

Priority Evaluation: County Improvements for Roads and Bridges



Report: 21-345-02

Legislative Office of Fiscal Transparency State Capitol Building, Room 107 2300 North Lincoln Blvd. Oklahoma City, OK 73105 okloft.gov



Table of Contents

LOFT Oversignt Committee	3
Executive Summary	4
Summary of Policy Considerations and Agency Recommendations	8
Introduction	10
Finding 1: Despite Infrastructure Improvements Under CIRB, One out of Five County Bridges Remain Structurally Deficient	
Finding 2: CIRB's Funding Formula Could More Efficiently Target County Infrastructur Challenges	
Finding 3: CIRB's Processes Lack Prioritization, Are Overly Complex and Under-Coordinated	36
Finding 4: Oklahoma Has Opportunities to Leverage Best Practices from Peer State Transportation Departments to Strengthen County Education and Capabilities	47
About the Legislative Office of Fiscal Transparency	52
Appendices	53
Appendix A. Methodology	. 53
Appendix B. Related Acronyms	.54
Appendix C. ODOT Organizational Structure and Leadership	55
Appendix D. State Transportation Funds Apportionment (FY20)	58
Appendix E. Use of Emergency Transportation Revolving Fund	61
Appendix F. CIRB and CED Funds Trends and Performance	.62
Appendix G. Oklahoma Infrastructure Inventory	.64
Appendix H. Bridge Inspection Report	.65
Appendix I. Structurally Deficient Bridges by ODOT District and County	67
Appendix J. Map of Oklahoma School Districts	. 69
Appendix K. Structurally Deficient County Bridges State Comparison (2019)	70
Appendix L. CIRB & CBRI Funding Apportionment by County	71
Appendix M. Current CIRB Projects	.73
Appendix N. CIRB FY19 Apportionment per County Road Mileage	74
Appendix O. Federal Funding in CIRB and Available Grants	.76
Appendix P. CIRB Processes	.79
Appendix Q. Oklahoma Historical Bridges	.81
Appendix R. Other States Methodology	.82
Appendix S. Local Technical Assistance Program Curriculum	83
Appendix T. Projection for Completion of Deficient County Bridges, by District	. 84
Agency Response	85

LOFT Oversight Committee

Co-Chairs





Sen. Roger Thompson

Rep. Kevin Wallace

Members









Sen. Michael Brooks

Sen. Kim David

Rep. Meloyde Blancett

Rep. Jeff Boatman









Sen. Julia Kirt









Sen. Dwayne Pemberton Sen. Frank Simpson

Rep. Cyndi Munson



Key Metrics:

- Oklahoma has 23,138 bridges, 58% of which are located in counties.
- > In FY19, 85% of all the State's structurally deficient bridges were on the county system.
- > Oklahoma's
 County
 Highway
 System
 encompasses
 more than
 82 thousand
 miles,
 carrying 9%
 of the State's
 traffic
 volume.

Executive Summary

In 2006, as part of a comprehensive plan to improve Oklahoma's infrastructure, new revolving funds were created under the Oklahoma Department of Transportation (ODOT) for specific needs, one of which was dedicated to County Improvements for Roads and Bridges (CIRB). This fund, which is derived from a share of motor vehicle collections, dedicates state revenue for *high priority* county road and bridge projects, as selected by county commissioners through their respective regional districts.

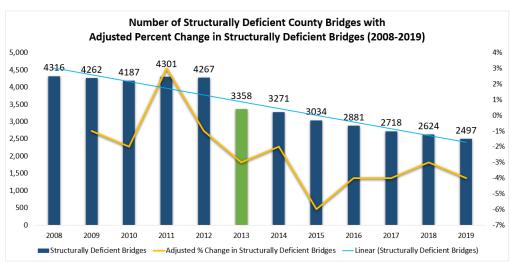
As directed by statute, the majority of CIRB funds "are to be used for the *sole purpose of construction or reconstruction* of county roads or bridges on the county highway system that are of the highest priority as defined by the Transportation Commission." However, statutes were amended in FY20 to allow a portion of CIRB's revenues to be used by counties for transportation maintenance and operations.

Through this evaluation, the Legislative Office of Fiscal Transparency (LOFT) sought to determine the performance outcomes of CIRB in improving structurally deficient county infrastructure across the State.

LOFT's evaluation resulted in four key findings:

Finding 1: Despite Infrastructure Improvements Under CIRB, One Out of Five County Bridges Remain Structurally Deficient

Between 2008-2019, CIRB contributed to an overall 24 percent reduction in structurally deficient county bridges. However, significant infrastructure challenges remain that impact local communities and the State's transportation system. LOFT's analysis found that one out of five county bridges in Oklahoma are structurally deficient, and specific geographic areas of the State have higher concentrations of deficient infrastructure.



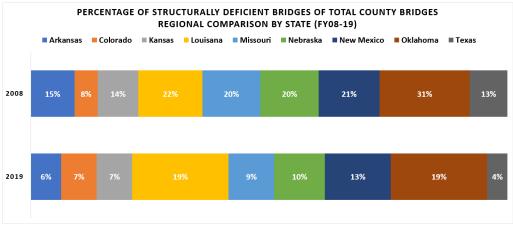
Source: Legislative Office of Fiscal Transparency's analysis based on data from FHWA and ODOT

In FY19, every county in Oklahoma, excluding Roger Mills, had structurally deficient bridges. The counties with the greatest number of structurally deficient bridges also have the highest concentration of bridges, and the slowest progress in addressing deficiencies.

In 2019, the State had 1,070 bridges classified as "school bus critical," a designation given by ODOT to bridges determined to be critical safety concerns to schools due to low tonnage capacity. LOFT identified a communication gap regarding signage reflecting this status, as well as notification to school districts of when a bridge is identified as school bus critical.

LOFT forecasts increasing costs for the State due to aging and rapidly deteriorating infrastructure. Eighty six percent of Oklahoma's structurally deficient bridges are more than 50 years old, and county bridges are typically not engineered to last as long as ODOT-designed bridges, which have a 70-to-80 year lifespan. For example, 69 county bridges built within the last twenty years are already classified as structurally deficient.

LOFT's regional comparison found that Oklahoma ranks first in both the total number and percentage of structurally deficient county bridges.



Source: Legislative Office of Fiscal Transparency analysis based on data from FHWA and ODOT

Finding 2: CIRB's Funding Formula Could More Efficiently Target County Infrastructure Challenges

In FY20, the State made a combined investment of \$386 million to maintain and improve county roads and bridges, representing 35 percent of all state transportation funding. CIRB accounts for 31% of funds dedicated to county infrastructure.

CIRB funds are apportioned in equal amounts of up to \$15 million to the State's eight Transportation Districts. LOFT's analysis finds CIRB's current funding formula fails to account for areas of greatest need or greatest concentration of infrastructure, either for quantity of county bridges or total county road mileage.

Key Metrics:

- In FY20,
 Oklahoma
 taxpayers,
 through 7 tax
 bases, funded
 11 different
 infrastructure
 programs at a
 cost of \$1.1
 billion; with
 counties
 receiving 35%
 of total
 funding.
- ➤ Between FY08
 FY20, 56% of CIRB's funds were spent on roads and 44% on bridge reconstruction projects.

Since CIRB's inception, \$1.3 billion has been used for county projects and inspections.

CIRB was not intended to be the sole funding source for replacing structurally deficient bridges, but a tool to accelerate the effort. In FY19, ODOT estimated it would cost \$811 million to replace the 2,497 structurally deficient county bridges in Oklahoma. The annual available funding per bridge ranges from \$28,000 to \$125,000 due to the equal apportionment of CIRB funds to Circuit Engineering Districts (CEDs) without factoring in need or density of structures.

ODOT District	Replacement Cost for all Structurally Deficient Bridges	Structurally Deficient Bridges	Estimated Work Cost per Bridge	CIRB Funding per Bridge
District 1	\$71,716,000	224	\$320,161	\$66,964
District 2	\$55,133,000	165	\$334,139	\$90,909
District 3	\$165,285,000	538	\$307,221	\$27,881
District 4	\$172,173,000	529	\$325,469	\$28,355
District 5	\$56,481,000	163	\$346,509	\$92,025
District 6	\$41,614,000	120	\$346,783	\$125,000
District 7	\$82,962,000	247	\$335,879	\$60,729
District 8	\$165,261,000	511	\$323,407	\$29,354
Total	\$810,625,000	2,497	\$324,640	\$48,058

Source: Legislative Office of Fiscal Transparency's based on ODOT Annual Bridge Summary Reports

Recent legislation (HB2892) adjusts one-fourth of CIRB's apportionment formula to be distributed directly to counties with the greatest infrastructure needs; the change takes effect July 1, 2021. The county-directed funds are to be used for maintenance and operations.

LOFT also determined that counties may not be maximizing federal funding, as half of the State's counties do not utilize federal funds.

Finding 3: CIRB's Processes Lack Prioritization, Are Overly Complex and Under-Coordinated.

LOFT's review of CIRB found no clear criteria for prioritization within the process for selecting projects to ODOT for consideration of CIRB funding.

Prioritization Factors in Selection of Infrastructure Projects					
CIRB 5-Year Plan	ODOT 8-Year Construction Plan				
CED recommendation	Surface condition				
Commissioner's autonomy in selecting projects	Bridge condition				
ODOT selects projects*	Geometrics (Vertical and Horizontal Alignment)				
Project readiness	Average Annual Daily Traffic (AADT)				
	Percentage of Truck Traffic				
	Accident History				
	Local, regional and national traffic patterns				
	Capacity				
	Critical needs				
	Anticipated improvement budgets				

Source: Legislative Office of Fiscal Transparency's creation based on reports and information provided by ODOT.
*Note: Under OAC 730-10-23, ODOT has authority to prioritize projects to the Transportation Commission.

In comparing the CIRB 5-Year Plan to ODOT's 8-Year Plan, LOFT finds that ODOT's 8-Year Plan considers factors to assist with prioritization of projects and the CIRB 5-Year Plan does not. While not all the prioritization factors from the 8-year plan are translatable to CIRB's plan, key metrics such as average daily traffic, critical needs, and improvement costs can be considered.

In contrast to the transportation data metrics used by ODOT, LOFT finds that CIRB fails to utilize a data-driven approach in selecting infrastructure projects, instead relying exclusively on County Commissioners. With needs that far outweigh availability of funding, the CIRB program will have limited impact without prioritization.

Throughout the evaluation of CIRB and accompanying fieldwork, LOFT observed both inconsistent standards and a lack of oversight for county bridge projects. These issues could be contributing factors to the number of bridges that require eventual replacement and the rapid deterioration of newer structures.

LOFT also finds that the differing alignment of both ODOT Transportation Districts and CED Districts creates unnecessary communication and operational barriers for CIRB's planning process. Additionally, LOFT identified duplication of services regarding the role of Circuit Engineering Districts. Last, better coordination of county project submissions to regulatory bodies could expedite processing and project start times.

Finding 4: Oklahoma Has Opportunities to Leverage Best Practices from Peer State Transportation Departments to Strengthen County Education and Capabilities

LOFT found that County Commissioners are not utilizing the technical guidance, resources, and training currently available to address local infrastructure needs effectively and efficiently. LOFT found consistent underutilization of available training and resources with both ODOT and locally-developed certified training options for county officials. LOFT identified strategies from peer states in leveraging knowledge and resources regarding federal funding, professional development and training materials.

LOFT's analysis finds there is a critical need to optimize the State's investment by promoting enhanced communication, integrated decision-making, and needs-based prioritization for transportation infrastructure projects. LOFT identified Nebraska's County Match Program as a best practice from which to model infrastructure collaboration efforts across the State.

Several states have developed data-driven methodologies and weighted formulas for allocating limited financial resources to their most pressing infrastructure challenges.

Summary of Policy Considerations and Agency Recommendations

The Oklahoma State Legislature and ODOT may consider the following:

Policy Considerations

- Amending the funding apportionment in 69 O.S. § 507 to prioritize funding to areas of the state with the most critical infrastructure needs and greatest concentration of roads and bridges.
- Amending 69 O.S. § 626 to require that county engineers provide school districts with a list of all local bridges (county or municipal) that could affect school district transportation routes one month before the start of the school year.
- For increased oversight and accountability, the Legislature may consider amending 70 O.S. § 9-105 to require the Oklahoma State Department of Education annually review local districts' school bus route evaluations.
- Amending 19 O.S. § 334 to require counties to collect and maintain records to notify school districts of
 any changes to bridge conditions that could affect school district transportation routes, such as when a
 bridge is closed, a bridge is repaired, or a weight restriction is removed or posted that could apply to
 school buses.
- Amending 69 O.S. § 507 to direct and prioritize funding to concentrations of structurally deficient structures.
- Amending 69 O.S. § 507 to require counties that receive direct apportionments under new CIRB
 formula to produce annual reports reflecting county inventory of structurally deficient infrastructure
 and schedule for repairs or replacement.
- Amending 69 O.S. § 687.3 to require the Oklahoma Cooperative Circuit Engineering Districts Board to
 approve access to funds available through the Emergency Transportation Revolving Fund (ETR) based
 on district data regarding unaddressed infrastructure.
- Amending 69 O.S. § 302.1 to expand the purpose of the Transportation County Advisory Board to include development of criteria for apportionment of CIRB funds.
- Amending 69 O.S. § 687 to align CED district boundaries with the Oklahoma Department of Transportation Districts' boundaries to bring consistency to districts.
- Restructuring the CIRB program under the Oklahoma Department of Transportation to maximize efficiencies and subject-matter expertise.
- Requiring centralization of infrastructure data and communication channels to ensure local leaders
 have the relevant information to make decisions pertaining to safety and efficiency regarding local
 infrastructure.
- Clarifying within statute the classification of "historical significance" as it relates to Oklahoma infrastructure.
- Amending 19 O.S. § 130.7 to require specific training hours, as approved by the Oklahoma Department
 of Transportation, for professional development and continuing education offered in-state for County
 Commissioners every two years.
- Amending 19 O.S. § 130.7 to assign enforcement authority for statutorily required professional development.
- Amending 19 O.S. § 130.5 to require County Commissioners to maintain active and historic records of training and professional development hours.

Agency Recommendations

- The Oklahoma Department of Transportation should seek to establish performance benchmarks for the CIRB program for 2030.
- The Oklahoma Department of Transportation should produce annual county road reports for improved roads with a minimum traffic count, that includes data metrics.
- The Oklahoma Department of Transportation should adopt policies for increased coordination with the Oklahoma State Department of Education and counties to improve communication and data sharing regarding school bus critical bridges.
- The Oklahoma Department of Transportation should require consistent standards for labeling school bus critical bridges, potentially incorporating as part of the bridge inspection process.
- The Oklahoma Department of Transportation should allocate any additional funds over the statutory apportionment, such as special appropriations, to districts with greatest critical county infrastructure challenges, instead of equally apportioning additional funds.
- The Oklahoma Department of Transportation should collect and report annual county road conditions similar to data currently collected and reported for county bridges.
- The Oklahoma Department of Transportation should develop a process to educate county transportation officials on identifying and securing all available federal grants and funding opportunities for infrastructure repair and replacement.
- The Oklahoma Department of Transportation should exercise the authority provided under current Administrative Rules and statutes to prioritize and more thoroughly review infrastructure projects being submitted for the CIRB 5-Year Plan, including developing selection criteria.
- The Oklahoma Department of Transportation should work with County Commissioners to utilize a datadriven approach to select infrastructure projects for the CIRB 5-Year Plan.
- The Oklahoma Department of Transportation should work to develop an objective methodology for
 prioritizing infrastructure projects for the CIRB 5-Year Plan, to include rating for multiple deficiencies or
 degree of deficiency.
- The Oklahoma Department of Transportation should coordinate county projects for submission to Federal regulatory bodies.
- The Oklahoma Department of Transportation should coordinate with Transportation Districts and County Commissioners to ensure accurate local records pertaining to historically significant bridges.
- The Oklahoma Department of Transportation should add to the definition of "structurally deficient" to account for degree of difficulty for remediation.
- The Oklahoma Department of Transportation should establish minimum standards for road and bridge maintenance for counties, to include requiring plan approval from a civil engineer.
- The Oklahoma Department of Transportation should further collaborate with Oklahoma State
 University's Center for Local Government Technology to develop curriculum, training and professional
 development for County Commissioners and local transportation stakeholders.
- The Oklahoma Department of Transportation should review, evaluate and prepare a report on the statewide governance, configuration and organizational strategies in coordinating management, oversight and funding of all forms of transportation in the State.

Key Objectives:

- Examine the historical context and funding of the CIRB program and whether the program is meeting legislative intent.
- Determine the performance of CIRB's current fund allocation and processes in improving county roads and bridges.
- Evaluate the efficacy of having multiple governmental entities related to the maintenance and repair of Oklahoma's roads and bridges.
- Identify opportunities for Oklahoma to adapt successful strategies from peer states.

Introduction

Legislative Intent for CIRB

In 2006, the Oklahoma Legislature built on the prior year's successful Rebuilding Oklahoma Access and Driver Safety (ROADS) Fund by enacting a comprehensive plan to improve and maintain Oklahoma's transportation infrastructure. House Bill 1176 initiated a schedule of annual funding increases that resulted in more than doubling Oklahoma's annual investment in state roads, dedicated an immediate \$125 million to critical bridge repairs and another \$6 billion over ten years to repairing roads and bridges, and earmarked a portion of car-tag revenue to create a consistent source of funds for county roads and bridges construction projects.

The funding plan contained in HB1176 was accompanied by significant policy changes, including de-politicizing the selection of projects funded by authorizing transportation officials to determine prioritization of projects.

The legislation also created new revolving funds under the Oklahoma Department of Transportation (ODOT)¹ for specific transportation needs, one of which was dedicated to County Improvements for Roads and Bridges (CIRB). This fund provides state dollars for *high priority* county road and bridge projects, as selected by county commissioners through their respective regional districts.² As established through HB1176, state CIRB funds are equally divided among the eight Oklahoma Transportation Districts.

Through Circuit Engineering Districts (CEDs), a separate facilitating entity that provides support to County Commissioners, many counties work together in identifying projects for CIRB. These districts pre-date both the ROADS fund and the CIRB fund, with the Oklahoma Cooperative Circuit Engineering Districts Board established in 2001. ³ This statutory Board provides assistance to CEDs and County Commissioners, as well as management and administration of the Statewide Circuit Engineering District Revolving Fund and the Emergency Transportation Revolving Fund.

As directed by statute, the majority of CIRB funds "are to be used for the **sole purpose of construction or reconstruction** of county roads or bridges on the county highway system that are of the highest priority as defined by the Transportation Commission."⁴

¹ See Appendix C for ODOT's organization structure and leadership.

² Oklahoma Statutes and archived audio from the Oklahoma House of Representatives for presentation of HB1176.

³ CED - OCCEDB Website

⁴ Per 69 O.S. § 507 all funds apportioned to ODOT for CIRB are to be used exclusively for construction or reconstruction. In 2020, 47 O.S. § 1104 was amended to allow the portion of the CIRB allotment cap to be directed to counties for maintenance and operations.

Figure 01 presents a high-level overview of the process for approving projects under CIRB.⁵ This is detailed further in Finding 3.

Figure 01: CIRB Projects Approval and Execution Process (Flow chart provides a high-level overview of the infrastructure reconstruction planning and funding process)



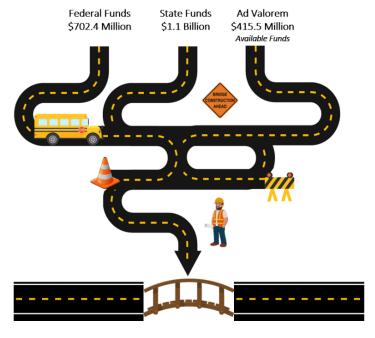
Source: Legislative Office of Fiscal Transparency

State Roads and Bridges Funding Overview

Construction and maintenance of Oklahoma's infrastructure is supported through federal, state, and local funding:⁶

- Federal Funds \$702.4 million
- State Funds \$1.1 billion
- County Ad Valorem Funds (use varies by county) a total of \$415.5 million in Ad Valorem is apportioned to counties but not commonly used for maintenance of roads and bridges; counties typically use their apportionment for general county operations.

Figure 02: Transportation Infrastructure Revenue Streams. (This infographic illustrates the various revenue sources funding county roads and bridges.)



⁵ Appendix P contains a more detailed review of processes.



⁶ Note: Tribal funds are excluded from this analysis.

