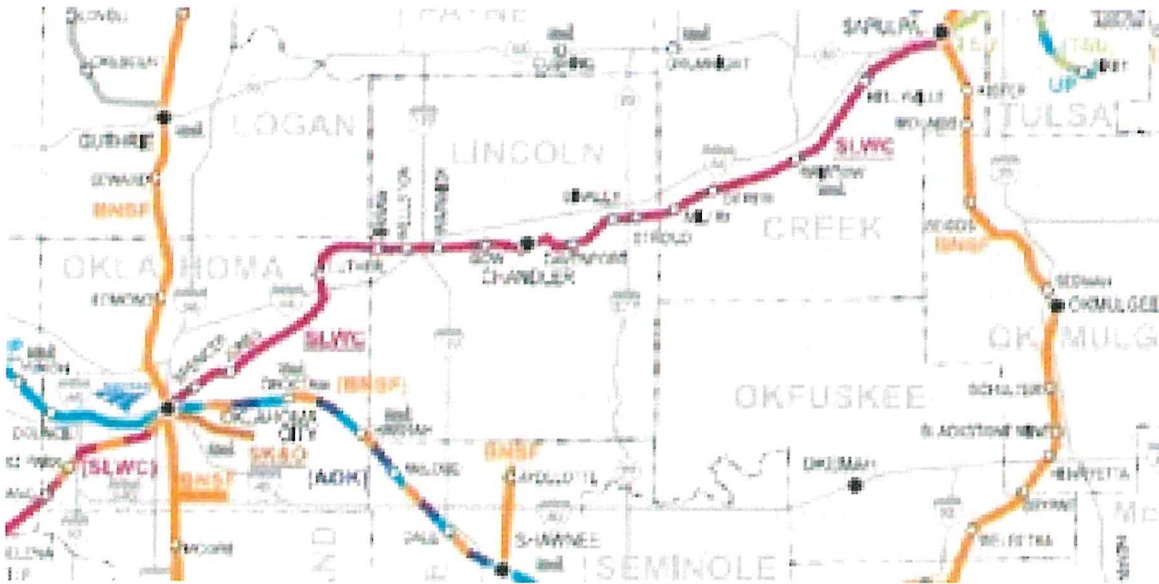
According to the *2010–2035 Oklahoma Statewide Intermodal Plan*, rail demand is expected to grow at a 0.9 percent annual rate from 2015 to 2035, with the largest growth occurring on the Class I network in the center of the State. BNSF operates with trackage rights on the Stillwater Central (SLWC) RR line. The viability of the existing BNSF service connecting the Tulsa Metro and Oklahoma City to the National Class I system, and the rail linkage to the nearby Port of Catoosa inland waterway seem to support the economic desirability of additional long-term rail improvements in the county. New investments in the Port and its associated road and rail infrastructure indicate confidence in intermodal shipping. Containers can be readily shifted among barge, truck, and rail, permitting greater efficiency. Shipping by rail does reduce wear on state highways and still offers the flexibility of truck transport to complete local sections of the trip.

Projections for specific freight modes are difficult to make at this time due to economic and political unpredictability, but railroads are working to compete with trucking for freight tonnage. Fuel prices and political funding priorities may shift. According to JOC.com in 2016, more U.S. shippers say they are shifting freight from truck to rail than the other way around, on improved intermodal service, according to a survey of shippers made by New York research firm Wolfe Research. Trucking remains a cost-effective mode because of historically low fuel prices, but with almost 307,000 containers moved per week in 2015, the railroad networks have handled a greater intermodal volume than ever before (Hutchins, 2016). Rising fuel prices could tip the "economy of scale" in favor of rail and waterway transportation.

Projected gradual increases in rail freight will support the preservation, maintenance and restoration of the regional rail infrastructure. Because current public funding for transportation in Oklahoma is so limited, it may be necessary to use jurisdictional collaboration and private funding to stabilize and improve local railways.



*Stillwater Central (SLWC) RR
Photo: Carlson 2008*



Map source: <http://passengerrailok.org/>

Passenger Rail

The Eastern Flyer is a proposed medium distance inter-city train traveling from Oklahoma City in central Oklahoma to Sapulpa, near Tulsa in north-eastern Oklahoma on the SLWC line. It is a private operation, operated by the Iowa Pacific railroad, and its services are designed to include a dome car, coaches and full meal service. This would be the first regular passenger service to Tulsa since 1967. The Eastern Flyer would connect with the Heartland Flyer, an existing high speed passenger rail between Dallas/Ft Worth/OKC. Over 77,000 passenger trips were made on the train during 2016 (Amtrak, 2017).