In FY20, the State of Oklahoma funded eleven different transportation infrastructure programs and funds at a cost of \$1.1 billion (excluding railroads); with counties receiving 35 percent of the total funding.

Revenue for State and County Roads and Bridges

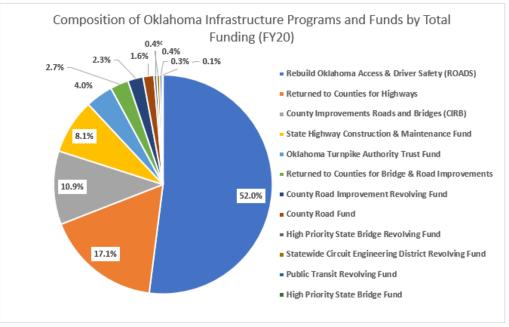
In FY20, the State of Oklahoma funded eleven different transportation infrastructure programs and funds at a cost of \$1.1 billion (excluding railroads); with counties receiving 35 percent of the total funding. ⁷

Table 01. Revenue Sources to Transportation Programs by Designation in FY20 (Table depicts the apportionment of revenues by type according to the program recipient)

Revenue Source	County	State	Total
Diesel Fuel Excise Tax - 19 Cents	\$ 36,862,372	\$ 56,587,674	\$ 93,450,046
Gasoline Excise Tax - 19 Cents	\$ 93,790,226	\$ 107,734,333	\$ 201,524,559
Special Fuel Tax - 16 Cents	\$ 7,929	\$ -	\$ 7,929
Motor Vehicle Taxes	\$ 212,852,361	\$ 171,483,470	\$ 384,335,831
Motor Revenue SubTotal	\$ 343,512,888	\$ 335,805,477	\$ 679,318,365
Gross Production Tax	\$ 42,447,088	\$ -	\$ 42,447,088
Income Tax	\$ -	\$ 293,914,165	\$ 293,914,165
Sales Tax	\$ -	\$ 89,600,000	\$ 89,600,000
Other Revenue SubTotal	\$ 42,447,088	\$ 383,514,165	\$ 425,961,253
Total \$	\$ 385,959,976	\$ 719,319,642	\$ 1,105,279,618
Total %	35%	65%	100%

Source: Legislative Office of Fiscal Transparency, based on OTC data

Chart 01. Composition of Oklahoma Infrastructure Programs and Funds by Total Funding (FY20) (This pie chart illustrates the percent of funding directed at specific infrastructure programs and funds in FY20).



Source: Legislative Office of Fiscal Transparency's analysis based on data from Oklahoma Tax Commission.

⁷ Please refer to Appendix D for Oklahoma Infrastructure programs and funds by tax base and FY20 funding levels.

The largest portion of State transportation funds are to the ROADS fund, which accounts for 52 percent of all State revenue apportioned for transportation infrastructure. CIRB's sole statutory apportionment of funds is from motor vehicle collections, the proceeds of which is capped at \$120 million annually. In FY20, CIRB's funding accounted for about 11 percent of the State's \$1.1B earmarked for transportation infrastructure programs.⁸

Emergency Transportation Revolving Fund

In FY09 the Legislature designated a one-time appropriation of \$25 million to a county-specific loan program "for the purpose of funding emergency or transportation projects." The fund was reduced by \$10 million in 2015 and held an available balance of approximately \$3.2 million as of June 1, 2020. The utilization of the fund by CEDs ranges between 45 to 100 percent with 79 percent average. The interest-free (up to five-years) program can be used to fill cashflow gaps for current or urgent projects. The fund is managed by the Oklahoma Cooperative Circuit Engineering Districts Board. As of the first quarter of FY21, the fund has supported a total of 665 projects. The

CIRB Funding History

The State of Oklahoma levies an annual tax for the registration of motor vehicles, and levies excise taxes upon the transfer of title or possession of motor vehicles. ¹² Appendix D reflects how motor vehicle taxes and fees are apportioned monthly to eleven different funds and/or entities. The apportionment to CIRB from motor vehicle collections has increased from five percent in FY08 to twenty percent as of the beginning of FY15.

The annual amount currently apportioned to CIRB is capped at \$120 million. The funds are administered by ODOT in accordance with a five-year construction work plan approved by the Transportation Commission.

In 2012, the Legislature increased funding to the CIRB Revolving Fund. HB 2249 gradually increased the CIRB allocation from 15 percent to 20 percent over three years. In 2015, HB 2244 capped the Fund's revenue at \$120 million per year. In 2019, HB 2676 provided additional funding of \$30 million from the general revenue fund for FY 2020. As of May 6, 2021, \$172,383,528 of the \$176,087,904 fund's cash balance was encumbered for approved project expenses. Since CIRB's creation, \$1.3 billion in county projects have been completed with the combined sources of funding.



⁸ See Appendix D for Motor Revenue Apportionment

⁹ <u>69 O.S. § 687.3</u>

¹⁰ See Appendix E for details, https://www.occedb.org/etr-fund.html

¹¹ See Appendix E for number and types of projects funded by district.

¹² Oklahoma Senate Overview of State Issues, 2018

¹³ See Appendix F for charts depicting CIRB Fund trends

As of May 25, 2021, HB2892 was signed into law adjusting the apportionment of CIRB funds. This is described further in Finding 2.

Bridge Criteria:

- 1. Public Use
- 2. Carries Vehicles
- 3. Min 20 ft. length
- 4. Min 3 tonnage

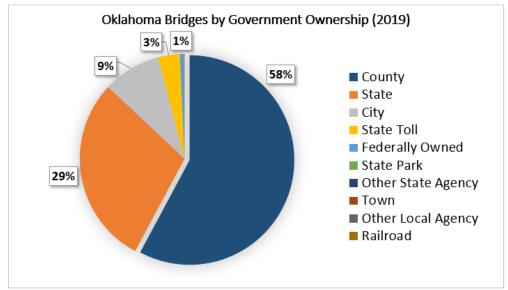
In 2019, 18% of county bridges were structurally deficient.

"Structurally
Deficient" is a
classification
given to a bridge
which has a
condition rating
of "poor" or
worse for any of
four
components:
deck,
superstructure,
substructure, or
culvert.

Oklahoma Bridges by the Numbers

The Federal Highway Administration (FHWA) within the U.S. Department of Transportation maintains data on bridges across the country. According to the 2020 National Bridge Inventory (NBI), Oklahoma has 23,138 bridges with 58 percent (13,379) under county control and ownership.¹⁴

Chart 02: Oklahoma Bridges by Government Ownership in 2019 (Pie chart demonstrates breakdown of bridges by governmental entity)



Source: Legislative Office of Fiscal Transparency's analysis based on data from NBI.

Since 2008, the percentage of Oklahoma bridges classified as deficient has been steadily declining. However, specific geographic regions and types of bridges appear to be experiencing greater infrastructure challenges than others.

Table 02: National Bridge Inventory (NBI) Bridge Condition Ratings. (This table illustrates the NBI condition ratings of bridges based on federal guidance and terminology utilized by the state.)

National Bridge Inventory (NBI) Bridge Condition Ratings								
Condition	Deck	Superstructure	Substructure	Culvert				
Good	≥ 7	≥7	≥ 7	≥ 7				
Fair	= 5 or 6	= 5 or 6	= 5 or 6	= 5 or 6				
Poor	≤ 4	≤ 4	≤ 4	≤ 4				

Source: Legislative Office of Fiscal Transparency's creation based on data from NBI and FHWA.

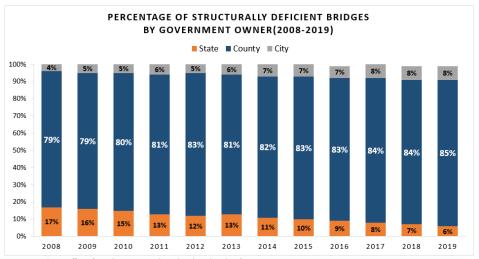
Note. Based on Pavement and Bridge Condition Performance Measures final rule, published in January of 2017.

¹⁴ See Appendix G for the State bridge inventory.

In 2020, 10 percent of all Oklahoma bridges were classified as structurally deficient, according to federal standards. "Structurally Deficient" is a classification given to a bridge which has a condition rating of "poor" or worse for any of four components: deck, superstructure, substructure, or culvert. 15 16

Oklahoma counties have more structurally deficient bridges than all other government-maintained bridges across the state combined (2,011 vs 341). Since 2008, county bridges have accounted for roughly 80 percent of all structurally deficient bridges across Oklahoma; representing 85 percent of all structurally deficient bridges in 2019 alone.

Chart 03: Structurally Deficient Bridges by Level of Government (2008-2019). (This chart illustrates that county bridges overwhelmingly make up the majority of deficient bridges in Oklahoma.)



Source: Legislative Office of Fiscal Transparency's analysis based on data from NBI.

Note: Federal, State Park and Town bridges account for less than 1% combined for years displayed.

Oklahoma's County Highway System

Oklahoma's citizens rely on a vast network of infrastructure ranging from the State's multifaceted highway system to county roads and bridges. Oklahoma's County Highway System, encompassing nearly 83 thousand miles, comprises 70 percent of Oklahoma's highway system and roughly 60 percent of all Oklahoma bridges. However, it is also a low-traffic system, carrying an estimated 9 percent of the state's traffic volume. The County Highway System includes 4,911 city street miles within 521 communities. During a 2020 Legislative Interim study on CIRB, a county commissioner reported that 12.8 million miles are traveled each day on the County Highway System. 18

Oklahoma's **County Highway** System. encompassing nearly 83 thousand miles. is a significant link in Oklahoma's **Transportation** System, comprising 70 percent of Oklahoma's highway system and roughly 60 percent of all Oklahoma bridges.

¹⁵ <u>Tables of Frequently Requested NBI Information - National Bridge Inventory - Bridge Inspection - Safety - Bridges & Structures - Federal Highway Administration (dot.gov)</u>

¹⁶ See Appendix H for ODOT Inspection Report

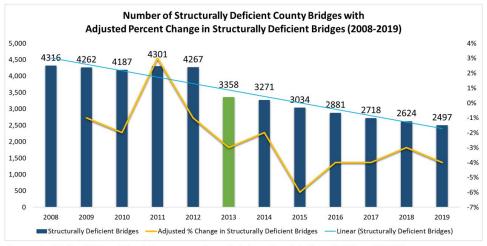
¹⁷ SFY21 CIRB 5-Year Plan

¹⁸ IS-2020-11: An Evaluation of the County Improvements for Roads and Bridges Fund. Presenter: Ken Doke, County Commissioner, Muskogee County – District 1



LOFT's performance-based evaluation of the County Improvements for Roads and Bridges (CIRB) program found that since the program's inception, structurally deficient county bridges have been reduced by 42 percent. However, as illustrated in Chart 04, approximately 800 bridges were removed from inventory by counties for reasons not related to construction or replacement. According to the State Department of Transportation (ODOT), county bridges that have been closed, replaced with temporary structures not meeting the definition of a bridge, or are now on private roads, are among the factors contributing to the reduction in bridges listed as structurally deficient. Adjusting for these reclassifications results in CIRB contributing to an overall 24 percent reduction in structurally deficient county bridges.

Chart 04. Number of Structurally Deficient County Bridges by Year (2008-2019). ¹⁹(The drop in structurally deficient bridges in 2013, highlighted in green, reflects the removal of bridges from the inventory for reasons unrelated to construction.)



Source: Legislative Office of Fiscal Transparency's analysis based on data from FHWA and ODOT.

Note. Between FY12-13, ODOT removed 800 bridges that had not had any requests for reconstruction for a period of 10 years. The adjusted percent change in number of structurally deficient bridges accounts for this.

LOFT's analysis reflects structurally deficient county bridges are declining, but specific geographical challenges remain. At the current rate of improvement, and assuming no change in funding levels, LOFT estimates the State could eliminate all deficient county bridges by 2056. If a needs-based approach were adopted, LOFT estimates all county bridges could be completed by 2032.²⁰

¹⁹ In 2013, there was an effort by ODOT and FHWA to remove bridges from inventory that were no longer in service. Reducing the number of bridges resulted in fewer structurally deficient bridges. Counties had to elect to eliminate bridges from inventory.

²⁰ Appendix T reflects the time horizon analysis for completion or replacement of all county structurally deficient bridges.

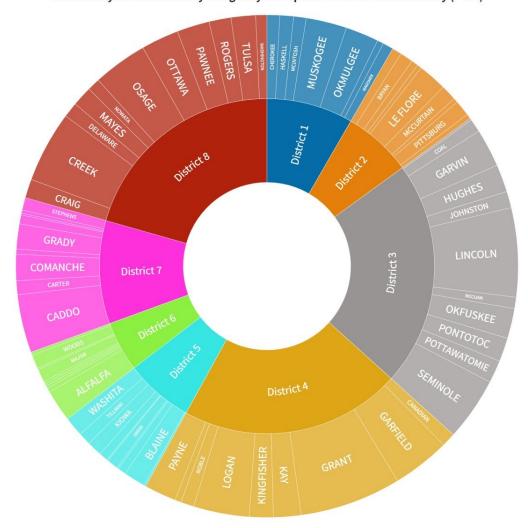
Table 03: Structurally Deficient Bridges by ODOT Districts. Table illustrates longitudinal data of structurally deficient bridges by ODOT Districts; table accounts for inventory reduction (non-construction) of 800 in 2013.

ODOT District	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change
District 1	363	345	360	360	441	418	412	378	285	270	261	224	-38%
District 2	347	352	332	327	311	273	253	222	209	182	167	165	-52%
District 3	756	752	729	750	749	499	583	564	585	567	540	538	-29%
District 4	1,041	994	954	943	903	720	707	648	609	564	547	529	-49%
District 5	394	397	414	449	461	291	264	224	203	198	184	163	-59%
District 6	413	401	401	393	373	220	185	185	168	141	134	120	-71%
District 7	366	384	361	422	371	318	309	262	272	269	262	247	-33%
District 8	636	637	636	657	658	619	558	551	550	527	529	511	-20%
Total	4,316	4,262	4,187	4,301	4,267	3,358	3,271	3,034	2,881	2,718	2,624	2,497	-42%

Source: Legislative Office of Fiscal Transparency's analysis based on data from ODOT and OCCEDB

Chart 05: Structurally Deficient County Bridges by Transportation Districts and County (FY19). This sunburst chart illustrates the number of structurally deficient bridges by Transportation Districts and county in 2019. The larger the size the more structurally deficient bridges in the region. ²¹

Structurally Deficient County Bridges by Transportation District and County (FY19)



Source: Legislative Office of Fiscal Transparency's analysis and creation based on data from ODOT.

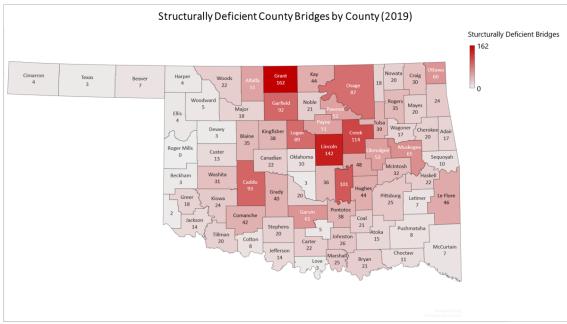
-

²¹ Please refer to Appendix I for comprehensive breakdown of structurally deficient bridges by county.

Geographic Location of Structurally Deficient Bridges

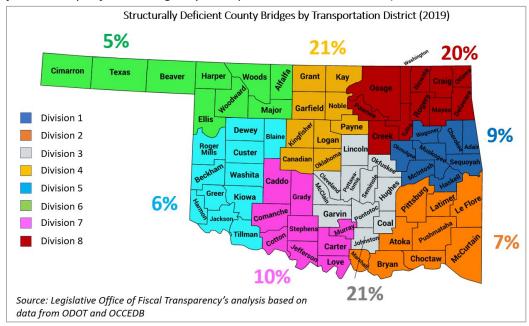
Every county in Oklahoma, excluding Roger Mills, has structurally deficient bridges. The number of deficient bridges also varies by transportation district. As Figure 03 illustrates, the counties with the highest number of deficient bridges are Grant (162), Lincoln (142), Creek (114), Seminole (101), Caddo (93), Garfield (92), Logan (89), Osage (87), Muskogee (65) and Garvin (61).

Figure 03: Structurally Deficient Bridges by County in 2019 (Area map chart illustrating the number of structurally deficient bridges by county in 2019).



Source: Legislative Office of Fiscal Transparency's analysis based on data from ODOT and OCCEDB.

Figure 04. Structurally Deficient County Bridges by Transportation Districts (2019). (This map illustrates the percentage of structurally deficient bridges by Transportation District in 2019.)



Based on FY19 data, one out of five county bridges in Oklahoma is structurally deficient. As shown in Table 03, Transportation Districts 6, 5, and 2 have experienced the greatest reductions in structurally deficient county bridges under CIRB while the largest remaining infrastructure challenges are concentrated in Transportation Districts 3, 4 and 8.

In 2019, structurally deficient county bridges in districts 3, 4 and 8 accounted for the majority (62%) of all infrastructure challenges for county bridges across Oklahoma. Lincoln, Grant, and Creek account for the largest number of structurally deficient county bridges, respectively, within their own Transportation Districts. ²² These three districts also have the highest concentration of bridges across the state. Since CIRB's inception, structurally deficient bridges have dropped by just 20 percent in Transportation District 8; the lowest rate of reduction in any district.

The northeast region of Oklahoma, district 4 and 8, account for 41 percent of all deficient county bridges. Both Oklahoma City and Tulsa, the state's two largest cities, are located within these districts. The entire western region of Oklahoma, comprised of districts 5 and 6, account for only 11 percent of all deficient county bridges.

Effects of Deficient Bridges on Public School Districts' Bus Routes

To understand the impact of structurally deficient bridges, LOFT evaluated how bridge conditions effect public school districts' bus routes. LOFT learned that in 2019 the State had 1,070 bridges classified as school bus critical (SBC), a designation given by ODOT to bridges determined to be critical safety concerns to schools due to low tonnage capacity. According to ODOT, SBC bridges had an estimated \$325.9 million in repair costs in FY19. Figure 05 illustrates the location of structurally deficient bridges by both county and school district.

This geographic information system (GIS) map, provided by ODOT, illustrates the safety hazards to Oklahoma school districts and the children transported on public school buses. There is no signage reflecting a bridge's status as structurally deficient or school bus critical, however, signage is posted for all bridges with a limited weight capacity under 23 tons. In 2019, Lincoln County had the most SBC bridges (78), representing seven percent of all school bus critical bridges in Oklahoma.

²² See Appendix I for the share of structurally deficient bridges by district and county.

²³ ODOT-Bridge Division Summary Bridge Report (SBC rating was increased from 10 tons to 15 tons in 2003)

²⁴ Per ODOT, "school bus critical" is classified as a bridge rated 15 tons or less that cannot safely carry a loaded school bus.

²⁵ LOFT notes that current bridge conditions could vary from what was reported in the 2019 ODOT data due to the inspection cycle of these bridges.

The ODOT Districts with the highest concentration of structurally deficient county bridges – Districts 3, 4 and 8 – also account for the greatest share of school bus critical bridges. In 2019, these three districts accounted for 60 percent of all school bus critical bridges.²⁶

Figure 05: GIS Map of the Number of Structurally Deficient Bridges in State (FY20). (This figure illustrates deficient bridges within school districts across Oklahoma in 2020.)

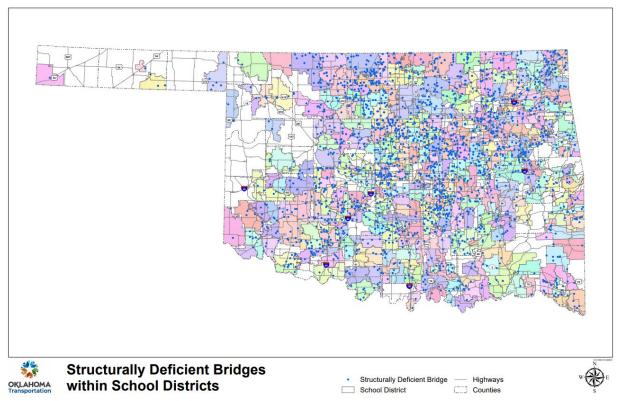
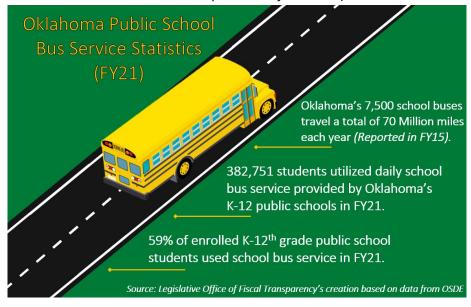


Figure 06: Oklahoma Public School Bus Service Statistics (FY21). (This infographic illustrates the critical role Oklahoma K-12 public school buses have in the transportation of students.)



²⁶ Please refer to Appendix J for number of school bus critical bridges by county.

Financial Effects of School Bus Detours Around Deficient Bridges in Select Public School Districts

In addition to safety concerns, bridge conditions can impact commute times and fuel costs for public school districts. To determine this impact, LOFT surveyed the school districts with the highest concentration of structurally deficient bridges in the State: Creek, Grant and Lincoln counties. LOFT had an 85 percent response rate with 22 school districts completing the survey.

Seven of the twenty-two school districts reported they are detouring school buses due to structurally deficient or closed bridges. In total, 11 structurally deficient bridges were identified across two counties, resulting in school buses being forced to alter their routes.

Table 04: Structurally Deficient Bridges Cause Detours on Select Public School Bus Routes. (This table illustrates deficient bridges are adding additional mileage and time to school bus routes in Creek and Lincoln counties.)

	Structurally Deficient	Average Miles	Average Time
Country	Bridges Identified on	Added to Each	Added to Each
County	School Bus Routes in	Bus Routes in	Bus Routes in
	2019-20 School Year	County	County
Creek	4	9.3	14 Minutes
Grant	0	0	0
Lincoln	7	5	10 Minutes

 $Source: Legislative \ Of \textit{Fiscal Transparency's analysis based on data from school districts}.$

Gypsy school district reported having to detour 20 miles due to a single structurally deficient bridge identified on their bus route, ultimately adding an additional 30 minutes of travel time. On a weekly basis, this equates to an additional 200 miles and over five hours of additional travel time due to a single deficient bridge. Wellston was another school district that self-reported deficient bridges impacting school bus routes. Wellston identified four structurally deficient bridges on their district's bus routes, adding a total of 19 miles and an additional 38 minutes to the bus routes. These are just two examples provided to LOFT for how structurally deficient bridges are impacting student transportation and related costs.

LOFT's analysis finds that it costs approximately \$2.27 per mile to operate a school bus based on maintenance, fuel, and depreciation costs. This analysis excludes labor. Using the data received from school districts, LOFT's analysis finds the total estimated cost of detours caused by structurally deficient bridges is \$21,246 for the five school districts that reported detours for the 2019-20 school year. For the eight structurally deficient bridges reported by the five school districts, this equates to an average annual detour cost of \$2,656 per structurally deficient bridge.

11 structurally deficient bridges were identified across two counties resulting in school buses being forced to alter their routes.

LOFT's analysis finds the total estimated cost of detours caused by structurally deficient bridges is \$21,246 for the five school districts that reported detours for the 2019-20 school year.

²⁷ LOFT's analysis does not include expenditures on bus drivers' compensation.

Table 05: Estimated Detour Costs Caused by Structurally Deficient Bridges for Select School Districts, School Year 2019-20. (This table illustrates the operational costs incurred by select school districts in the State from detours on school bus routes caused by structurally deficient bridges. Marginal labor costs are excluded from analysis.)

County	School District	Estimated Operating Cost per Mile	Identified Structurally Deficient Bridges on School Bus Route	District Reported Detour Mileage	Total Estimated Operational Detour Costs (School Year 2019-20)
Creek	Bristow	\$2.27	1	4	\$1,634
Creek	Gypsy	\$2.27	1	20	\$8,172
Creek	Sapulpa	\$2.27	1	4	\$1,634
Subtotal Creek County		\$2.27	3	28	\$11,440
Lincoln	Wellston	\$2.27	4	19	\$7,763
Lincoln	White Rock	\$2.27	1	5	\$2,043
Subtotal Lincoln County		\$2.27	5	24	\$9,806
Total Creek & Lincoln Counties		\$2.27	8	52	\$21,246

 $Source: Legislative \ Of fice \ of \ Fiscal \ Transparency's \ analysis \ based \ on \ data \ received \ from \ school \ districts.$

Note. Schools in Grant County reported no deficient bridges.

Lone Star reported 1 structurally deficient bridge but did not provide the mileage added to bus route. Chandler reported 2 structurally deficient bridges but confirmed no mileage was added to bus route.

Aging and Deteriorating Infrastructure Forecasts Increasing Costs for the State

LOFT's analysis of data from the National Bridge Inventory (NBI) confirms that the majority (86%) of Oklahoma's structurally deficient bridges are more than 50 years old. On average, county bridges currently classified as deficient were built in 1950. Bridges nearing or exceeding lifespans require continued inspections, repairs and increasing maintenance or preservation costs for reliable and safe transportation. ODOT designed bridges are typically built to last between 70-80 years.

LOFT's analysis found the average daily traffic (ADT) across county bridges is 162.2 per bridge.²⁹ As bridges continue to age and experience high traffic volumes, Oklahoma's county bridges will continue to deteriorate at a rapid pace, further increasing costs.

Exhibit 01: Example of Construction



Hole showing water from creek below discovered on county bridge in Tulsa due to understructure not supporting asphalt.

²⁸ According to ODOT- Bridge Department

²⁹ The ADT, also referred to as mean daily traffic, is the average number of vehicles that travel through a specific point of a road over a short duration of time (often 7 days or less). ADT is estimated by dividing the total daily volumes during a specified time period by the number of days in the period.

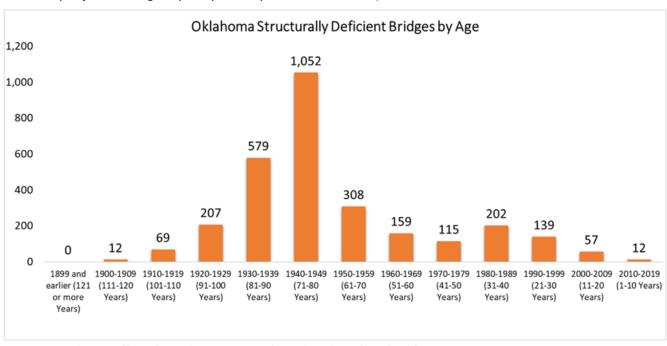


Chart 06: Oklahoma Structurally Deficient Bridges by Age. (This chart illustrates Oklahoma's bridges classified as structurally deficient bridges by the year they were constructed.)

Source: Legislative Office of Fiscal Transparency's analysis based on data from NBI.

According to the NBI, there are structurally deficient bridges in use today that were constructed before statehood. Coupled with the challenges presented by the high proportion of older structurally deficient bridges is the rapid deterioration of newer structures. More than 69 bridges constructed within the last 20 years are currently designated as deficient. ODOT confirmed these structures are all on the county system.

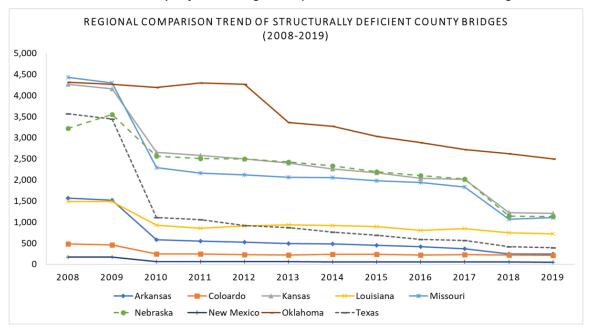
Regional Comparison

LOFT conducted a regional analysis to determine how Oklahoma compares with regional peer states regarding structurally deficient bridges. Despite the success of CIRB, Oklahoma has the highest number of structurally deficient county bridges within the geographic region. As illustrated in Chart 07, beginning in 2008, Oklahoma and two regional states (Kansas and Missouri) had similar levels of structurally deficient bridges, but both Kansas and Missouri have improved their respective county bridges at faster rates than Oklahoma. Per data from the NBI, Oklahoma has more structurally deficient county bridges than Arkansas (245), Colorado (214), Louisiana (721), New Mexico (47) and Texas (395) combined (2,497 vs 1,622).³⁰

As of 2019, Arkansas, Colorado, New Mexico, and Texas each have less than 500 classified structurally deficient county bridges. New Mexico has the lowest number in the region at 47 bridges.

³⁰ See Appendix K for National Map of Structurally Deficient Bridges by State

Chart 07: Regional Comparison Trend of Structurally Deficient Bridges (2008-2019). This line chart illustrates Oklahoma has the most structurally deficient bridges compared to other states within the region.

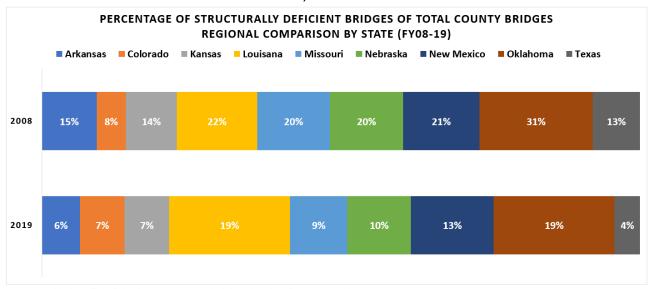


Source: Legislative Office of Fiscal Transparency's creation based on data from FHWA and ODOT.

Note. LOFT was unable to determine the cause of drops in both FY09 and FY17 by regional peer states.

LOFT performed another regional comparison analysis, this time based on the percentage of structurally deficient county bridges. This approach still finds Oklahoma as having the highest composition of structurally deficient county bridges in the region. Beginning in FY08 for Oklahoma, 31 percent of all county bridges were classified as structurally deficient; by FY19 that percentage dropped to 19 percent. In FY19, Arkansas (6%), Colorado (7%), Kansas (7%), Missouri (9%) and Texas (4%) all had less than 10 percent of their respective county bridges classified as structurally deficient.

Chart 08: Percentage of Structurally Deficient Bridges of Total County Bridges - Regional Comparison by State (FY08-19). (This column chart illustrates the percentage of structurally deficient bridges of county roads by state in FY08 and FY19 to illustrate the variance over time.)



Source: Legislative Office of Fiscal Transparency analysis based on data from FHWA and ODOT

Policy Considerations and Agency Recommendations

Policy Considerations

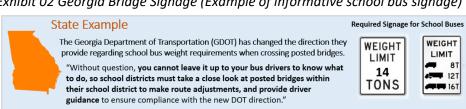
The Legislature may consider the following policy changes:

- Amending the funding apportionment in 69 O.S. § 507 to prioritize funding to areas of the state with the most critical infrastructure needs and greatest concentration of roads and bridges.
- Amending 69 O.S. § 626 to require that county engineers provide school districts with a list of all local bridges (county or municipal) that could affect school district transportation routes one month before the start of the school year.
- For increased oversight and accountability, the Legislature may consider amending 70 O.S. § 9-105 to require the Oklahoma State Department of Education annually review local districts' school bus route evaluations.
- Amending 19 O.S. § 334 to require counties to collect and maintain records to notify school districts of any changes to bridge conditions that could affect school district transportation routes, such as when a bridge is closed, a bridge is repaired, or a weight restriction is removed or posted that could apply to school buses.

Agency Recommendations

- The Oklahoma Department of Transportation should establish performance benchmarks for the CIRB program for 2030.
- The Oklahoma Department of Transportation should produce annual county road reports that include data metrics for improved roads with a minimum traffic count.
- The Oklahoma Department of Transportation should adopt policies for increased coordination with the Oklahoma State Department of Education and counties to improve communication and data sharing regarding school bus critical bridges.
- The Oklahoma Department of Transportation should require consistent standards for labeling school bus critical bridges, potentially incorporating into the bridge inspection process (see example below in Exhibit 02).

Exhibit 02 Georgia Bridge Signage (Example of informative school bus signage)



Source: Georgia Department of Transportation



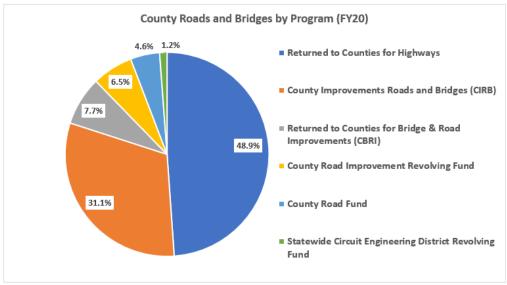
In FY20, Oklahoma, through 7 tax bases, funded 11 different infrastructure programs at a cost of \$1.1B, with counties receiving 35% of total funding.

Finding 2: CIRB's Funding Formula Could More Efficiently Target County Infrastructure Challenges

County Funding Streams

Taxpayer-funded improvements for county roads and bridges has grown dramatically over the last decade, resulting in multiple programs and funding streams at the State level dedicated to improving infrastructure. The State's combined investment in maintaining and improving county roads and bridges totaled \$386 million in FY20, representing 35 percent of all state transportation funding.³¹

Chart 09. State Investment in County Roads and Bridges by Program. (This chart illustrates the multiple programs and their respective funding levels aimed at preserving and improving the State's county roads and bridges.)



 $Source: Legislative\ Office\ of\ Fiscal\ Transparency's\ analysis\ based\ on\ data\ from\ Oklahoma\ Tax\ Commission.$

These funds have varied purposes limited to maintenance, replacement, or both, and can be designated for state, county, or both. Additionally, these funds are not coordinated with one another. Without coordination, multiple state programs are targeted at the same infrastructure challenges, failing to leverage funds and maximize the State's investment in improving county roads and bridges.

³¹ See Appendix D for details

CIRB Appropriated Funds Apportionment

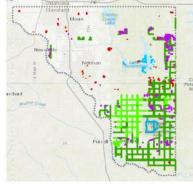
CIRB funds are apportioned in equal amounts of up to \$15 million to the eight Transportation Districts.³² The equal apportionment of CIRB funds does not account for areas of greatest need or greatest concentration, either for quantity of county bridges or total county road mileage.³³

Figure 07: Disproportion of Funding for County Roads (Figure depicts CIRB equal per CED funding is not equitable per county road mile)

County Road Mileage: 2,493.43 CIRB Funding per County Mile: \$668

Texas County

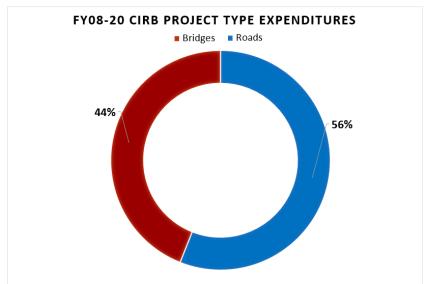
Cleveland County
County Road Mileage: 297.86
CIRB Funding per County Mile: \$4,578



 $Source: Legislative\ Of fice\ of\ Fiscal\ Transparency's\ creation\ based\ on\ information\ from\ ODOT.$

In reviewing CIRB expenditures between FY08-20, LOFT found that 56 percent of expenditures were allocated to roads and 44 percent on bridge reconstruction projects.

Chart 10: CIRB Expenditure Breakdown by Project Type between FY08-20. (This pie chart illustrates the majority of CIRB project expenditures have been focused on roads.)



Source: Legislative Office of Fiscal Transparency's analysis based on data from ODOT.

The equal apportionment of CIRB funds does not account for areas of greatest need or greatest concentration, either for quantity of county bridges or total county road mileage.



³² See Appendix L for CIRB & CBRI Funding Apportionment by County

³³ 69 O.S. § 507 B.

Statutory yearly CIRB funding provides \$0.15 to \$1 of needed investments.

"Remember, these are projects which would likely never have been funded otherwise, but by working together and pooling their resources, the counties have made it happen."

- Mark Liotta, former Chairman of the House Appropriations Subcommittee on General Government and Transportation, 2018

Funding Challenges

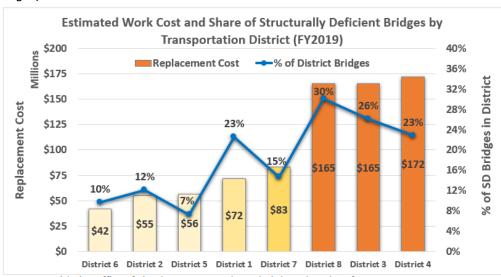
In 2019, ODOT estimated it would cost \$811 million to make required repairs to all the 2,497 structurally deficient county bridges in Oklahoma.³⁴

Table 06. Estimated Work Cost per Bridge by Transportation District. (This table illustrates the average estimated work cost per structurally deficient bridge in Oklahoma and by Transportation District based on replacement cost and number of structurally deficient bridges.)

ODOT District	Replacement Cost for all Structurally Deficient Bridges	Structurally Deficient Bridges	Estimated Work Cost per Bridge	CIRB Funding per Bridge
District 1	\$71,716,000	224	\$320,161	\$66,964
District 2	\$55,133,000	165	\$334,139	\$90,909
District 3	\$165,285,000	538	\$307,221	\$27,881
District 4	\$172,173,000	529	\$325,469	\$28,355
District 5	\$56,481,000	163	\$346,509	\$92,025
District 6	\$41,614,000	120	\$346,783	\$125,000
District 7	\$82,962,000	247	\$335,879	\$60,729
District 8	\$165,261,000	511	\$323,407	\$29,354
Total	\$810,625,000	2,497	\$324,640	\$48,058

Source: Legislative Office of Fiscal Transparency's based on ODOT Annual Bridge Summary Reports

Chart 11: Replacement Cost of Structurally Deficient Bridges by Transportation District (Vertical bar chart illustrating the work cost per District to repair structurally deficient bridges)



Source: Legislative Office of Fiscal Transparency's analysis based on data from NBI.

³⁴ ODOT Annual Bridge Summary Reports.

ODOT officials explained the agency actively pursues federal grants and offers counties the opportunity to utilize ODOT's resources - at no expense - to assist in applying for federal grants for infrastructure repairs and improvements.

However, the low utilization of federal grants suggests there are opportunities to leverage existing resources and technical guidance for the purpose of acquiring more federal funds for CIRB projects. This opportunity is discussed further in Finding 4 of this report.

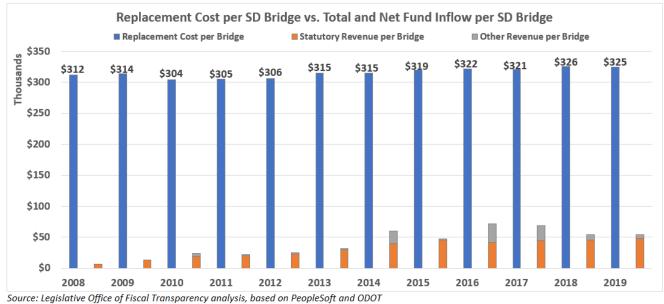
Formula Apportionment as Compared to Number of Bridges

When CIRB was created, it was not intended to be a sole funding source for replacing structurally deficient bridges, but a tool to accelerate the effort.

However, utilizing data from ODOT's Annual Bridge Summary Reports, LOFT determined that, on average, the estimated work cost for each structurally deficient county bridge in 2019 was \$324,640. The yearly \$120 million apportionment averages to \$48,058 per bridge, or about 15 cents to every dollar needed for county bridge construction projects.³⁵

Due to the diverse number of counties represented in each transportation district, the amount of funding per county varies. Table 06 displays the level of CIRB funding vs. the replacement cost per structurally deficient bridge by district. Chart 12 highlights the variance between the ODOT replacement cost and level of CIRB funding.

Chart 12. Per Bridge Replacement Cost Comparison with Deposited and Net Revenue between 2008-2019 (Bar and line chart indicate a gap between replacement levels, the apportionment funding and other revenue, which includes interest, federal, county and other funds deposits, one-time appropriations and other deposits).



Figures 07 and 08 demonstrate the current gap of need vs. funding available for counties.

³⁵ See Appendix M for further visual presentation of current projects.