The operation of the Heartland Flyer is dependent on funding from both the State of Oklahoma and Texas. ODOT officials said they have enough funding to cover the operating costs for another year, but its ability to continue service in fiscal year 2018 remains in question since Amtrak costs are rising and Texas transportation officials have said they will not be increasing their contribution.

Initiation of service on the Eastern Flyer has been delayed repeatedly due to controversy over whether passenger fares along the route would cover the costs of operation. According to the Tulsa World, initial commercial demonstration test trips were sold out when conducted in February 2014, running between Oklahoma City and the Tulsa suburb of Sapulpa with stops in Stroud and Bristow (Arnold, 2014). The Eastern Flyer is partly dependent on the continuation of service on the Heartland flyer, without which the Tulsa leg would not be seen as viable (Felder, 2016). *UPDATE: On June 22, 2018, WATCO announced a RFP for Passenger Service (See Appendix 2.8, p. 43).*

At-grade Crossings

One at-grade Railroad crossing on the SLWC line has been identified for improvement in Lincoln County; it is at the intersection of 1st Street in Chandler. The crossing is listed as part of a \$100 million Rail Crossings Safety Initiative that was announced in 2014 by the State of Oklahoma and ODOT. These projects can include improved signage and active warning systems such as flashing lights and gates that will lower to prevent traffic from crossing when trains are present, and audible alert devices (ODOT, 2015).

LINCOLN	668825E	SLWC	1ST STREET	Signal Improvements on the SLWC at 1st Street in Chandler.
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Table 18

Aviation Review

No airport improvements or expansions are planned at this time.

Funded Improvements; 8-year Plan

Funded improvements are projects that have ODOT and local funding commitments through the year 2018. Projects included in the ODOT 8-year Construction Plan that are scheduled beyond a 3 or 4 year time frame are subject to occasional reordering of priorities and funding has not been committed to those projects. See Appendix 3.6 for a Table of Lincoln County projects on the ODOT 8-year Plan. About half are bridge-related improvements.

County Improvements; Roads & Bridges (CIRB)

Statewide, the 2016-2020 CIRB 5-year plan includes replacement or rehabilitation of 439 County Bridges. That List includes 327 structurally deficient or functionally obsolete bridges. 52 Bridges in the CIRB plan will utilize recycled crosstown bridge beams. Approximately 875 miles of County Roads in the state will also be improved (CIRB, 2016). A list of CIRB projects in Lincoln County is shown in a Table in Appendix 3.7. Eight (8) of those projects are bridge-related improvements, seven (7) are road repairs.

County Bridge & Road Improvement Fund (CBRI)

Another program that provides significant funding for County transportation is the CBRI revolving fund. These projects change each year. Contact your County Commissioners for more information.

County Bridge and Road Improvement, CBRI, Fund
 Revolving fund—No fiscal year limits

Sources:

- Gasoline Tax
- Diesel Tax
- Special Fuel Tax
- Gross Production Tax on oil

Uses: Less flexible than County Highway funds

- 100% CBRI funded projects may be let by the county or ODOT
- Matching other project funding (ex. Federal) - must be let by ODOT.
- Project Engineering costs
- Project R/W and Utility costs
- Graveling and Chip/seal roadways
- Inspection costs (Construction and Safety Bridge Inspection)

Allocation: Varies monthly from Tax Commission to each County Treasurer

- County Road, CR, Factor
- Major Collector Miles
- Terrain Type
- CB Factor

County Improvements for Roads and Bridges, CIRB, Fund
 Revolving fund—No fiscal year limits

Sources:

- Motor Vehicle Collection Tax

Uses: Less flexible than County Highway funds and CBRI funds

- Projects only on the County Highway System.
- Projects approved by Circuit Eng. Districts (CED) and ODOT.
- May combine with other funding sources
- Project Engineering costs
- Project R/W and Utility costs
- CED Program Management costs
- Project Construction Inspection costs
- **ALL PROJECTS HAVE TO BE LET BY ODOT.**

Allocation: Varies monthly from Tax Commission to the Fund, administered by ODOT.