Figure 07: Number of Structurally Deficient Bridges. (Map illustrates number of structurally deficient bridges in each county)

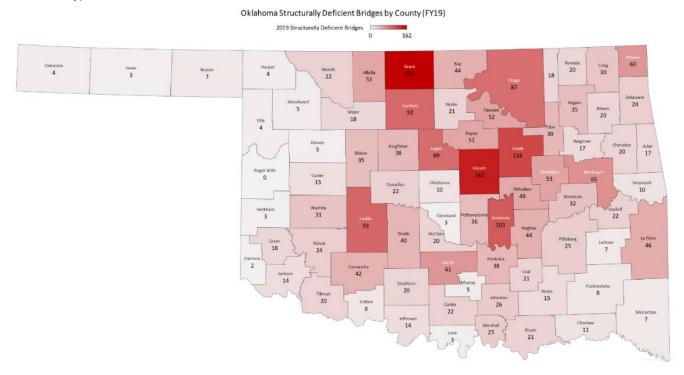
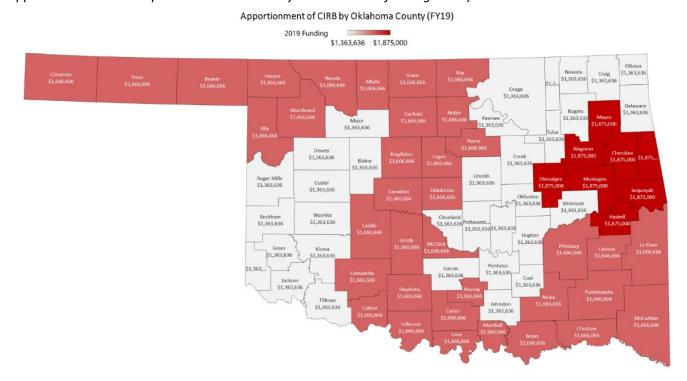


Figure 08: CIRB Apportionment with Current \$15 million per ODOT Transportation District. (Map illustrates the apportionment amount provided to each county based on CIRB funding levels)



The yearly available funding per bridge ranges from \$28,000 to \$125,000. This wide variance is due to the equal apportionment of CIRB funds to CEDs without factoring in need or density of structures.

Further analysis shows the geographic location of structurally deficient bridges is a major cost driver to the program. Transportation Districts 3, 4 and 8 account for 62 percent (\$502.7 million) of the replacement cost (\$810.6 million) for all structurally deficient county bridges in Oklahoma. In contrast, the estimated work costs of the entire western geographic region of Oklahoma, comprised of districts 5 and 6, is \$98 million.

As Appendix I details, Transportation District 6, representing the Northwestern counties of Oklahoma, receives the greatest amount of funds per structurally deficient bridge but has the second lowest ratio of structurally deficient bridges to total bridges in the State.

Formula Apportionment by the County Road Mileage

The current CIRB funding formula also produces challenges with county road improvements and repairs. Per state statute, the Oklahoma State Transportation Commission must certify to the Oklahoma Tax Commission (OTC) the county road mileage of each county and the total county road mileage of the state.³⁶

According to the FY19 report, county road mileage totaled 82,822. Consistent with the CIRB funding formula of equal apportionments to districts, counties received an average of \$1,720 per county road mile in FY19, with 11 counties receiving less than \$1,000 per county road mile. For example, Texas County has the highest total county road mileage at 2,493 miles but received the lowest amount of funding at \$668 per county mile.

At a 2020 Interim Study on CIRB, County Commissioners stated that for every one mile of county road, it costs (conservatively) \$150,000 for asphalt overlays or an estimated \$25,000 - \$30,000 for gravel.³⁷ Figure 09 below illustrates the county comparison of CIRB funding received per county mileage in FY19.

As shown in Appendix N, Transportation District 3 has the highest share of structurally deficient bridges to road miles while it ranks fourth in CIRB funding per mile, reflecting that an equal apportionment formula does not take into consideration infrastructure type density. Ratio of road miles to bridges varies greatly in the State between the districts and counties.

Transportation districts 3, 4 and 8 account for 62% (\$502.7 million) of the replacement cost (\$810.6 million) for all structurally deficient county bridges in Oklahoma.

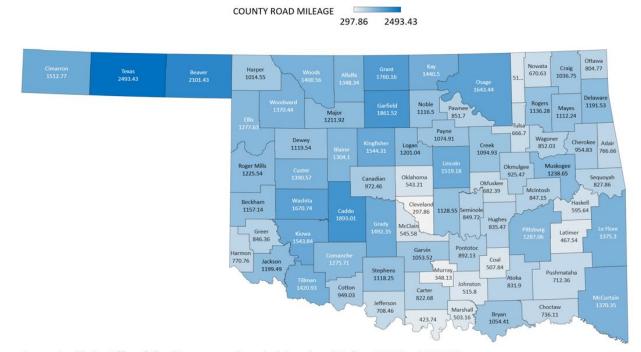
In FY19, county road mileage totaled 82,822. Consistent with the CIRB funding formula of equal apportionments to districts, counties received an average of \$1,720 per county road mile.

³⁶ 69 O.S. § 316

³⁷ IS-2020-11: An Evaluation of the County Improvements for Roads and Bridges Fund

Figure 09: Certified County Road Mileage by County (FY19). (Map illustrates the certified amount of county road mileage by county in FY19.)

Certified County Road Mileage by County (FY19)

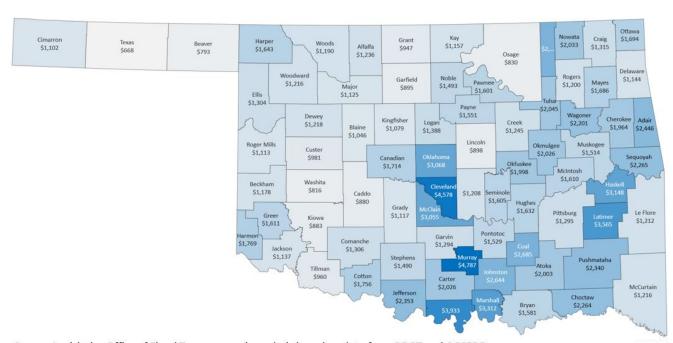


Source: Legislative Office of Fiscal Transparency's analysis based on data from ODOT and OCCEDB

Figure 10: CIRB Apportionment per County Road Mileage by County (FY19). (Map illustrates the apportionment amount per county mileage provided to each county based on CIRB funding levels.)

CIRB Apportionment per County Road Mile (FY19)

CIRB Funding per Mile \$668 \$4,787



Source: Legislative Office of Fiscal Transparency's analysis based on data from ODOT and OCCEDB

CIRB Funding Formula Adjustment

Signed into law May 25, 2021, HB2892 adjusts CIRB's apportionment formula to account for counties within the State that have the greatest infrastructure needs; the change takes effect July 1, 2021. This legislation remits 25 percent of the monthly allocation (up to \$30 million annually) to various counties based on the new formula below; the remaining monthly allocation (up to \$90 million annually) will still be distributed in equal apportionments to the State's eight Transportation Districts. Notably, a legislative change made in 2020 allowed a portion of CIRB funds to be used for maintenance and operations.

Table 07: CIRB Formula Adjustment from HB2892. (This table illustrates the new CIRB funding formula for the 25% of the CIRB allocation.)

Formula for 25% of CIRB Alloc	ation based on HB2892 (2021)
July 1, 2021 - June 30, 2026	Beginning on July 1, 2026
One-third (1/3) of such funds shall be	One-third (1/3) of such funds shall be
distributed to the various counties in the	distributed to the various counties in the
proportion which the area of each county	proportion which the area of each county
bears to the total area of the state	bears to the total area of the state
One-third (1/3) of such funds shall be	One-third (1/3) of such funds shall be
distributed to the various counties in the	distributed to the various counties in the
proportion which the certified county road	proportion which the certified county road
miles of each county bear to the total sum	miles of each county bear to the total sum
of county road miles in the state	of county road miles in the state
One-third (1/3) of such funds shall be	One-third (1/3) of such funds shall be
distributed to the various counties in the	distributed to the various counties in the
proportion which the total replacement	proportion which the number of county
cost for obsolete or deficient bridges	bridges in each county according to the
according to the most recent ODOT yearly	ODOT 2020 Bridge Summary Report for
Bridge Summary Report for County Bridges	County Bridges bears to the total sum of
for each county bears to the total amount	county bridges in the state according to
of such cost for all such county bridges in	such report
the state	

Source: Legislative Office of Fiscal Transparency's creation based on data from State Legislature

Federal Funds

Annual Federal Highway Administration funds (\$704.6 million available for use in federal FY20) provide resources for maintaining the national highway system in the State, including statewide planning, safety improvement, railroad safety, and urban areas development, a population-based designation.³⁸

There is no requirement for ODOT to pass through any of these funds to CIRB, but ODOT has allocated a share to CIRB under the urban areas development category of the FHWA portion, as it did for CBRI (a different program that passed funds through to counties) when it was overseen by ODOT.

A legislative change made in 2020 allowed a portion of CIRB funds to be used for maintenance and operations.

³⁸ FAST Act | Funding | Federal Highway Administration (dot.gov)



In FY20, ODOT allocated \$28 million of federal funds for CIRB projects, which was evenly divided among all ODOT districts. In FY20, ODOT budgeted the funds to CIRB as follows: ³⁹

- \$18 million (64.29 percent) for bridges,
- \$6 million (21.43 percent) for roads,
- \$4 million (14.29 percent) for inspections.⁴⁰

Counties within ODOT districts achieve agreement with ODOT, CEDs⁴¹ and the Oklahoma Cooperative Circuit Engineering Districts Board (OCCEDB)⁴² on the further allocation breakdown based on project readiness.

According to ODOT's FY21 CIRB 5-Year Plan, a total of \$879.3 million will be budgeted from various fiscal resources to fund the FY21 5-Year Plan; \$656.5 million (75%) of the budgeted funds are from CIRB.⁴³ The budgeted federal investment accounts for 19 percent of the total budget for the FY21 5-Year Plan. The State plans to leverage over \$27.7 million in federal funding for county roads and bridges improvements under CIRB in FY21, \$166 million over a five-year period.

Under-utilization of Federal Dollars by Counties

LOFT determined the CIRB program may not be maximizing federal funding, as nearly half of the State's counties do not utilize federal funds. ⁴⁴ Lack of use can be attributed to the practice of alternating the funds between counties from year to year, to the more costly design standard requirements that are tied to federal funds, and to a general lack of awareness by county officials of the grants available.

ODOT utilizes private contractors for grant-writing support due to the complexity of the grants. While ODOT extends this support to counties, upon request, the agency notes it is rare for counties to reach out to ODOT for this service. ODOT provided the example of Grant County utilizing ODOT for grantwriting assistance with securing federal funds for a local bridge project.

³⁹ Based on correspondence with ODOT, May 24, 2021. See Appendix D for FY20 actual apportionment and counties use.

⁴⁰ ODOT utilizes a portion of FHWA funds to comply with <u>23 CFR § 650.303</u> for inspection of all bridges on public roads

⁴¹ OCCEDB Website - Home

⁴² ACCO - Home (okacco.com)

⁴³ CIRB FY-2021 through FY-2025 Construction Work Plan

⁴⁴ See Appendix O for federal FY20 funding use for CIRB projects by county and for other federal grants.

Policy Considerations and Agency Recommendations

Policy Considerations

The Legislature may consider the following policy changes:

- Amending 69 O.S. § 507 to direct and prioritize funding to concentrations of structurally deficient structures.
- Amending 69 O.S. § 507 to require counties that receive direct apportionments under new CIRB formula to produce annual reports reflecting county inventory of structurally deficient infrastructure and schedule for repairs or replacement.
- Amending 69 O.S. § 687.3 to require the Oklahoma Cooperative Circuit Engineering Districts Board to approve access to funds available through the Emergency Transportation Revolving Fund (ETR) based on district data regarding unaddressed infrastructure.
- Amending 69 O.S. § 302.1 to expand the purpose of the Transportation County Advisory Board to include development of criteria for apportionment of CIRB funds.

Agency Recommendations

- The Oklahoma Department of Transportation should allocate any additional funds over the statutory apportionment, such as special appropriations, to districts with greatest critical county infrastructure challenges, instead of equally apportioning additional funds.
- The Oklahoma Department of Transportation should collect and report annual county road conditions similar to data currently collected and reported for county bridges.
- The Oklahoma Department of Transportation should develop a process to educate county transportation officials on identifying and securing all available federal grants and funding opportunities for infrastructure repair and replacement.



Observations made during fieldwork, combined with a review of the planning process and stakeholder interviews, lead LOFT to conclude that current processes are hindering CIRB's progress in addressing infrastructure needs.

Finding 3: CIRB's Processes Lack Prioritization, Are Overly Complex and Under-Coordinated

As demonstrated in Finding 1, CIRB has contributed to reducing the number of structurally deficient county bridges. However, LOFT found the program's planning process to be overly complex, with multiple steps and stakeholders and limited coordination among them.

As part of LOFT's field work, site visits were made to Lincoln, Oklahoma, and Tulsa counties where officials from both the Oklahoma Department of Transportation (ODOT) and the local county Circuit Engineering Districts (CEDs) detailed the bridge inspection process and planning process for repairs or reconstruction of bridges. Observations made during fieldwork, combined with a review of the planning process and stakeholder interviews, lead LOFT to conclude that current processes are hindering CIRB's progress in addressing infrastructure needs.

Summary of 5-Year Planning Process

After potential projects are selected by each County, ODOT and CEDs work together in developing the CIRB 5-Year Plan (CIRB Plan), which is used to select county infrastructure projects for repairs and maintenance. The CIRB Plan is designed to allow counties to tackle projects that would be beyond a single county's ability. Through the program, counties pool funds and resources to benefit a wider citizen base and improve connections to major thoroughfares or highways. For example, counties may elect to accumulate their annual CIRB funding or apply it toward a partnership to fund a specific infrastructure project in their community.

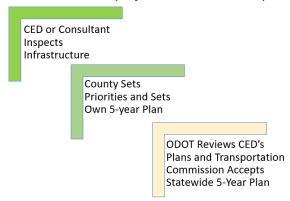
Per federal regulation, "off-system" bridges are inspected every 24 months, resulting in a bridge summary report. 45 46 Under CIRB, county infrastructure projects are prioritized at the county level by the Board of County Commissioners (Commissioners) for each respective county. After electing to utilize CIRB, Commissioners report their proposed projects to their respective CED where the projects are reviewed based on eligibility, priority, funding, project readiness and other resource constraints. The compiled CIRB 5-Year Plan is forwarded to ODOT for review of financials, confirmation of project delivery deadlines, and vetting of cost estimates.

⁴⁵ 23 CFR § 650.311

⁴⁶ Off-system bridges are bridges on city streets or county roads separately maintained by local governments.

The selected bridges are then sent before the Transportation Commission for final approval. Once approved, projects on the CIRB Plan go through the CIRB's design and construction process. ⁴⁷

Figure 11: CIRB 5-Year Plan Development Process (Figure depicts steps leading to adding a county infrastructure reconstruction project to the statewide plan and funding)

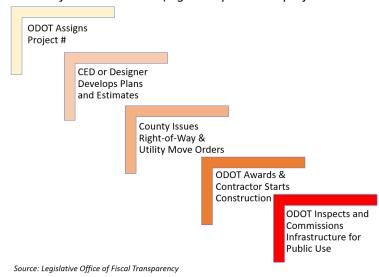


Source: Legislative Office of Fiscal Transparency

Summary of 5-Year Plan Construction Process

Upon adding a county project to the CIRB Plan, ODOT assigns a project number. County Commissioners select an Engineer or Designer to develop estimates and structural plans. Once all environmental studies are complete, County Commissioners, ODOT personnel, CED personnel, and designers meet to review the "Plan-in-Hand." If necessary, right-of-way and utility relocation orders are issued by ODOT, bids for a contractor are received and a construction contract is awarded. Once construction is complete, a final inspection is conducted, and the infrastructure is commissioned for public use. ⁴⁸

Figure 12: Execution of the 5-Year Plan (Figure depicts CIRB project construction process)



⁴⁷ CIRB planning process is detailed in Figure 23 in Appendix P.



⁴⁸ CIRB project construction process is detailed in Figure 24 in Appendix P.

LOFT found no clear criteria for prioritization within the selection process for projects submitted to ODOT for CIRB funding.

Under current Administrative Code, ODOT has authority to prioritize projects within the CIRB 5-year plan, but is not exercising this authority.

CIRB 5-Year Plan Lacks Prioritization of Projects

LOFT found no clear criteria for prioritization within the selection process for projects submitted to ODOT for CIRB funding. ODOT confirmed LOFT's conclusion, stating that Commissioners have full autonomy for selecting bridges for inclusion on the CIRB Plan and there is no standard for use of data or methodology to inform those decisions. Commissioners select the projects, which are then confirmed by the Transportation Commission for placement on the 5-Year Plan. Under current Administrative Code, ODOT has authority to prioritize projects within



Deficient beam on county bridge in Lincoln County connecting to deck. Deck surface is deteriorating.

the CIRB Plan, but is not exercising this authority. 49

In comparing the CIRB 5-Year Plan to ODOT's 8-Year Plan, LOFT finds that ODOT's 8-Year Plan considers factors to assist with prioritization of projects and the CIRB 5-Year Plan does not. While not all the prioritization factors from the 8-year plan are translatable to CIRB's plan, key metrics such as average daily traffic, critical needs, and improvement costs can be considered.

Table 08: Comparison of Prioritization Factors in CIRB 5-Year and ODOT 8-Year Construction Plan. (This table illustrates that the ODOT 8-Year Plan utilizes a data-driven approach to prioritize infrastructure plans and CIRB relies solely on local level's recommendation.)

Prioritization Factors in Selection of Infrastructure Projects						
CIRB 5-Year Plan	ODOT 8-Year Construction Plan					
CED recommendation	Surface condition					
Commissioner's autonomy in selecting projects	Bridge condition					
ODOT selects projects*	Geometrics (Vertical and Horizontal Alignment)					
Project readiness	Average Annual Daily Traffic (AADT)					
	Percentage of Truck Traffic					
	Accident History					
	Local, regional and national traffic patterns					
	Capacity					
	Critical needs					
	Anticipated improvement budgets					

Source: Legislative Office of Fiscal Transparency's creation based on reports and information provided by ODOT. *Note: Under OAC 730-10-23, ODOT has authority to prioritize projects to the Transportation Commission.

⁴⁹ OAC 730-10-23.

As illustrated in Table 08 above, ODOT's 8-Year Construction Plan is guided by the transportation needs and priorities of Transportation Districts. In addition, ODOT utilizes an evidence-based approach by collecting and analyzing transportation data metrics to assist in selecting projects for the 8-Year Construction Plan.

LOFT observed ODOT personnel working within their Bridge Management System (BRM) and found ODOT to have sophisticated data management systems and well-trained data analysts. ODOT's BRM system uses a bottom-up approach, collecting data on infrastructure from annual bridge inspections and utilizing real-time data to make informed decisions on infrastructure projects for the 8-Year Construction Plan. These resources and capabilities could likewise assist Commissioners and counties in decision-making.

LOFT finds that CIRB fails to utilize a data-driven approach in selecting infrastructure projects; instead, relying exclusively on County Commissioners. With needs that far outweigh availability of funding, the CIRB program will have limited impact without prioritization.

LOFT found several other states have developed processes for prioritizing infrastructure projects based on need. This is detailed in the Peer State section below.

Inconsistent Standards and Lack of Oversight

Throughout the evaluation of CIRB and accompanying fieldwork, LOFT observed both inconsistent standards and a lack of oversight.

As demonstrated in Exhibits 03 and 04, from two separate counties, LOFT observed inconsistent standards and questionable reconstruction

Exhibit 05: Example of Construction Standards



Steel support beams placed to reinforce county bridge in Prague from scour.

Exhibit 04: Example of Construction Standards



Wooden 2X6s making up the width difference in size between two I-beams on a county bridge in Tulsa County.

repairs. The lack of consistent standards for bridge repairs and the lack of oversight for the CIRB program could be contributing factors to the number of bridges that require eventual replacement and the rapid deterioration of newer structures. Currently, ODOT has no statutory authority to enforce standards for CIRB.

LOFT finds that CIRB fails to utilize a datadriven approach in selecting infrastructure projects; instead, relying exclusively on County Commissioners.

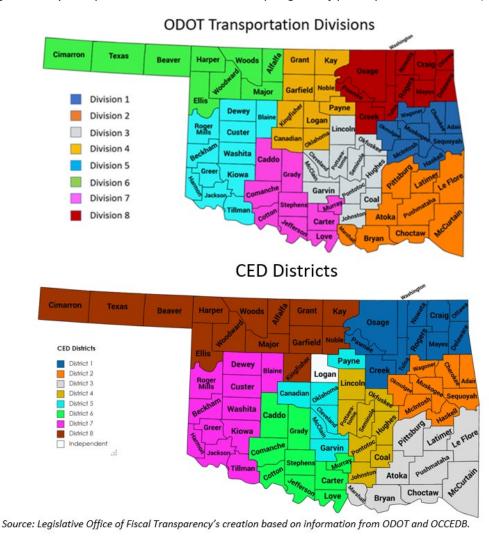
Throughout the evaluation of CIRB and conducted fieldwork, LOFT recognized both inconsistent standards and a lack of oversight.

If public funds are continued to be utilized for CIRB, ODOT should provide clearly defined standards for Commissioners and counties to follow regarding the maintenance, operations, and reconstruction of projects under CIRB.

Governmental Coordination

LOFT observed a lack of alignment between ODOT Transportation Districts and CED districts regarding CIRB's planning and coordination process. As illustrated below in Figure 13, although both ODOT Transportation Districts and CED districts are divided into eight districts, each have different geographical boundaries and county representation. The differing districts create challenges in coordinating bridge inspections and engineers, identifying infrastructure challenges, and ensuring communication.

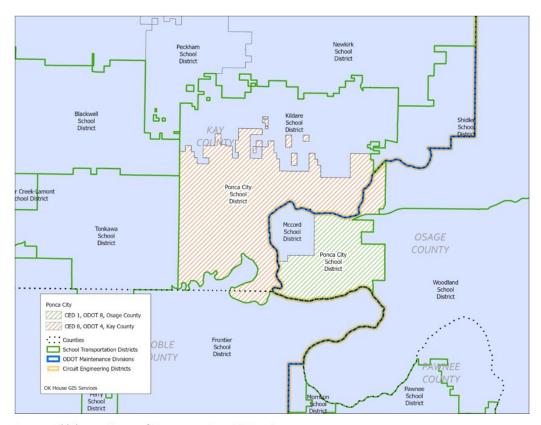
Figure 13: Lack of alignment between ODOT Transportation Districts and CED Districts. (This figure illustrates the variance between the two entities' service areas.) Note: Logan County is depicted with no color due to opting out of participation in the CED.)



As of May 2021, the Logan County Board of County Commissioners voted to leave CED 5. Structurally deficient bridges that impact school district bus routes are one area where communication challenges are created from the lack of alignment among districts, and counties within the CIRB process. Districts' bus routes can span multiple counties, CED Districts, and ODOT Transportation Districts.

In the case of the Ponca City school district, the Transportation Director would need to communicate with seven different entities in order to gain complete understanding of the condition of infrastructure – and any related safety concerns – within their district's boundaries.

Figure 14: Ponca City School District Overlaps Multiple CEDs. (Ponca City School District is in CED Districts 1 & 8, ODOT Districts 4 & 8, Kay and Osage Counties, while also have pockets of its school district within Kildare School District. 6-7 entities are involved to communicate infrastructure issues to Ponca City School District).



Source: Oklahoma House of Representatives GIS Services.

LOFT finds that the current arrangement of both ODOT Transportation Districts and CED Districts creates unnecessary communication and operational barriers for CIRB's planning process; specifically, in identifying and coordinating bridge selection and projects. LOFT was also informed by the State Department of Education (OSDE) that neither school superintendents nor ODOT communicate with OSDE in a centralized manner to ensure schools are aware of bridge and road conditions that may pose a safety risk.

Structurally deficient bridges that impact school district bus routes are one area where communication challenges are created from the lack of alignment among districts, and counties within the CIRB process.



CEDs' Original Intent and Mission within CIRB

Circuit Engineering Districts (CEDs) originated from the need for counties to have access to industry professionals, services, and resources at a time when ODOT was unable to manage county needs. Per state statute, CEDs were created:

"To provide assistance to county governments in performing the functions delegated by law including, but not limited to, the operation of road maintenance, construction, inspection, and equipment purchases and management." ⁵⁰

The CEDs state one of their key roles and responsibilities is partnering with ODOT in both the development and management of the CIRB 5-Year Plan. LOFT identified areas within the planning process that present additional layers of bureaucracy which may hinder the program's outcomes.

Duplication of Services

As discussed earlier within Finding 3, LOFT found duplication of services being performed within CIRB's planning and construction process. For example, CEDs often conduct bridge inspections for CIRB projects, but these statutorily required services are subsidized by ODOT through a portion of CIRB funds. Stakeholder interviews further revealed that Commissioners have discretion, but are not required, to use CEDs for bridge design within CIRB's construction process. Meanwhile, ODOT has the knowledge base and expertise to perform the necessary bridge designs for county infrastructure.

Although ODOT records were not readily available to determine the share of federal and state funds and the specific type of services (inspections vs. design), a review of PeopleSoft expenditures revealed that ODOT paid \$5.1 million in FY19 to CEDs for engineering services through CIRB and Highway Construction and Maintenance funds. ⁵¹ These funds are supplementary to funds Oklahoma Cooperative Circuit Engineering District Board receives through the dedicated CED Revolving Fund, which in FY19 equated to \$4.8 million. ⁵²

In reviewing statutes and administrative codes, LOFT found that while CEDs assist Commissioners and counties in selecting county bridges for consideration on the CIRB 5-Year Plan, under administrative code ODOT maintains the authority to select all CIRB projects presented to the Transportation Commission for further and final approval.⁵³

^{50 69} O.S. § 687.1

As of June 4, 2020, FY19 expenditures were: \$4.7 million through CIRB and \$0.4 million through highway fund in direct payments to five CEDs; ODOT also paid \$5.9 million to consultants through CIRB fund (records were not readily available to determine how much ODOT paid consultants for county infrastructure inspection and design through the highway fund)

52 See Appendix F, Chart 17

⁵³ OAC 730-10-25

Per administrative code,

"In the absence of an acceptable project recommendation from any CED, the Department reserves the authority to select and recommend projects to the Transportation Commission as determined appropriate." 54

Additionally, current statutes mandate the Transportation Commission to develop "criteria for determining the level of priority for projects" for CIRB's 5-Year Plan. 55 LOFT did not observe any selection criteria utilized for identifying projects for inclusion on the plan.

Regulatory Challenges

Federal Compliance Requirements

County infrastructure projects can be impacted by regulatory entities outside of county or state control. For example, whenever Federal funds are being utilized for a project over a navigable waterway, approval from the U.S. Army Corps of Engineers (Corps) is required. Additionally, some projects may require clearance from the FHWA, a process that can range anywhere from a few months to years. While environmental clearance is not always required for a project, it is significantly more difficult to receive Corps approval without it, even if the project does not require it according to FHWA standards.

While the State and counties cannot avoid such regulations, there are steps that can be taken to better navigate compliance delays. Recently, ODOT successfully bundled multiple bridges into one project, obtaining FHWA environmental clearance as one project with multiple bridges. Better coordination of county project submissions to regulatory bodies could expedite processing and project start times.

Additionally, LOFT found that Oklahoma has approximately 2,400 bridges that were built prior to the founding of the National Highway Traffic Safety Administration (NHTSA) in 1970. NHTSA is the federal agency responsible for reviewing and establishing the Nation's safety standards.

Historical Significance of Structures

LOFT learned through fieldwork that many infrastructure projects are slowed due to concerns about the historical significance of county bridges. A structure classified as having historical significance requires additional steps and regulatory processes that extend the overall planning process.



⁵⁴ OAC 730-10-23

⁵⁵ 69 O.S. § 507



Exhibit 06: Example of Construction Standards

Bridge #18 at Rock Creek, constructed in 1924, is still in use as the part of Historic Route 66 crossing Rock Creek in Sapulpa, Oklahoma.

LOFT observed a misconception among local transportation officials that any bridge more than 50 years old is automatically classified as historical; as referenced in Finding 1, this would result in the majority (86%) of Oklahoma's structurally deficient bridges as being considered historically significant.

Local transportation officials informed LOFT that structures are often classified as historically significant due to age but could also be deemed historic for a variety of reasons, including relevance to state history or being a tourism attraction. Examples of this include unique structural design, engineering aspects, or being located on Route 66.

LOFT verified with the Oklahoma State Historic Preservation Office (SHPO) the criteria for determining the historical significance of a county bridge. According to SHPO, age alone does not make a bridge historically significant. Based on current records, SHPO estimates the State has between 200 – 250 historical bridges, compared to the thousands originally communicated to LOFT. ODOT's records align with SHPO's, reflecting 254 historical bridges. Regarding classification of historical bridges, ODOT identifies the bridges and SHPO validates their historical significance.

Peer State Project Planning and Prioritization Comparison

In reviewing other state's infrastructure planning processes, LOFT concludes CIRB could transition its methodology regarding project selection for repair and/or replacement to one that prioritizes critical infrastructure demands or by prioritizing funding in specific geographical areas.

Several states have developed data-driven methodologies for allocating limited financial resources to their most pressing infrastructure challenges. These states' processes account for need and greatest impact, sometimes using weighted formulas to objectively make those determinations. For example, the Vermont Department of Transportation (VTrans) has developed a prioritization process that utilizes data-driven selection criteria for infrastructure projects.

As directed by statutes, VTrans created a numerical grading system that includes asset management-based factors that are objective and quantifiable,

Several states have developed data-driven methodologies and weighted formulas for allocating limited financial resources to their most pressing infrastructure challenges.

⁵⁶ Please refer to Appendix Q for map of historical bridges.

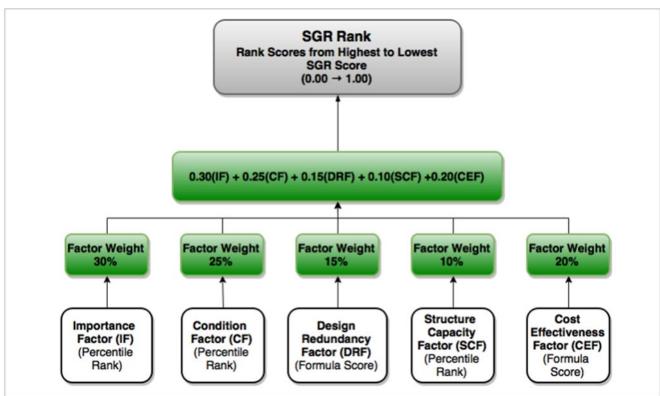
including: safety, traffic volume, availability of alternate routes, future maintenance and reconstruction costs, and priorities assigned by the regional planning commission. VTrans further classifies the prioritization of projects based on the construction project type (roadway, bridge, intersection, etc.). Each category has its own set of criteria that allows for leadership to prioritize projects for greatest public benefit.⁵⁷

Virginia is another state LOFT identified as prioritizing infrastructure projects based on data, using an innovative methodology that accounts for factors like condition and cost effectiveness.

Exhibit 07: Example of Construction Standards

Deteriorating support on county bridge in Tulsa County connecting to deck. Further erosion or deterioration will result in total replacement.

Figure 15: Virginia State of Good Repair Methodology. (This figure illustrates Virginia's methodology for prioritizing infrastructure projects.)



Source: Virginia Department of Transportation

The formula was developed to meet the Commonwealth Transportation Board's statutory obligation to develop a "priority ranking system" for the allocation of Virginia's State of Good Repair (SGR) funds. The formula is based on five factors: Importance, Condition, Design Redundancy, Structure Capacity, and Cost Effectiveness.⁵⁸

⁵⁷ Please refer to Appendix R for Vermont's methodology.

⁵⁸ SGR PrioritizationFormula Description 08-31-2018.pdf (virginiadot.org)



Policy Considerations and Agency Recommendations

Policy Considerations

The Legislature may consider the following policy changes:

- Amending 69 O.S. § 687 to align CED district boundaries with the Oklahoma Department of Transportation Districts' boundaries to bring consistency to districts.
- Restructuring the CIRB program under the Oklahoma Department of Transportation to maximize efficiencies and subject-matter expertise.
- Requiring centralization of infrastructure data and communication channels to ensure local leaders have the relevant information to make decisions pertaining to safety and efficiency regarding local infrastructure.
- Clarifying within statute the classification of "historical significance" as it relates to Oklahoma infrastructure.

Agency Recommendations

- The Oklahoma Department of Transportation and the Transportation Commission should exercise the authority provided under current Administrative Rules and statutes to prioritize and more thoroughly review infrastructure projects being submitted for the CIRB 5-Year Plan, including developing selection criteria.
- The Oklahoma Department of Transportation should work with County Commissioners to utilize a data-driven approach to select infrastructure projects for the CIRB 5-Year Plan.
- The Oklahoma Department of Transportation should work to develop an objective methodology for prioritizing infrastructure projects for the CIRB 5-Year Plan, to include rating for multiple deficiencies or degree of deficiency.
- The Oklahoma Department of Transportation should coordinate county projects for submission to Federal regulatory bodies.
- The Oklahoma Department of Transportation should coordinate with Transportation Districts and County Commissioners to ensure accurate local records pertaining to historically significant bridges.
- The Oklahoma Department of Transportation should add to the definition of "structurally deficient" to account for degree of difficulty for remediation.
- The Oklahoma Department of Transportation should establish minimum standards for road and bridge maintenance for counties, to include requiring plan approval from a civil engineer.

Finding 4: Oklahoma Has Opportunities to Leverage Best Practices from Peer State Transportation Departments to Strengthen County Education and Capabilities

In examining the resources available to county officials regarding management of roads and bridges, LOFT found that County Commissioners are not utilizing the technical guidance, resources, and training available to address local infrastructure needs effectively and efficiently.

Knowledge Gaps

County Commissioners play a critical role in the operational oversight and management of local infrastructure, especially regarding the prioritization of infrastructure projects for submission onto the CIRB 5-Year plan. However, during LOFT's evaluation it became clear that Commissioners rarely have the proper resources, staff, or guidance pertaining to county infrastructure to efficiently navigate the complex CIRB planning process.

Through multiple interviews with various stakeholders, LOFT learned Commissioners have very little access to historic resources regarding their district's infrastructure demands, mostly due to documents not being properly stored and being lost or destroyed over time. This, coupled with Commissioner turnover, limits understanding of the availability and utilization of different county infrastructure funds, resources, partnerships, and coordination with ODOT.

As newly elected leaders, Commissioners are offered one week of training followed by a once-a-month training session presented by various entities, such as Oklahoma State University (OSU), that they can attend at their discretion. While current state statute requires Commissioners receive training for their respective duties and responsibilities, there is no established criteria, minimum required number of hours, nor accountability to ensure the training is fulfilled.⁵⁹

LOFT's research into commissioner training requirements of peer state Departments of Transportation (DOT) revealed a best practice of states offering free, mandatory training to Commissioners that is focused on enhancing knowledge and resource utilization.



⁵⁹ 19 O.S. § 130.7



Adoption of similar training in Oklahoma has the potential to improve the Commissioners' involvement in the 5-year planning process, specifically with project prioritization and engineer/designer selection.

It is LOFT's assessment that the Oklahoma Department of Transportation has the opportunity to leverage training, resources, technical assistance and funding to support the enhancement of infrastructure goals at all levels of Oklahoma's government.

Local Technical Assistance Programs (LTAP)

The Federal-aid Program Administration of the United States Federal Highway Administration (FHWA) has several opportunities and resources to provide professional development, technical assistance and guidance to both state and local government officials for infrastructure projects. Under the FHWA, there are 51 Local Technical Assistance Programs (LTAP) which are designed to provide information and training to local governments and responsible agencies. According to the FHWA:

"Through these core services, LTAP/TTAP centers provide access to training and information that may not have otherwise been accessible. Centers are able to provide local road departments with workforce development services; resources to enhance safety and security; solutions to environmental, congestion, capacity and other issues; technical publications; and training videos and materials."

During the evaluation, LOFT found that Kansas, Iowa, Missouri, Montana and Texas have greater utilization of the FHWA's LTAP program to assist local stakeholders, to include County Commissioners, in leveraging knowledge and resources regarding federal funding, professional development and training materials.

The Texas Engineering Extension Service's (TEEX) LTAP provides advance training at no cost to county and city road agencies. TEEX's technical assistance courses are intended to train local county and city road agencies on how to maximize existing and available resources to benefit their communities' infrastructure goals. ⁶⁰ Specifically, incoming County Commissioners are paired with a road administrator to make them aware of their community's infrastructure challenges and assist the administrator in developing specific curriculum and a resource list for that respective Commissioner.

⁶⁰ TEEX Technical Assistance Courses - Texas County Progress

LTAP Utilization in Oklahoma

Oklahoma's LTAP program, offered through Oklahoma State University's (OSU) Center for Local Government Technology (CLGT), provides extension programs and services to those responsible for the construction and maintenance of transportation systems at the local level in Oklahoma. According to LTAP officials, the program was funded by a federal grant of \$150,000 that was equally matched by the Oklahoma Department of Transportation (ODOT), providing curriculum and courses to transportation stakeholders at no cost. LTAP curriculum includes free training, professional development, resources and technical assistance on road maintenance, pavement preservation, heavy equipment training and construction project management. Additionally, the program offers special certifications, such as bridge welding.

Representatives of OSU's LTAP state the program is currently underutilized by local transportation representatives, an assessment confirmed by LOFT's review of participants compared to the pool of Commissioners. There are 231 County Commissioners across the State but since 2018, just 68 Commissioners have taken courses within the program.

LOFT found consistent underutilization of available training with another locally-developed certified training option for county officials. A County Government Training Program (primarily focused on budgeting) offered by OSU's Extension Campus, reports that between 2018 and 2020, an average of 66 Commissioners completed training towards a certificate, reflecting just 29 percent of Commissioners engaged in the professional development. For FY21, 36 Commissioners have completed training through CGTP.

Intra-Governance Structures

Per Finding 2 and 3, LOFT's analysis found limitations in the State's governance structure and communication between ODOT and local government officials. LOFT's analysis finds there is a critical need to optimize the State's investment by promoting enhanced communication, integrated decision-making and needsbased prioritization for transportation infrastructure projects.

As part of a comparative analysis, LOFT researched governance structures and collaboration between other state DOTs and local officials.



⁶¹ About LTAP | Center for Local Government Technology | Oklahoma State University (okstate.edu)

⁶² Please refer to Appendix S for comprehensive list of courses and materials provided via OSU's CLGT.

⁶³ These numbers were provided to LOFT and do not represent unduplicated Commissioners enrolled in training.



While each state varies in their approach to addressing critical infrastructure, with differing tax bases, number of counties and county bridges that require distinct approaches to meet infrastructure demands, LOFT identified practices that may be adaptable to Oklahoma.

For example, the state of Washington's County Road Administration Board (CRAB) streamlines standards of operations, communication, and resources to local officials regarding infrastructure construction and repairs. Specifically, Washington's CRAB details relationships between county engineers and county authorities by clarifying roles and accountability of both the lead professional and their respective councils or boards.⁶⁴

Governance Best Practice – Nebraska's County Bridge Match Program

LOFT's research into peer states yielded a similar project to CIRB. Nebraska was specifically studied as a regional peer because they have a high concentration of county bridges; 71 percent (10,960) of Nebraska's 15,348 bridges are on the county road system in Nebraska.⁶⁵ Nebraska's version of Oklahoma's CIRB is the County Bridge Match Program, where the State partners with local counties in coordinating and repairing deficient infrastructure.⁶⁶

In Nebraska, the State matches a county's funding for a bridge replacement or removal. After a project is determined to meet criteria for consideration, recommendations are made by a Working Group composed of County Officials and the Nebraska Department of Transportation (NDOT). NDOT makes the final decision based on the recommendations and a criteria-based score for each submittal. Similar to CIRB, Nebraska's program permits and encourages counties to work together to bundle bridge projects across counties into one project. Although each county itself may not have the means to reap the benefits of a bridge bundle, counties can benefit through collaboration.

According to a member of the Working Group interviewed by LOFT, the County Bridge Match Program has had measurable success in addressing deficient infrastructure. In the 4 to 5 years of the program's operations, it has been able to assist with replacement of more than 50 county bridges. This rate of repair compares similarly to CIRB's performance. According to Nebraska officials, the program has also resulted in better relationships between counties, which pool their resources and work together to regionalize the process. Additionally, the program has fostered better collaboration between counties and Nebraska's state government.

⁶⁴ WAC 136-50-050:

⁶⁵ FHWA

⁶⁶ County Bridge Match Program - Nebraska Department of Transportation

Policy Considerations and Agency Recommendations

Policy Consideration

The Legislature may consider the following policy changes:

- Amending 19 O.S. § 130.7 to require specific training hours, as approved by the Oklahoma Department of Transportation, for professional development and continuing education offered in-state for County Commissioners every two years.
- Amending 19 O.S. § 130.7 to assign enforcement authority for statutorily required professional development.
- Amending 19 O.S. § 130.5 to require County Commissioners to maintain active and historic records of training and professional development hours.