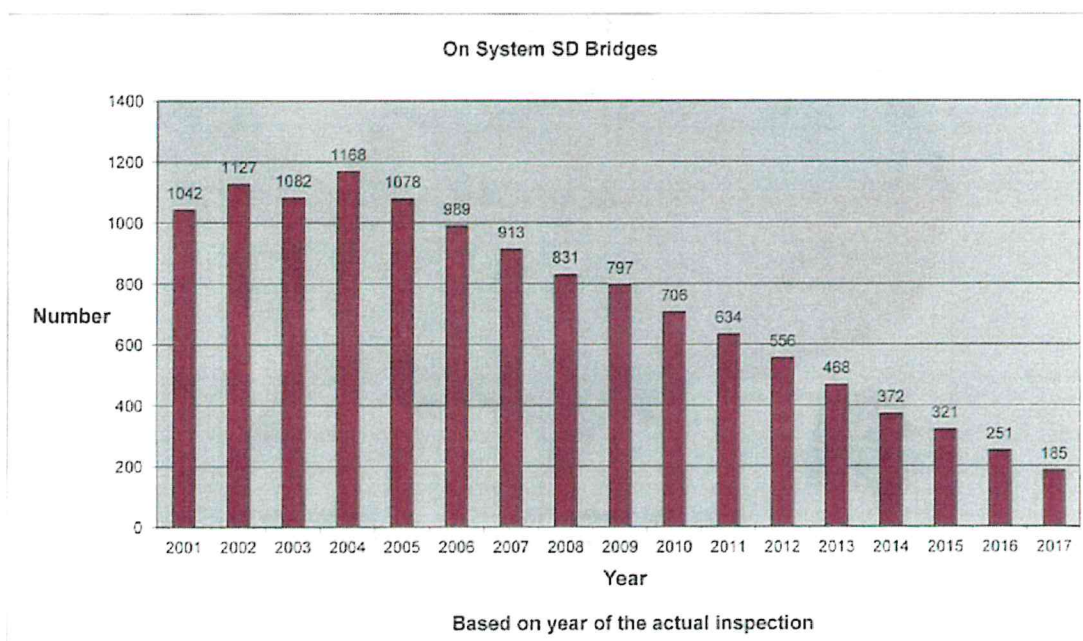
- Evenly between the eight ODOT Field Divisions for those counties within the division boundaries.

Chapter 4: Financial Summary

Funding for Projects and Recommendations of the L RTP

Funding of local transportation projects and programs is heavily influenced by State of Oklahoma’s annual budget and federal funding. Transportation funding sources based on motor vehicle fuel taxes tend to fluctuate with changes in fuel prices and fuel consumption. Instability in gas and oil revenues collected by the State has contributed to the challenge of consistent investment in road surface maintenance and preservation. Modern roads and bridges must be wider and carry more freight than the original design of a road, and rehabilitation or replacement becomes increasingly expensive.

Limited budgets and a focus on repairing structurally deficient bridges have diverted funds from pavement maintenance. The number of structurally deficient highway bridges peaked at 1,168 in 2004. Due to increased state funding since 2006, bridges were replaced at such a rate that by the year 2017 that number had dropped to 185 (ODOT, 2018).



Funding Sources

Successful projects are often the result of collaborative funding strategies. Therefore, coordination among federal, local, regional and statewide agencies in the development of transportation initiatives will be necessary in order to accomplish needed improvements. New sources of revenue may be required to meet gaps in services.