Agency Recommendations

- The Oklahoma Department of Transportation should further collaborate with Oklahoma State University's Center for Local Government Technology to develop curriculum, training and professional development for County Commissioners and local transportation stakeholders.
- The Oklahoma Department of Transportation should review, evaluate, and prepare a report on the statewide governance, configuration and organizational strategies in coordinating management, oversight and funding of all forms of transportation in the State.





About the Legislative Office of Fiscal Transparency

Mission

To assist the Oklahoma Legislature in making informed, data-driven decisions that will serve the citizens of Oklahoma by ensuring accountability in state government, efficient use of resources, and effective programs and services.

Vision

LOFT will provide timely, objective, factual, non-partisan, and easily understood information to facilitate informed decision-making and to ensure government spending is efficient and transparent, adds value, and delivers intended outcomes. LOFT will analyze performance outcomes, identify programmatic and operational improvements, identify duplications of services across state entities, and examine the efficacy of expenditures to an entity's mission. LOFT strives to become a foundational resource to assist the State Legislature's work, serving as a partner to both state governmental entities and lawmakers, with a shared goal of improving state government.

Authority

With the passage of SB1 during the 2019 legislative session, LOFT has statutory authority to examine and evaluate the finances and operations of all departments, agencies, and institutions of Oklahoma and all of its political subdivisions.

Created to assist the Legislature in performing its duties, LOFT's operations are overseen by a legislative committee. The 14-member Legislative Oversight Committee (LOC) is appointed by the Speaker of the House and Senate Pro Tempore, and receives LOFT's reports of findings.

The LOC may identify specific agency programs, activities, or functions for LOFT to evaluate. LOFT may further submit recommendations for statutory changes identified as having the ability to improve government effectiveness and efficiency.

Appendices

Appendix A. Methodology

Oklahoma Constitution, Statutes and Agency Policies

LOFT incorporated legal research methodology for a detailed analysis of state laws and governing policies found in various sources (constitution, statutes and administrative rules) to assist with review of the legislative history of CIRB, revenue sources, funding process and policy considerations.

Oklahoma Infrastructure Funding, Apportionments and Allocations

LOFT reviewed state statutes and governing policies on taxes allocated to CIRB and other infrastructure programs for county roads and bridges. Longitudinal data from the Oklahoma Tax Commission was utilized to develop a time-series analysis on CIRB's funding levels. State statutes and data from the Oklahoma Tax Commission were utilized to develop LOFT's fiscal framework for county infrastructure programs.

Scope of Work and Evaluation Process

The scope of this evaluation is for a performance-based review of the CIRB program based on evidence of repaired or replaced county roads and bridges compared to allocated funding. This evaluation was limited to assessing county bridges and not roads due to limited availability of data on county road conditions. LOFT gained an understanding of CIRB through communications with ODOT Executive Staff, County Commissioners, and Circuit Engineers (CED).

Oklahoma Bridges by the Numbers

Using longitudinal data from the U.S. Federal Highway Administration, LOFT conducted a time series analysis to measure the variation in Oklahoma's infrastructure; specifically measuring structurally deficient bridges. LOFT also utilized data from the Oklahoma Department of Transportation's annual bridge summary report for structurally deficient bridges. LOFT conducted field work at the Oklahoma Department of Transportation by shadowing agency personnel working within the State's BRM system.

County Bridge Evaluation and CIRB Process

LOFT conducted fieldwork in various counties and transportation districts, shadowing ODOT bridge inspectors, CED engineers and contractors to observe how county bridges are evaluated, assessed, and placed on the ODOT's 5-Year Plan for CIRB. County bridges were selected via random sampling with the only two criteria: the bridges had to be within Transportation Districts 3, 4 and 8 and the bridges had to be currently classified as structurally deficient. Transportation Districts 3, 4 and 8 were selected because these districts were found, through LOFT's analysis, to represent 62 percent of all structurally deficient bridges in Oklahoma.

The contents of this report were discussed with the Oklahoma Department of Transportation staff throughout the evaluation process. Additionally, sections of this report were shared with the Oklahoma Department of Transportation for purposes of confirming accuracy and clarity.

It is the purpose of LOFT to provide both accurate and objective information: this report has been reviewed by LOFT staff outside of the project team to ensure accuracy, neutrality, and significance.

Appendix B. Related Acronyms

AASHTO American Association of State Highway and Transportation Officials

AADT Annual Average Daily Traffic

ACCO Association of County Commissioners of Oklahoma

ADT Average Daily Traffic

BR Bridge Replacement (see HBRRP)

CB County Bridge

CBRI County Bridge and Road Improvement

CED Circuit Engineering District

CFR Code of Federal Regulations

CIRB County Improvement for Roads and Bridges

CLGT Center for Local Government Technology

COE or Corps US Army Corps of Engineers

EPA Environmental Protection Agency

FHWA Federal Highway Administration

FY Fiscal Year

GIS Geographic Information System

HBRRP Highway Bridge Rehabilitation and Replacement Program (BR funds, Federal)

LPA Local Public Agency

LTAP Local Technical Assistant Program

NBIS National Bridge Inspection Standards

NEPA National Environmental Policy Act of 1969

OCCEDB Oklahoma Cooperative Circuit Engineering Districts Board

ODOT Oklahoma Department of Transportation

SBC School Bus Critical

SFY State Fiscal Year

SHA State Highway Agency

SHPO State Historic Preservation Office

STP Surface Transportation Program (Federal Funds)

TAP Transportation Alternatives Program

TTAP Tribal Technical Assistant Program

§404 Wetlands permit program

Appendix C. ODOT Organizational Structure and Leadership

Agency Mission

The Oklahoma Department of Transportation (ODOT) is charged with the planning, designing, construction, operation, and maintenance of Oklahoma's highway-based transportation infrastructure including the non-toll interstate system, the U.S. highway system and the state highway system along with management of the state-owned railroads. ODOT also administers a variety of other multi-modal programs including passenger rail, public transit and waterways. The agency also oversees other state and federal funds and programs directed to the county and city transportation systems.

The transportation network in Oklahoma falls into two categories – On System and Off System. On System represents the responsibility of the department – interstate, U.S. numbered routes, and state routes. ODOT is responsible for 32,883 lane miles of highway pavements and approximately 6,800 bridges across the state. ODOT also assists with planning, coordination, and other support for the nonjurisdiction Off System – city streets and county roads.

Organizational Structure and Oversight

Transportation Commission Operations, Review and Evalu Transportation Holly Lowe Secretary / **Organization Chart Executive Director** DRF Liaison Officer General Counsel Jenny Allen Sarah Penn Administrator of Chief Engineer EIT Program **Deputy Director** Legislative Affairs Ann Si Dawn Sullivar Director of Director of Director of Finance & Director of nteragency Liaiso Civil Rights Tribal Liaison Engineering Operations Administration / CFO Capital Program Tem Angier Jenny Allen Rhonda Fair Darren Saliba Chelley Hilmes Rick Johnson Human Office of Research Right-of-Way Rail Programs Bridge **Division One** Construction Programs Resources & Implementation Chris Wallac David Ooten Scott Lange Strategic Asset & Local Office Engineer Media & Public **Division Two** Government Lisa Endres Caleb Austin Anthony Echelle Anthony Delce Jennifer Hankins Matt Swift Brenda Perry (Acting) Project **Facilities** Environmental **Division Three** Office of Mobility Management Chad Pendle Siv Sundaram Ron Brown Matt Romero Office Services & Public Transit Jamie Bleeker Ernestine Mbroh **Division Four** Maintenance Waterways Kyle King Trenton January Taylor Henderson eus Babb **Brent Almquist Division Six Division Seven** Jay Earp **Division Eight** Randle White

Figure 16: ODOT Organization Chart

Source: Oklahoma Department of Transportation

The Oklahoma Department of Transportation is regionally organized with eight field districts that correspond to the Transportation Commissioner districts and a central office located in the State Capitol Complex in Oklahoma City. More than 70 percent of ODOT's workforce is based in the eight field districts. The operations in each field district are directed by the field district engineer who retains the primary responsibility for the daily and long-term highway maintenance and construction activities and decisions associated with the highways within their boundaries. The central office in Oklahoma City houses the executive staff, other divisions and work units that essentially support transportation projects and program delivery in all regions. ODOT's executive staff, field divisions and central office cooperatively interact to construct and maintain Oklahoma's highway system and to administer and deliver other transportation-related projects and programs.²

ODOT Commission

The Oklahoma Transportation Commission is comprised of an at-large member and one member from each of the eight districts of the state. The appointing authorities are the Governor, Speaker of the House of Representatives and President Pro Tempore of the Senate. Each member shall serve at the pleasure of his or her appointing authority and may be removed or replaced without cause.³

Members from districts 5,6,7 and 8 and at-large shall be appointed by the Governor. Members from districts 2 and 3 shall be appointed by the Speaker of the House of Representatives. Members from districts 1 and 4 shall be appointed by the President Pro Tempore of the Senate.⁴



Figure 17: ODOT Districts (Map depicts eight ODOT districts and covered counties)⁶⁷

Source: Oklahoma Department of Transportation

⁶⁷ Transportation Commission (oklahoma.gov)

Table 09: ODOT Districts Commissioners (Table providing information about Transportation Commissioners appointing authority and their term)

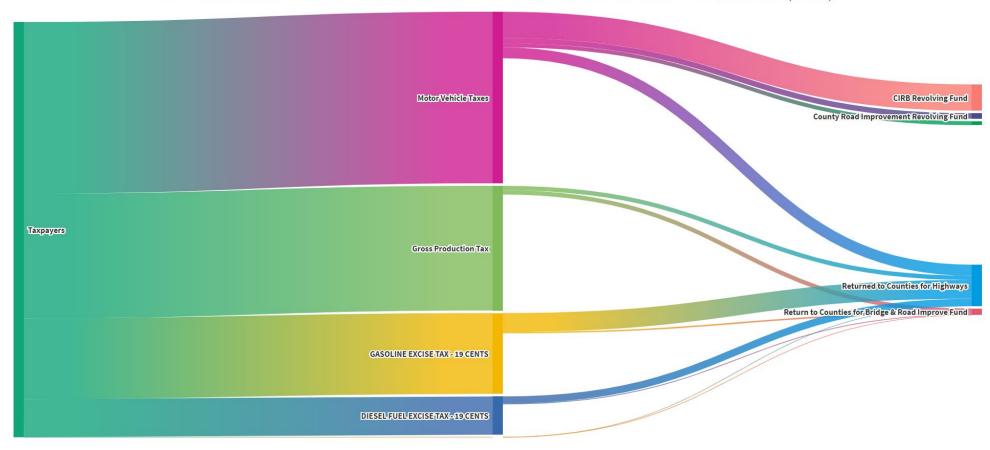
Distrct	Appointing	Appointment	Term
District	Authority	Date	Ends
District 1	Senate Pro Tem	April-19	At Will
District 2	Speaker of House	May-19	At Will
District 3	Speaker of House	March-19	At Will
District 4	Senate Pro Tem	April-19	At Will
District 5	Governor	April-19	At Will
District 6	Governor	April-19	At Will
District 7	Governor	April-19	At Will
District 8	Governor	April-19	At Will
At-Large	Governor	April-19	At Will

Source: ODOT

Appendix D. State Transportation Funds Apportionment (FY20)

Figure 18: Apportionment of Statutory Revenues for County Roads and Bridges (FY20). (This figure, a Sankey diagram, illustrates the flow of various funding streams to address infrastructure challenges for the State's county roads and bridges.)

APPORTIONMENT OF STATUTORY REVENUES FOR COUNTY ROADS AND BRIDGES (FY20)



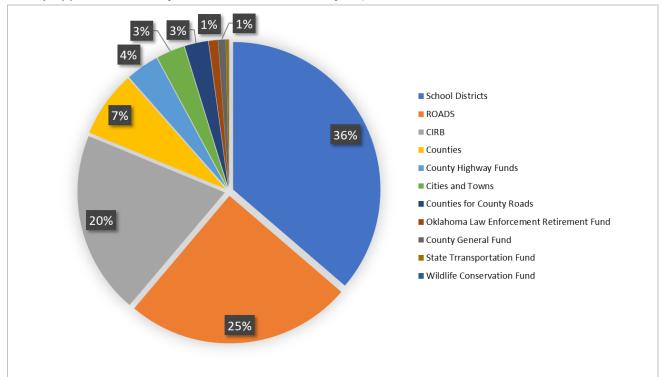
Source: Legislative Office of Fiscal Transparency's analysis based on data from Oklahoma Tax Commission

Table 10: Apportionment of Statutory Revenues for County Roads and Bridges in FY20 (Table lists infrastructure programs totals by the owner and revenue source)

Infrastructure Program/Fund	Tax Base(s)	FY20 Total Funding	Owner of Program/Fund	%
Rebuild Oklahoma Access & Driver Safety (ROADS)	Motor Vehicle Collections, Gasoline Excise Tax - 19 Cents, Income Tax, Diesel Fuel Excise Tax - 19 Cents	\$575,000,001	State	52.0%
State Highway Construction & Maintenance Fund	Sales Tax	\$89,600,000	State	8.1%
Oklahoma Turnpike Authority Trust Fund	Gasoline Excise Tax - 19 Cents	\$44,720,780	State	4.0%
High Priority State Bridge Revolving Fund	Gasoline Excise Tax - 19 Cents, Diesel Fuel Excise Tax - 19 Cents	\$6,148,861	State	0.6%
Public Transit Revolving Fund	Income Tax, Gasoline Excise Tax - 19 Cents	\$3,850,000	State	0.3%
State SubTotal		\$719,319,642		65.1%
Returned to Counties for Highways	Diesel Fuel Excise Tax - 19 Cents, Gross Production Tax, Gasoline Excise Tax - 19 Cents, Special Fuel Tax - 16 Cents, Motor Vehicle Collections	\$188,676,725	County	17.1%
County Improvements Roads and Bridges (CIRB)	Motor Vehicle Collections	\$120,000,000	County	10.9%
Returned to Counties for Bridge & Road Improvements (CBRI)	Diesel Fuel Excise Tax - 19 Cents, Gross Production Tax, Gasoline Excise Tax - 19 Cents, Special Fuel Tax - 16 Cents	\$29,881,337	County	2.7%
County Road Improvement Revolving Fund	Motor Vehicle Collections	\$24,990,747	County	2.3%
County Road Fund	Motor Vehicle Collections	\$17,880,120	County	1.6%
Statewide Circuit Engineering District Revolving Fund	Diesel Fuel Excise Tax - 19 Cents, Gasoline Excise Tax - 19 Cents, Gross Production Tax, Special Fuel Tax - 16 Cents	\$4,531,047	County	0.4%
County SubTotal		\$385,959,976		34.9%
Total Oklahoma Road Infrastructure	7 Tax Bases	\$1,105,279,618		

Source: Legislative Office of Fiscal Transparency's analysis based on data from Oklahoma Tax Commission.

Chart 13: Motor Vehicle Taxes and Fees Monthly Apportionment (Pie chart showing the breakdown of monthly apportionments of motor vehicle taxes and fees).



Source: Oklahoma Senate

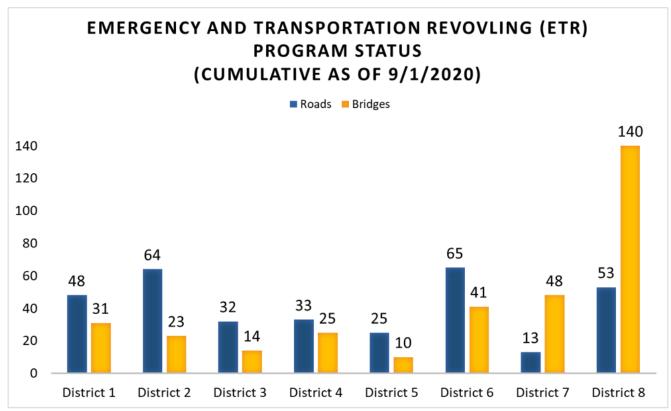
Appendix E. Use of Emergency Transportation Revolving Fund

Table 11: Emergency Transportation Revolving Fund Utilization by CEDs (Table provides a breakdown of the loan program use by CED; Note: per 69 O.S. § 687.3 up to 50% of the fund can also be used for compressed natural gas vehicles purchase)⁶⁸

	Emergency and Transportation Revolving Fund						
CED	CED Remaining Balance	Apportionment	ETR Utilization				
1	\$474,502.00	\$1,875,000.00	75%				
2	\$1.00	\$1,875,000.00	100%				
3	\$586,176.94	\$1,875,000.00	69%				
4	\$496,263.56	\$1,875,000.00	74%				
5	\$350,001.00	\$1,875,000.00	81%				
6	\$260,002.00	\$1,875,000.00	86%				
7	\$1,026,627.00	\$1,875,000.00	45%				
8	\$3.00	\$1,875,000.00	100%				
Total	\$3,193,576.50	\$15,000,000.00	79%				

Source: Oklahoma Cooperative Circuit Engineering Districts Board as of 06/01/20

Chart 14: Emergency Transportation Revolving Fund Use by CED (Chart depicts number of projects loaned by the fund by each of the eight CEDs)

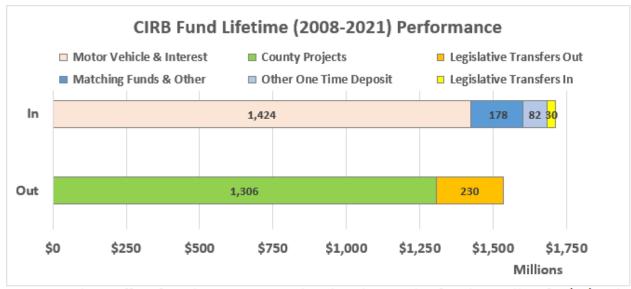


Source: Legislative Office of Fiscal Transparency's creation based on information from the Association of County Commissioners of Oklahoma (ACCO).

⁶⁸ ETR Fund - OCCEDB Website

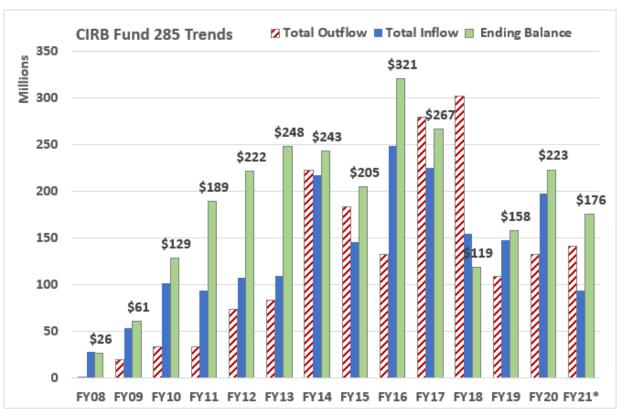
Appendix F. CIRB and CED Funds Trends and Performance

Chart 15: ODOT's CIRB Fund 285 Lifetime Performance between FY08-20 (Bar chart depicting funds lifetime inflows and outflows by the major category)



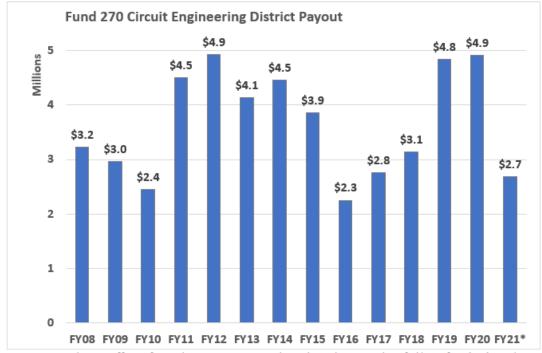
Source: Legislative Office of Fiscal Transparency analysis, based on PeopleSoft and ODOT (*as of 03/31/2021)

Chart 16: CIRB Fund 285 Performance (FY08-21). (Vertical bar chart depicting fund's overall cashflow and yearly ending balance. Note: out of \$176 million, \$3.7 million is unencumbered for FY21.)



Source: Legislative Office of Fiscal Transparency analysis, based on PeopleSoft (*as of 05/06/2021)

Chart 17: Apportionment to the Circuit Engineering Districts (CEDs) (Vertical bar chart depicts Treasurer's Fund 270 since its creation. In addition to monthly apportionments, CEDs receive interest earnings from the CED fund.)



 $Source: Legislative \ Office \ of \ Fiscal \ Transparency \ analysis, \ based \ on \ People Soft \ (*as \ of \ 05/05/2021)$

Appendix G. Oklahoma Infrastructure Inventory

Table 12: Oklahoma Bridge Inventory in 2019 (Table lists State's bridges by owner)

Total Bridges in 2019

	_	
Owner	Count	%
County	13,379	58%
State	6,749	29%
City	2,078	9%
State Toll	765	3%
Federally Owned	128	1%
State Park	15	0%
Other State Agency	12	0%
Town	6	0%
Other Local Agency	4	0%
Railroad	2	0%
Total	23,138	100%

Source: Legislative Office of Fiscal Transparency, based on NBI

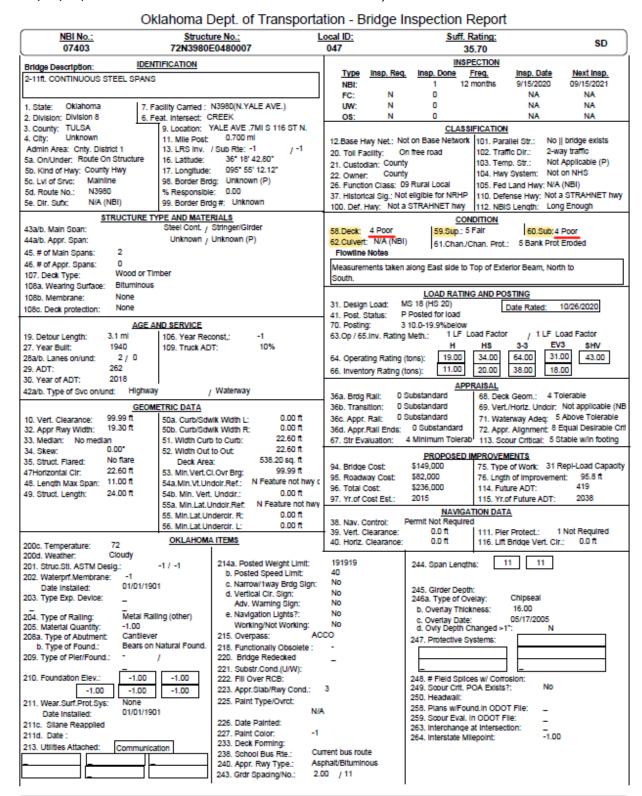
Table 13: Oklahoma Bridge Inventory (Table lists State's bridges by type)

Type of Bridge	Number of Bridges	Area of All Bridges (sq. meters)	Daily Crossings on All Bridges	Number of Structurally Deficient Bridges	Area of Structurally Deficient Bridges (sq. meters)	Daily Crossings on Structurally Deficient Bridges
Rural Interstate	597	579,109	8,549,850	5	7,073	38,900
Rural arterial	1,397	1,145,658	7,577,423	10	12,523	61,650
Rural minor arterial	1,205	786,483	3,688,887	19	25,105	71,740
Rural major collector	7,150	2,226,818	6,064,877	595	137,569	223,301
Rural minor collector	5	9,489	3,960	1	4,132	1,700
Rural local road	9,524	1,393,417	1,833,413	1,505	137,098	190,738
Urban Interstate	496	775,279	18,602,387	13	20,568	518,700
Urban freeway/expressway	419	533,740	11,226,020	6	4,675	195,100
Urban other principal arterial	355	397,457	4,169,487	5	7,610	33,207
Urban minor arterial	703	456,323	4,714,780	47	20,907	333,077
Urban collector	586	462,429	3,459,790	54	37,768	230,222
Urban local road	718	167,871	1,235,022	66	15,325	102,902
Total	23,155	8,934,073	71,125,896	2,326	430,353	2,001,237

Source: Federal Highway Administration (FHWA) National Bridge Inventory (NBI)

Appendix H. Bridge Inspection Report

Exhibit 08: ODOT Bridge Inspection Report (Infrastructure deemed as structurally deficient because one of the items 58, 59, 60, or 62 under "CONDITION" is ranked as 4 or below)



NBI No.: 07403	<u>Structure No.:</u> 72N3980E0480007	<u>Local ID:</u> 047	<u>Suff. Rating:</u> 35.70	SD
Inspection Date: 9/15/20			Digitally signed by Location:	
Invoice No.: 19T03020-2	Inspected With:		Contact Info: Date: 2020.10.27 09:38:28-05'0	0'

BRIDGE NOTES:

INSPECTION NOTES: 9/15/20

PX - STRAIGHTEN & SECURE LOAD POSTING METAL POST AT NORTH APPROACH. LOAD POSTING SIGN IS LEANING.

CONTINUE TO MONITOR CONDITION. BRIDGE NEEDS TO BE REPLACED SOON.

Utility conduit is attached to the East side.

ELEMENT CONDITION STATE DATA

LEMENT C	CONDITION STATE DATA											
Elem. / Env	Description	Unit	Total Qty	% 1	Qty. 1	% 2	Qty. 2	% 3	Qty. 3	% 4	Qty. 4	
31 / 4	Timber Deck	sq.ft	538.00	0%	0.00	0%	0.00	100%	538.00	0%	0.00	
Dete	erioration of existing timber planks.					•						
510 / 4	Wearing Surfaces	sq.ft	538.00	0%	0.00	71%	380.00	29%	158.00	0%	0.00	
	PX - 2 FT. DEEP EROSION HOLE UN	IDER O	VERLAY AT N	W CORN	ER.			•				
	Asphalt overlay has been patched. Or	verlay h	as wearing, ra	veling and	large tran	sverse an	d longitudina	al cracks a	t the North	span.		
07 / 4	Steel Opn Girder/Beam	ft	154.00	0%	0.00	0%	0.00	100%	154.00	0%	0.00	
FX -	- SURFACE RUST, PITTING AND FLA	KING F	RUST.									
11 / 4	Other Pier Wall	ft	23.00	0%	0.00	0%	0.00	100%	23.00	0%	0.00	
PX -	- ROCKS ARE GETTING LOOSE & FA	AILING A	AT TOP. LOSS	OF MOR	RTAR.							
17 / 4	Masonry Abutment	ft	46.00	0%	0.00	0%	0.00	100%	46.00	0%	0.00	
PX -	- REPAIR VERTICAL CRACK AT WES	ST SIDE	OF NORTH A	BUTMEN	T. LOSIN	G MORTA	R BETWEE	N ROCKS	3			
30 / 4	Metal Bridge Railing	ft	49.00	0%	0.00	0%	0.00	100%	49.00	0%	0.00	
PX -	- METAL RAIL IS TOO LOW. ALSO, N	METAIL	RAIL IS WEAI	KLY ATTA	CHED TO	BRIDGE.						
19 / 4	St.(Rail) Prot. Coat	(SF)	52.00	0%	0.00	100%	52.00	0%	0.00	0%	0.00	
	Galvanized coating is failing.											
70 / 4	Concrete Wingwall	(EA)	1.00	100%	1.00	0%	0.00	0%	0.00	0%	0.00	
NW	wing - minor honeycombing.		_									
75 / 4	Masonry Wingwall	(EA)	3.00	67%	2.00	0%	0.00	33%	1.00	0%	0.00	
PX -	- NE WING - LARGE CRACK AT CON	NECTIO	N & SEPARA	TED FRO	M ABUTM	IENT.						
SE /	& SW wings - Minor cracks along mort	ar joints										
60 / 4	Settlement SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00	
FX -	- WEST END PIER WALL HAS PREVI	OUSLY	SETTLED. W	OOD SH	MS HAVE	BEEN PL	ACED UND	ER BEAM	S. NO AD	DITIONAL	SETTLEM	IENT
AS (OF 09/2020. CONTINUE TO MONITO	R.										
61 / 4	Scour SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00	
Mine	or scour beginning under the abutment	ts and th	e pier wall.									
No o	change as of 09/2020.		_									
63 / 4	Steel Section Loss SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00	
Sec	tion Loss on all girders 20%.											
65 / 4	Debris SF	(EA)	1.00	100%	1.00	0%	0.00	0%	0.00	0%	0.00	
Minor debris along East side of North span.												
Min												
Mino 068 / 4	Erosion SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00	

PX - SHOULDER FAILURE AT NE CORNER BEHIND WING.

Minor erosion behind all wings.

Appendix I. Structurally Deficient Bridges by ODOT District and County

Table 14: Share of County Structurally Deficient Bridges by ODOT District

ODOT District	Structurally Deficient Bridges	All Bridges	% of Structurally Deficient Bridges	SD % Deficiency Rank	CIRB Funding per Bridge	CIRB Funding per Bridge Rank
District 1	236	1,045	23%	4	\$ 66,964	4
District 2	165	1,363	12%	6	\$ 90,909	3
District 3	540	2,069	26%	2	\$ 27,881	8
District 4	529	2,314	23%	3	\$ 28,355	7
District 5	163	2,253	7%	8	\$ 92,025	2
District 6	118	1,221	10%	7	\$ 125,000	1
District 7	247	1,684	15%	5	\$ 60,729	5
District 8	499	1,657	30%	1	\$ 29,354	6
Grand Total	2,497	13,606	18%		\$ 48,058	

Source: Legislative Office of Fiscal Transparency analysis based on data from ODOT.

Table 15: Percentage of Structurally Deficient Bridges by County

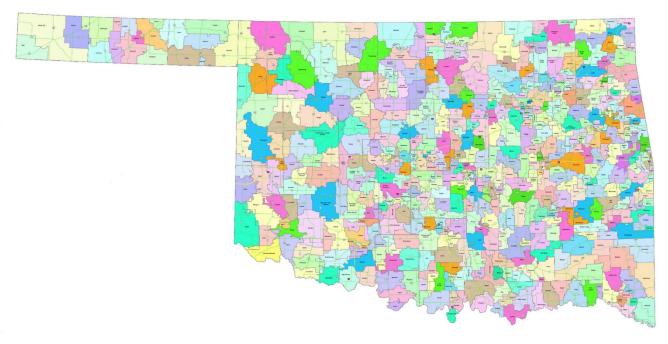
County	Structurally	All Bridges	% of County Structurally	CIRB Funding per Structurally Deficient
	Deficient Bridges		Deficient Bridges	Bridge
ADAIR	17	97	18%	\$110,294
ALFALFA	51	321	16%	\$32,680
ATOKA	15	141	11%	\$111,111
BEAVER	7	139	5%	\$238,095
BECKHAM	3	168	2%	\$454,545
BLAINE	35	231	15%	\$38,961
BRYAN	21	157	13%	\$79,365
CADDO	93	325	29%	\$17,921
CANADIAN	22	166	13%	\$75,758
CARTER	22	202	11%	\$75 <i>,</i> 758
CHEROKEE	20	121	17%	\$93,750
CHOCTAW	11	141	8%	\$151,515
CIMARRON	4	45	9%	\$416,667
CLEVELAND	3	66	5%	\$454,545
COAL	21	97	22%	\$64,935
COMANCHE	42	285	15%	\$39,683
COTTON	8	111	7%	\$208,333
CRAIG	30	104	29%	\$45,455
CREEK	114	254	45%	\$11,962
CUSTER	13	263	5%	\$104,895
DELAWARE	24	95	25%	\$56,818
DEWEY	3	135	2%	\$454,545
ELLIS	4	104	4%	\$416,667
GARFIELD	92	387	24%	\$18,116
GARVIN	61	240	25%	\$22,355
GRADY	40	278	14%	\$41,667
GRANT	162	456	36%	\$10,288
GREER	18	199	9%	\$75,758
HARMON	2	75	3%	\$681,818
HARPER	4	77	5%	\$416,667
HASKELL	22	112	20%	\$85,227

HUGHES	44	157	28%	\$30,992
JACKSON	14	230	6%	\$97,403
JEFFERSON	14	95	15%	\$119,048
JOHNSTON	26	102	25%	\$52,448
KAY	44	268	16%	\$37,879
KINGFISHER	38	254	15%	\$43,860
KIOWA	24	342	7%	\$56,818
LATIMER	7	138	5%	\$238,095
LE FLORE	46	238	19%	\$36,232
LINCOLN	142	365	39%	\$9,603
LOGAN	89	216	41%	\$18,727
LOVE	3	62	5%	\$555,555
MAJOR	18	117	15%	\$92,593
MARSHALL	25	171	15%	\$66,667
MAYES	20	97	21%	\$68,182
MCCLIAN	20	217	9%	\$68,182
MCCURTAIN	7	50	14%	\$238,095
MCINTOSH	32	124	26%	\$58,594
MURRAY	5	58	9%	\$333,333
MUSKOGEE	65	184	35%	\$28,846
NOBLE	21	194	11%	\$79,365
NOWATA	20	88	23%	\$68,182
OKFUSKEE	48	161	30%	\$28,409
OKLAHOMA	10	111	9%	\$166,667
OKMULGEE	53	194	27%	\$35,377
OSAGE	87	260	33%	\$15,674
OTTAWA	60	161	37%	\$22,727
PAWNEE	52	120	43%	\$26,224
PAYNE	51	262	19%	\$32,680
PITTSBURG	25	210	12%	\$66,667
PONTOTOC	38	182	21%	\$35,885
POTTAWATOMIE	36	262	14%	\$37,879
PUSHMATAHA	8	117	7%	\$208,333
ROGER MILLS	0	101	0%	-
ROGERS	35	121	29%	\$38,961
SEMINOLE	101	220	46%	\$13,501
SEQUOYAH	10	109	9%	\$187,500
STEPHENS	20	268	7%	\$83,333
TEXAS	3	71	4%	\$555,555
TILLMAN	20	214	9%	\$68,182
TULSA	39	210	19%	\$34,965
WAGONER	17	104	16%	\$110,294
WASHINGTON	18	147	12%	\$75,758
WASHITA	31	295	11%	\$43,988
WOODS	22	248	9%	\$75,758
WOODWARD	5	99	5%	\$333,333
Total	2,497	13,606	18%	\$48,058

Source: Legislative Office of Fiscal Transparency analysis based on data from ODOT.

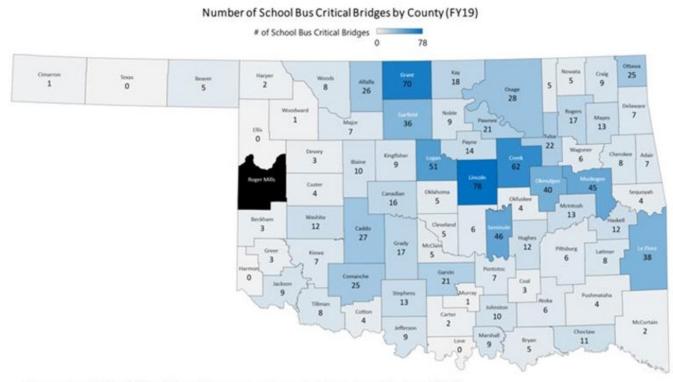
Appendix J. Map of Oklahoma School Districts

Figure 19: Map of Oklahoma School Districts



Source: Legislative Office of Fiscal Transparency based on data from OSDE.

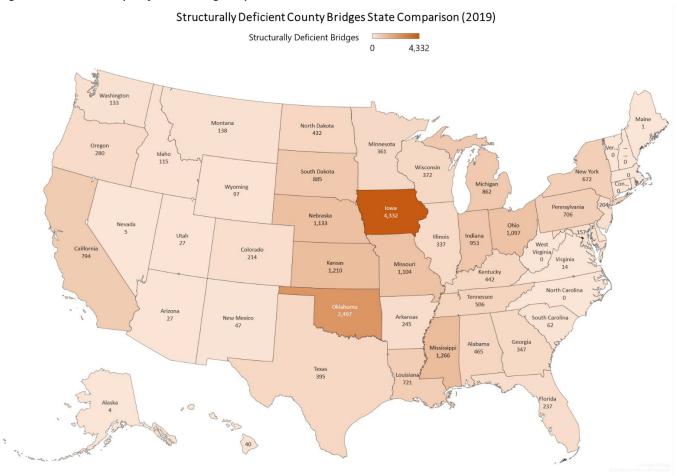
Figure 20: Number of School Bus Critical Bridges by County in FY19 (This figure illustrates the number of bridges classified as school bus critical across Oklahoma in 2019).



Source: Legislative Office of Fiscal Transparency's analysis based on data from ODOT. Note: No data was supplied for Roger Mills County.

Appendix K. Structurally Deficient County Bridges State Comparison (2019)

Figure 21: Structurally Deficient Bridges by State in 2019



Appendix L. CIRB & CBRI Funding Apportionment by County

Table 16: FY20 CIRB and CBRI Apportionment by County and ODOT District.

County	ODOT District	CIRB	CBRI
ADAIR	District 1	\$1,875,000	\$304,270
ALFALFA	District 6	\$1,666,666	\$340,557
ATOKA	District 2	\$1,666,666	\$479,876
BEAVER	District 6	\$1,666,666	\$484,119
BECKHAM	District 5	\$1,363,636	\$292,919
BLAINE	District 5	\$1,363,636	\$338,237
BRYAN	District 2	\$1,666,666	\$434,103
CADDO	District 7	\$1,666,666	\$510,767
CANADIAN	District 4	\$1,666,666	\$508,543
CARTER	District 7	\$1,666,666	\$523,815
CHEROKEE	District 1	\$1,875,000	\$373,886
CHOCTAW	District 2	\$1,666,666	\$365,563
CIMARRON	District 6	\$1,666,666	\$307,274
CLEVELAND	District 3	\$1,363,636	\$686,829
COAL	District 3	\$1,363,636	\$275,438
COMANCHE	District 7	\$1,666,666	\$672,916
COTTON	District 7	\$1,666,666	\$257,362
CRAIG	District 8	\$1,363,636	\$355,925
CREEK	District 8	\$1,363,636	\$488,952
CUSTER	District 5	\$1,363,636	\$356,446
DELAWARE	District 8	\$1,363,636	\$362,165
DEWEY	District 5	\$1,363,636	\$346,302
ELLIS	District 6	\$1,666,666	\$356,772
GARFIELD	District 4	\$1,666,666	\$451,985
GARVIN	District 3	\$1,363,636	\$585,868
GRADY	District 7	\$1,666,666	\$604,816
GRANT	District 4	\$1,666,666	\$541,264
GREER	District 5	\$1,363,636	\$310,824
HARMON	District 5	\$1,363,636	\$244,042
HARPER	District 6	\$1,666,666	\$321,247
HASKELL	District 1	\$1,875,000	\$351,822
HUGHES	District 3	\$1,363,636	\$369,209
JACKSON	District 5	\$1,363,636	\$380,239
JEFFERSON	District 7	\$1,666,666	\$236,580
JOHNSTON	District 3	\$1,363,636	\$255,495
KAY	District 4	\$1,666,666	\$439,691
KINGFISHER	District 4	\$1,666,666	\$513,634
KIOWA	District 5	\$1,363,636	\$404,567
LATIMER	District 2	\$1,666,666	\$250,579
LEFLORE	District 2	\$1,666,666	\$661,465
LINCOLN	District 3	\$1,363,636	\$489,080

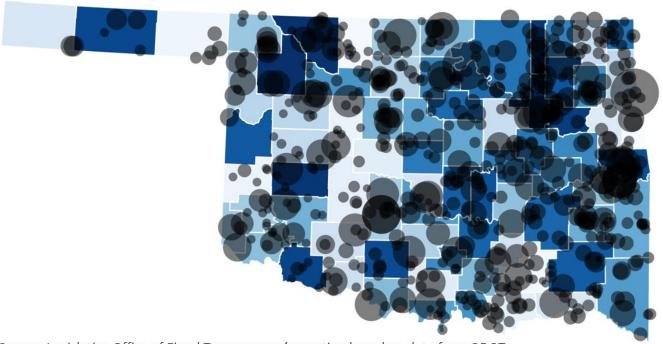
Total	-	\$120,000,000	\$31,573,678
WOODWARD	District 6	\$1,666,666	\$330,244
WOODS	District 6	\$1,666,666	\$454,603
WASHITA	District 5	\$1,363,636	\$439,830
WASHINGTON	District 8	\$1,363,636	\$491,745
WAGONER	District 1	\$1,875,000	\$302,790
TULSA	District 8	\$1,363,636	\$408,542
TILLMAN	District 5	\$1,363,636	\$287,976
TEXAS	District 6	\$1,666,666	\$413,981
STEPHENS	District 7	\$1,666,666	\$605,261
SEQUOYAH	District 1	\$1,875,000	\$314,828
SEMINOLE	District 3	\$1,363,636	\$340,004
ROGERS	District 8	\$1,363,636	\$334,646
ROGER MILLS	District 5	\$1,363,636	\$311,316
PUSHMATAHA	District 2	\$1,666,666	\$330,564
POTT	District 3	\$1,363,636	\$559,948
PONTOTOC	District 3	\$1,363,636	\$444,853
PITTSBURG	District 2	\$1,666,666	\$625,189
PAYNE	District 4	\$1,666,666	\$408,272
PAWNEE	District 8	\$1,363,636	\$323,964
OTTAWA	District 8	\$1,363,636	\$315,133
OSAGE	District 8	\$1,363,636	\$694,091
OKMULGEE	District 1	\$1,875,000	\$524,833
OKLAHOMA	District 4	\$1,666,666	\$869,761
OKFUSKEE	District 3	\$1,363,636	\$446,427
NOWATA	District 8	\$1,363,636	\$267,630
NOBLE	District 4	\$1,666,666	\$295,982
MUSKOGEE	District 1	\$1,875,000	\$534,331
MURRAY	District 7	\$1,666,666	\$217,756
MAYES	District 1	\$1,875,000	\$418,096
MARSHALL	District 2	\$1,666,666	\$264,826
MAJOR	District 3	\$1,363,636	\$349,714
MCINTOSH	District 8	\$1,363,636	\$340,459
MCCURTAIN	District 2	\$1,666,666	\$558,933
MCCLAIN	District 6	\$1,666,666	\$250,657
LOVE	District 7	\$1,666,666	\$306,576
LOGAN	District 4	\$1,666,666	\$354,472

Source: Legislative Office of Fiscal Transparency based on data from OTC

Appendix M. Current CIRB Projects

Figure 22: Current CIRB Projects (as of 05/20/2021)

Current CIRB Projects



Source: Legislative Office of Fiscal Transparency's creation based on data from ODOT. Note: Size of the circles indicate the level of spending for CIRB projects.