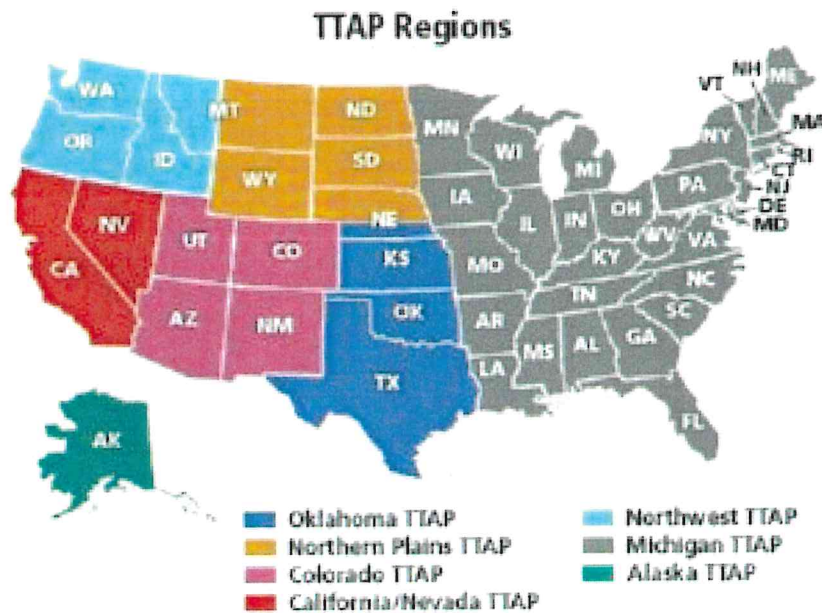
Funding for highway improvements in Oklahoma comes primarily from two sources – the Federal Highway Trust Fund and state funds. Oklahoma Department of Transportation (ODOT) provided \$26 million of Surface Transportation Program (STP) federal funds to the County Highway System. Oklahoma’s primary sources of funding for road and bridge construction and maintenance are derived from fuel taxes and motor vehicle tax. Appendix 4.1 provides more information about various transportation funding strategies.

In 1923, Oklahoma enacted its first State excise tax on motor fuels. The last increase was in 1987 and the tax is currently 17 cents per gallon for gasoline; diesel is taxed at 14 cents. In addition, counties raise their own revenue sources to supplement state and federal funding through local option sales taxes. Lincoln County collects a one-

cent sales tax, the proceeds of which are deposited to the county revolving fund. Ten percent (10%) of the penny tax is allocated to maintenance, repair and improvement of county roads and bridges.

Tribal Transportation Projects and Funding

Lincoln County is located in the Sac & Fox, Kickapoo and Iowa Tribal jurisdictions. Native American Nations within the State of Oklahoma have increasingly taken a leadership role in regional transportation infrastructure projects. Recognized tribal governments receive federal transportation funds and may also designate local funds for transportation projects. Municipal and Tribal governments have been successful in working together to complete critical transportation improvements throughout the CORTPO region. The (TTP) Tribal Transportation Program is the largest program in the Office of Federal Lands Highway. TTP is intended to address transportation needs of Tribal governments throughout the United States. Many current and projected road and bridge projects have been a direct result of the initiative of local Tribal Nations. This Municipal/Tribal collaboration often provides critical funding for the local “match” dollars required to leverage other State and Federal funds.



Source: LTAP/TTAP

Rural Transit

The Federal Transit Authority allocates funds annually to the governor of each state, to provide funding for public transportation projects serving areas that are outside of an urban boundary with a population of 50,000 or less. Tribal Transportation funding is a critical component of keeping transit available in the county and the region.

Non-motorized Transportation

The Transportation Alternatives Program (TAP) was authorized under Section 1122 of Moving Ahead for Progress in the 21st Century Act (MAP-21) and continued under the FAST Act (2016). TAP provides funding for programs and projects defined as transportation alternatives, primarily bicycle and pedestrian infrastructure, including Safe Routes to School (SRTS) and recreational trails.

Chapter 5: Public Participation

Public involvement is an integral part of the transportation process and is also a federal requirement continued as part of the legislation Fixing America's Surface Transportation Act, or "FAST Act." The Lincoln County Long Range Transportation Plan (LRTP) is the product of comprehensive study of data, community meetings, public surveys and planning research. Together, these efforts provided an opportunity for local stakeholders to assess the existing transportation system, consider needs, trends and alternatives, and identify specific priorities for the county and region in the context of sound planning principles.

We include an assessment of the relative concentrations of identified populations such as low-income and zero-vehicle households. Proposed construction projects must be evaluated to determine if they have disproportional adverse effects on vulnerable populations. This concept is known as Environmental justice. Additional information about community involvement in drafting this plan is available in Appendix 5.

Public Participation Plan

CORTPO is proactive in its efforts to communicate effectively with the public and has adopted a Public Participation Plan (PPP) to ensure that local transportation planning provides opportunities for the public to take an active role in the decision-making process and complies with the federal requirement for public involvement and participation. The PPP is available on the CORTPO webpage or may be viewed at our offices in Shawnee, OK

Methods

As part of the PPP, public meetings were held and newspaper press releases were issued for public outreach, to involve interested parties in the early stages of the plan development. Notices of public meetings for the LRTP were posted in accordance with Oklahoma Open Meetings Law After the draft LRTP was developed, CORTPO hosted additional public meetings and provided a notice of availability for a 30-day public comment period (Appendix 6.4). The final draft LRTP was presented to the CORTPO Technical Committee for review and comment prior to recommendation to the CORTPO Policy Board for adoption. Contact the CORTPO office or website for the full version of the PPP.

Surveys

To receive public comments by survey, we issued a press release, posted notices, published the survey on CORTPO website, provided paper copies to local interest groups and distributed them throughout Lincoln County and to community representatives on the CORTPO Technical Committee. Surveys were collected from the public between March and June, 2018. Two hundred thirty-one surveys were returned and tabulated. All public comments received have been included. See Appendix 5.1 for survey instrument, response summary and public comments.

Narrative Survey Results

Demographics

Not all respondents chose to answer the optional demographic questions. Of the respondents who stated their age, 48% were between the ages of 25 and 65. 23% were age 18 to 25; 21% were over age 65. Seven percent (7%) identified as Native American and 7% Black; Males were represented at 33%. One respondent identified themselves as Hispanic. Thirty-one percent (31%) identified as “low-income.” These answers indicate that we reached a relatively proportional demographic sample.

Medical Travel

Many people are able to get primary medical care within 15 to 40 miles from home, but that can represent a 30 to 80 mile round trip. A third of respondents must travel more than 100 miles round trip. Medical travel for individuals varies from three times a week for Dialysis patients to once per year or less among Lincoln County respondents.

Work, Shopping, Other

Most respondents shop at local merchants most often (less than 30 miles from home); a short walk or up to 60 mile round trip. The most frequent work and shopping destinations are Chandler, Prague, Shawnee, Edmond, OKC or Tulsa. More than two-thirds of respondents drive somewhere in a car alone every day (work, shopping, school). About a quarter of respondents say that carpooling is common mode of travel. A few respondents report using transit services; several respondents carpool, walk or rely on a motorized wheelchair or scooter to access jobs, supplies or services.

Importance of transportation components

Road and bridge maintenance and improvements are viewed as the most important issues, followed by safety concerns, such as the need for shoulders, pedestrian safety and signage. Protecting the environment scored well. Bicycle and transit improvements scored next, while Rail freight scored lower. All three of the latter modes (transit, bicycling and improved rail freight) could be viewed as environmentally preferable to an individual vehicle strategy. This may indicate that bicycling and rail freight are seen as less feasible than automobile and truck transportation. See Appendix 5.3.

Culturally, bicycling has been viewed as a relatively exotic means of travel in central Oklahoma. The proportion of people engaging in bicycle recreational travel has been increasing in the region, consistent with a national trend towards biking. While bicycle improvements scored lower than road maintenance and pedestrian improvements, the higher ranked priorities of general road safety (adding shoulders and improved signage) will support an increase in bicycling as a viable and sustainable strategy for both travel and recreational purposes. Anecdotally, bicycling was seen as being tied to economic vitality, tourism and perceived quality of life available in the county, but may be viewed as a luxury in terms of funding priorities.



Bike and pedestrian facilities scored lower than environmental concerns, which may seem inconsistent, as biking or walking, and transit are the most readily available ways to reduce energy use and lessen environmental impacts at an individual level.

The rural setting and age demographic of respondents may have influenced those selections.

Improved Rail transportation for people and freight seems to be viewed as environmentally and economically desirable, but unrealistic at this time.



Priority for consideration

Economic development is the top priority for this community. This seems practical when sales tax receipts and jobs provide the revenue for local municipal infrastructure. Economic vitality and transportation are viewed as mutually dependent. Pedestrian safety (sidewalks with crosswalks) was the third most important category, followed by reducing environmental impacts and improving freight. Bicycle accommodations and more travel choices were less valued. See Appendix 5.3.

Public Comments

More than two Hundred fifty written comments were received by survey. Other comments were made as well. All comments have been incorporated into the recommended Projects, Policies, and Action steps of the LRTP.

About half of all comments indicated a need for road and bridge maintenance or improvements on State, County, and local roads. Stoplights and enhanced pedestrian and bicycle safety were also frequently mentioned concerns along with improved access to public transportation.

Some comments identified specific locations that were perceived to be dangerous or in need of improvement, many on State Highways. Table 1 (on page 3, above) shows a tally of written comments received. The most frequent comments were for road improvements, especially to Route 66 and the Kendrick Road. Other specific locations pointed out by the public are listed as Project Locations in the Tables 2 & 3 in on pages 4, 5 & 6 of the LRTP. All comments made are on file in the CORTPO office.

Kendrick Road (below) was one of the most frequently mentioned roads in need of improvement.

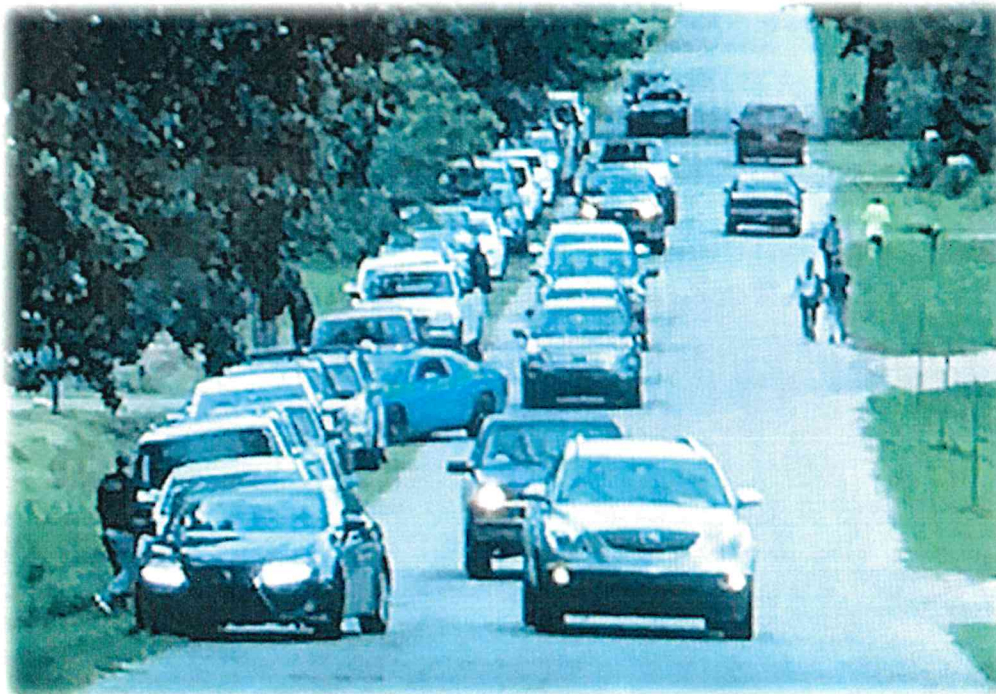




School Zones become dangerously crowded before and after school. School buses also use these routes. This is a common problem throughout the CORTPO region.

FHWA and ODOT have placed a high priority on Safe Routes to School, (SRTS) making funds available to local communities through the TAP program.

Photos: Shari Ripley 2018



Chapter 6: The Transportation Plan

“The Plan” is a combination of the Goals, Objectives (in Chapter 1), Policies and Action Steps for implementation (Chapter 6). Project Locations of the Plan (Pages 3 & 4) were developed as a result of the review of demographics, growth, activity generators, transportation infrastructure, survey information and comments of the community.

Research that has been included in the plan will provide information and data to support achievement of the goals. The Plan with recommendations can be used as a guide for improvement to the county and region’s multimodal transportation system over both short and long periods of time. Recommended Policies and Action Steps are shown below.

All Plan components, the Goals, Objectives, Policies and Action Steps which together form “The Plan” have been organized in one place for handy reference; in the Executive Summary of this document. A table in the final pages of Appendix 6 illustrates the Policies and Action steps in context of the Goals and Objectives.

L RTP Recommendations:

The goals and objectives in Chapter 1 of the Lincoln County L RTP suggest strategies which consistently applied, can be expected to bring the community vision to fruition. Those recommended policies and activities are summarized below.

Implementation Policies

Recommended Policy	
1	Continue to expand collaboration among tribes and municipalities to match funding for projects
2	Integrate alternative transportation solutions into all new developments
3	New or Rehabilitation transportation projects should include Bike/Ped access features
4	Share the cost burden of road maintenance among road users
5	Allocate an annual portion of public employee labor as in-kind funds for transportation grants
6	Consider a County moratorium on accepting new roads
7	Encourage Recreational biking as a tool of Economic Development
8	Accommodate and encourage tourists; Route 66 and Historic sites
9	Bicycle infrastructure should have a dedicated revenue stream
10	Encourage infill development and upper-story downtown residential units
11	Preserve all existing ROW's

Action Steps for Implementation: Other Projects

In addition to potential road and highway project locations that were identified by the community, other projects were suggested, which have been incorporated into the section titled “Action Steps,” below. Taken together over time, the Policies, Projects and Action steps can be expected to move the county consistently toward the community vision for the 2040 Transportation system in the County. The recommended Action Steps for plan implementation have been roughly prioritized below.

To track progress towards overall Goals over time, the corresponding Objective is noted at left.

Action Steps: Implementation (2018-2040)		Meets Obj #
1	Monitor and apply for all available transportation grant opportunities each year	3.A
2	Active collaboration on projects between municipal and Tribal partners for mutual benefit	3.B
3	Explore and implement alternative funding opportunities used in other jurisdictions	3.F
4	Conduct a strategic annexation study	1.D
5	Use public-private agreements with companies to maintain county roads	3.E
6	Evaluate and consider additional weight limits on roads	3.E
7	Map and Prioritize County Roads & Bridges for repair/replacement; track annual progress	2.F
8	Map the location of existing infrastructure appropriate for development	3.C
9	Include pedestrian and bicycle infrastructure requirements in development regulations	1.A; 2.A
10	Identify local tourist attractions, map a proposed route among them	1.E
11	Designate specific areas as Park-and-Ride lots for commuters	1.B
12	Provide employers with an opportunity to contribute to transit	1.B
13	Work with transit providers to coordinate services	1.C
14	Include pedestrian and bicycle infrastructure with road and street improvements	4.D,E
15	Prioritize business and school crosswalks for improvement	2.D,E
16	Evaluate existing town sidewalks and pursue rehabilitation	4.A,C
17	Develop a prioritized plan for sidewalks and bicycle routes in the County & small towns	2.D,E
18	Place rumble strips appropriately; enhanced safety btwn motor vehicles & people on the shoulder	2.C
19	Map a proposed multi-use trail system for regional connectivity	1.F
20	Use signage to alert motorists to the possible presence of bicycles on the road	2.B,E
21	Initiate a Bicycle sticker program to track bikes and fund signage	4.A
22	Research and document the ownership of abandoned RR ROW's	4.G

Community Recommendations to ODOT

- ✓ CIRB Funds could pass directly to Counties, to maximize the impact of funding
- ✓ Prioritize improvements to Route 66 for Economic Vitality and Tourism.
- ✓ Improved Rumble strip placement on new or rehabilitated shoulders (near edgeline)
- ✓ Additional Regional Rail investments; Intermodal freight opportunities, Eastern Flyer

Appropriate rumble strip placement adds value to the sustainability and resilience of the regional transportation system. FHWA has published guidelines for improved rumble strips. A graphic illustrating preferred placement is shown here. Placement on or near the right edgeline can provide additional seconds of warning to both drivers and bicyclists traveling in the same direction that a vehicle has strayed over the edgeline. Proper placement of rumble strips also provides a wider riding surface between the roadway and the unimproved roadside (ditch). See Appendix 5.6 for FHWA guidelines.

Other Recommendations

Each town includes housing in close proximity to the downtown area which could be rehabilitated or demolished for infill units that make use of existing infrastructure. Traditional design elements can help visually integrate newer housing into an existing neighborhood. Downtown upper story residential units contribute to economic vitality and place more residents close to goods and services, reducing the need to drive. Opportunities for long range strategic annexation should be evaluated to capture potential sales tax revenue.

Citizen comments indicate that visibility is poor for traffic turning left along Hwy 18, on the North side of Chandler (intersection of Manvel and 1st Street). Intersection realignment or moving the stop sign from SH 18 to west-bound 1st Street are suggestions that were offered.