Appendix N. CIRB FY19 Apportionment per County Road Mileage

Table 17: Apportionment per County Road Mileage by ODOT District

ODOT District	Road Mileage	Miles Share vs. State Counties Miles	Miles per SD Bridge	SD Bridge per Miles Rank	CIRB Statutory Apportionment	Funding per Mile	Funding per Mile Rank
District 1	7,273	16%	0.032	4	\$14,999,996	\$ 2,062	1
District 2	8,338	16%	0.020	6	\$14,999,994	\$ 1,799	2
District 3	9,494	14%	0.057	1	\$14,999,994	\$ 1,580	4
District 4	11,515	13%	0.046	3	\$14,999,996	\$ 1,303	6
District 5	13,649	11%	0.012	7	\$14,999,996	\$ 1,099	8
District 6	13,065	11%	0.009	8	\$14,999,994	\$ 1,148	7
District 7	9,031	10%	0.027	5	\$14,999,994	\$ 1,661	3
District 8	10,456	9%	0.048	2	\$15,000,000	\$ 1,435	5
Total	82,822	100%	0.030	-	\$119,999,964	\$ 1,449	-

Source: Legislative Office of Fiscal Transparency analysis based on data from ODOT.

Table 18: Apportionment per County Road Mileage by County

County	Road Mileage	Miles per Structurally Deficient Bridge	CIRB Apportionment	CIRB Funding per Mile
ADAIR	767	45	\$1,875,000	\$2,446
ALFALFA	1,348	26	\$1,666,666	\$1,236
АТОКА	832	55	\$1,666,666	\$2,003
BEAVER	2,101	300	\$1,666,666	\$793
BECKHAM	1,157	386	\$1,363,636	\$1,178
BLAINE	1,304	37	\$1,363,636	\$1,046
BRYAN	1,054	50	\$1,666,666	\$1,581
CADDO	1,893	20	\$1,666,666	\$880
CANADIAN	972	44	\$1,666,666	\$1,714
CARTER	823	37	\$1,666,666	\$2,026
CHEROKEE	955	48	\$1,875,000	\$1,964
CHOCTAW	736	67	\$1,666,666	\$2,264
CIMARRON	1,513	378	\$1,666,666	\$1,102
CLEVELAND	298	99	\$1,363,636	\$4,578
COAL	508	24	\$1,363,636	\$2,685
COMANCHE	1,276	30	\$1,666,666	\$1,306
COTTON	949	119	\$1,666,666	\$1,756
CRAIG	1,037	35	\$1,363,636	\$1,315
CREEK	1,095	10	\$1,363,636	\$1,245
CUSTER	1,391	107	\$1,363,636	\$981
DELAWARE	1,192	50	\$1,363,636	\$1,144
DEWEY	1,120	373	\$1,363,636	\$1,218
ELLIS	1,278	319	\$1,666,666	\$1,304
GARFIELD	1,862	20	\$1,666,666	\$895
GARVIN	1,054	17	\$1,363,636	\$1,294
GRADY	1,492	37	\$1,666,666	\$1,117
GRANT	1,760	11	\$1,666,666	\$947
GREER	846	47	\$1,363,636	\$1,611
HARMON	771	385	\$1,363,636	\$1,769
HARPER	1,015	254	\$1,666,666	\$1,643
HASKELL	596	27	\$1,875,000	\$3,148

HIICHEC	925	10	\$1,262,626	¢1 c22
HUGHES	835	19	\$1,363,636	\$1,632
JACKSON	1,199	86	\$1,363,636	\$1,137
JEFFERSON	708	51	\$1,666,666	\$2,353
JOHNSTON	516	20	\$1,363,636	\$2,644
KAY	1,441	33	\$1,666,666	\$1,157
KINGFISHER	1,544	41	\$1,666,666	\$1,079
KIOWA	1,544	64	\$1,363,636	\$883
LATIMER	468	67	\$1,666,666	\$3,565
LE FLORE	1,375	30	\$1,666,666	\$1,212
LINCOLN	1,519	11	\$1,363,636	\$898
LOGAN	1,201	13	\$1,666,666	\$1,388
LOVE	424	141	\$1,666,666	\$3,933
MAJOR	546	30	\$1,666,666	\$3,055
MARSHALL	1,370	55	\$1,666,666	\$1,216
MAYES	847	42	\$1,363,636	\$1,610
MCCLIAN	1,212	61	\$1,363,636	\$1,125
MCCURTAIN	503	72	\$1,666,666	\$3,312
MCINTOSH	1,112	35	\$1,875,000	\$1,686
MURRAY	348	70	\$1,666,666	\$4,787
MUSKOGEE	1,239	19	\$1,875,000	\$1,514
NOBLE	1,117	53	\$1,666,666	\$1,493
NOWATA	671	34	\$1,363,636	\$2,033
OKFUSKEE	682	14	\$1,363,636	\$1,998
OKLAHOMA	543	54	\$1,666,666	\$3,068
OKMULGEE	925	17	\$1,875,000	\$2,026
OSAGE	1,643	19	\$1,363,636	\$830
OTTAWA	805	13	\$1,363,636	\$1,694
PAWNEE	852	16	\$1,363,636	\$1,601
PAYNE	1,075	21	\$1,666,666	\$1,551
PITTSBURG	1,287	51	\$1,666,666	\$1,295
PONTOTOC	892	23	\$1,363,636	\$1,529
POTTAWATOMIE	1,129	31	\$1,363,636	\$1,208
PUSHMATAHA	712	89	\$1,666,666	\$2,340
ROGER MILLS	1,226	0	\$1,363,636	\$1,113
ROGERS	1,136	32	\$1,363,636	\$1,200
SEMINOLE	850	8	\$1,363,636	\$1,605
SEQUOYAH	828	83	\$1,875,000	\$2,265
STEPHENS	1,118	56	\$1,666,666	\$1,490
TEXAS	2,493	831	\$1,666,666	\$668
TILLMAN	1,421	71	\$1,363,636	\$960
TULSA	667	17	\$1,363,636	\$2,045
WAGONER	852	50	\$1,875,000	\$2,201
WASHINGTON	513	28	\$1,363,636	\$2,661
WASHITA	1,671	54	\$1,363,636	\$816
WOODS	1,401	64	\$1,666,666	\$1,190
WOODWARD	1,370	274	\$1,666,666	\$1,216
Total	82,822		\$119,999,964	\$1,449

Source: Legislative Office of Fiscal Transparency's Analysis based on data from ODOT and OCCEDB.

Appendix O. Federal Funding in CIRB and Available Grants

ODOT FHWA Grant Share and Apportionment for CIRB (in Federal FY20)

Table 19: Federal FY20 Funding Use for County ⁶⁹Projects by Activity Type (Table compares initial FHWA funds allocation for county projects with authorizations; due to <u>23 CFR § 650.303</u> mandate requiring ODOT to inspect all bridges on public roads, final authorization exceeded initial 2020 allocation and ODOT utilized more of the FHWA funding to comply with the mandate)

Activity Type	ODOT Allocation	Al. %	Authorizatio n	Aut. %	# Projects
Bridge Constr.	\$18,000,000	64.29%	\$15,999,123	62%	52
Bridge Inspection	\$4,000,000	14.29%	\$8,286,474	32%	N/A
Road Constr. Total	\$6,000,000	21.43%	\$9,412,686	36%	18
Road Constr.	-	-	\$6,537,717	25%	14
City Street Constr.	-	-	\$2,294,807	9%	3
Enhancement Constr.	-	-	\$580,162	2%	1
Total	\$28,000,000	100%	\$33,698,282	130%	-

Source: Legislative Office of Fiscal Transparency based on ODOT

Table 20: Federal FY20 Funding Use for CIRB Projects by County (List of bridge, \$15,999,123, and road, \$9,412,686, authorized construction projects by county)

County	# Constr. Projects	Amount		
•	# Constr. Projects			
04 - BEAVER	1	\$100,000		
05 - BECKHAM	3	\$548,563		
06 - BLAINE	1	\$9,600		
10 - CARTER	1	\$400,000		
13 - CIMARRON	1	\$500,000		
15 - COAL	1	\$666,308		
17 - COTTON	4	\$563,989		
21 - DELAWARE	1	\$580,646		
22 - DEWEY	4	\$1,076,097		
23 - ELLIS	1	\$1,000,000		
27 - GRANT	2	\$647,726		
28 - GREER	5	\$278,198		
31 - HASKELL	1	\$4,748		
33 - JACKSON	2	\$477,247		
34 - JEFFERSON	1	\$751,434		
37 - KINGFISHER	2	\$6,512		
38 - KIOWA	4	\$1,910,796		
39 - LATIMER	1	\$22,016		
40 - LEFLORE	1	\$700,000		
41 - LINCOLN	4	\$1,106,441		
43 - LOVE	1	\$240,864		
47 - MAJOR	2	\$923,530		
48 - MARSHALL	1	\$250,000		
49 - MAYES	1	\$580,646		
50 - MURRAY	1	\$742,012		
51 - MUSKOGEE	4	\$1,630,830		
54 - OKFUSKEE	1	\$426,713		
55 - OKLAHOMA	2	\$786,426		
60 - PAYNE	1	\$500,000		
62 - PONTOTOC	1	\$426,713		
66 - ROGERS	2	\$1,031,846		
67 - SEMINOLE	1	\$465,070		
69 - STEPHENS	1	\$467,808		
70 - TEXAS	2	\$600,000		
72 - TULSA	4	\$2,874,969		
74 - WASHINGTON	1	\$870,969		
75 - WASHITA	1	\$225,000		
76 - WOODS	2	\$1,018,092		
Total	70	\$25,411,808		
Comment a side time Office of Fig. 17				

Source: Legislative Office of Fiscal Transparency based on ODOT

⁶⁹ ODOT utilizes a portion of FHWA funds to comply with 23 CFR § 650.303 for inspection of all bridges on public roads

Federal Grants Available for Roads and Bridges

Grants have specific guidance addressing what bridges/roads they can be applied towards, recipients are presented with an opportunity to reallocate internal source for projects not qualified for repair under the Federal grants, when utilizing federal funds for projects that are qualified.

American Rescue Plan Act

American Rescue Plan Act (ARP) was signed on March 11, 2021 and designated \$350,103,000 to Oklahoma for transportation needs.⁷⁰

Table 21: American Rescue Plan Act Grants through the US Department of Transportation

American Rescue Plan Act Funding for Transportation (in thousands)	Other	\$350,103
CARES Act		\$149,017
FTA Nonurbanized Formula (CARES Act)		\$51,393
FTA Urbanized Formula (CARES Act)		\$55,422
FAA Grants-in-Aid for Airports		\$42,203
Consolidated Appropriations Act		\$173,132
FHWA Surface Transportation Block Grant		\$157,253
FTA Nonurbanized Formula (P.L. 116-260)		\$387
Enhanced Mobility of Seniors and Persons with Disabilities - State (P.L. 116-260)		\$294
FAA Airport Coronavirus Response Grant Program		\$15,199
American Rescue Plan Act		\$27,953
FTA Intercity Bus Formula		\$2,368
FTA Urbanized Area Formula (ARP)	Tribal Allocations	\$16,622
FTA Nonurbanized Area Formula (ARP)		\$8,418
FTA Enhanced Mobility of Seniors and Persons with Disabilities (ARP)		\$545

Source: Federal Funds Information for States

The Transportation Infrastructure Finance and Innovation Act (TIFIA)

TIFIA provides low interest loan assistance for regional projects of recognized significance in the form of three instruments:⁷¹

- Secured (direct) loan
- Loan guarantee
- Standby line of credit

Eligible projects are: highways and bridges, intelligent transportation systems, intermodal connectors, transit vehicles and facilities, intercity buses and facilities, freight transfer facilities, pedestrian bicycle infrastructure networks, transit-oriented development, rural infrastructure projects, passenger rail vehicles and facilities, surface transportation elements of port projects

⁷⁰ The ARP: Initial State Allocations, Estimates | Federal Funds Information for States (ffis.org)

⁷¹ Program Overview | Build America (transportation.gov)

Other Federal Highway Administration Programs and Projects

The following are other examples of grants that could be utilized by the ODOT, County Commissioners, and CEDs for various CIRB related projects⁷²:

- Highway Bridge Replacement And Rehabilitation Program (HBRRP): HBRRP funds may be used for (1) the total replacement of a structurally deficient or functionally obsolete highway bridge on any public road with a new facility constructed in the same general traffic corridor, (2) the rehabilitation that is required to restore the structural integrity of a bridge on any public road, as well as the rehabilitation work necessary to correct major safety (functional) defects, (3) the replacement of ferryboat operations in existence on January 1, 1984, the replacement of bridges destroyed before 1965, low-water crossings, and bridges made obsolete by Corps of Engineers (COE) flood control or channelization projects and not rebuilt with COE funds, and (4) bridge painting, seismic retrofitting, calcium magnesium acetate applications, sodium acetate/formate, or other environmentally acceptable, minimally corrosive anti-icing and de-icing compositions or installing scour countermeasures. Deficient highway bridges eligible for replacement or rehabilitation must be over waterways, other topographical barriers, other highways, or railroads. They must, however, as determined by the State and the Secretary of Transportation, be significantly important and unsafe because of structural deficiencies, physical deterioration, or functional obsolescence.
- Bridges on Indian Reservation Roads (IRR): Highway Bridge Replacement and Rehabilitation
 Program (HBRRP) funds set aside for Bridges on Indian Reservation Roads may be obligated for
 eligible projects to replace, rehabilitate, paint, or apply calcium magnesium acetate to highway
 bridges located on Indian reservation roads.
- National Historic Covered Bridge Preservation: Projects are to provide for rehabilitation or repair of a historic covered bridge (listed or eligible for listing on the National Register of Historic Places); and for preservation of an historic covered bridge by installation of a fire protection system, including a fireproofing or fire detection and sprinklers. Projects may also include installation of a system to prevent vandalism and arson, or relocation of a bridge to a preservation site. Additionally, funds may be used to collect and disseminate information concerning historic covered bridges, to foster educational programs relating to the history and construction techniques of such structures, conduct research on their history, and conduct research and study techniques on protecting them from rot, fire, natural disaster or weight-related damage. Projects must be carried out in the most historically appropriate manner and preserve the existing structure. Projects must also provide for replacement of wooden components with wooden components unless the use of wood is impractical for safety reasons.

⁷² https://www.fhwa.dot.gov/programadmin/if99006.cfm

Appendix P. CIRB Processes

Figure 23: CIRB 5-Year Planning process including all State, Federal, and Private entity participation.

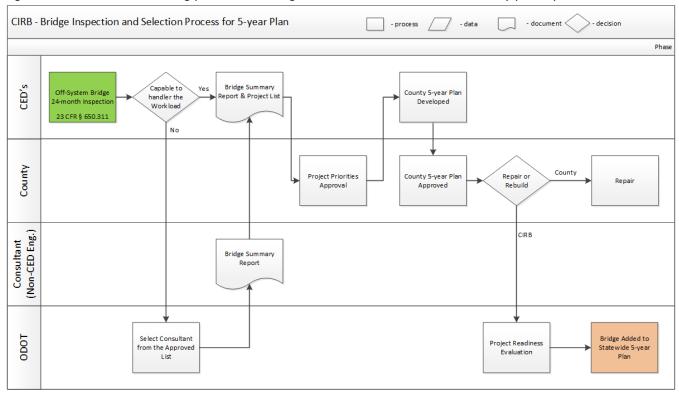
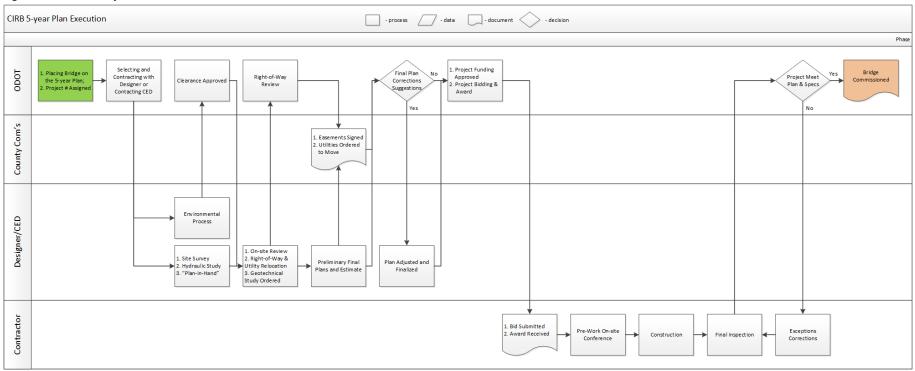


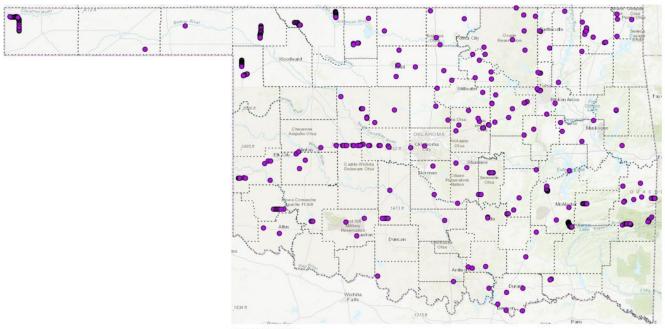
Figure 24: CIRB Projects on 5-Year Plan Execution.



Project is approved by the Transportation Commission and added to the CIRB 5-Year Plan, at which time ODOT assigns a project number. County Commissioners select an Engineer or Designer, or elect for the local CED to perform the design functions. All projects must meet local and federal EPA requirements. Depending on project size and complexity, this process can range from months to years. Designer performs a geometric survey providing data to engineers required to perform a Hydraulic Analysis for bridge projects, or drainage information for roadway projects. County Commissioners, ODOT personnel, CED personnel, and designers meet to review the "Plan-in-Hand" plan. After making any updates to the plan set, right-of-way plans are created showing all landowners and parcels necessary for construction. If necessary, Utility Relocation plans are drafted, and coordination with utility owners takes place. Geotechnical investigations are also conducted to identify the proper subgrade material. Final plans and estimates are submitted to ODOT and, upon approval, will be placed on an ODOT Letting (County Commissioner approval is required for all bids exceeding 10% over Engineer's estimate). ODOT, through Transportation Commission approval, awards a construction contract to the lowest responsive bidder. A Pre-Construction Conference is conducted with the contractor, commissioner and construction of the road/bridge can begin. Once construction is complete, a final inspection is conducted before the roadway can be reopened to the public.

Appendix Q. Oklahoma Historical Bridges

Figure 25: Map of the State's Historical Bridges



Source: ODOT

Appendix R. Other States Methodology

Figure 26: Vermont State Methodology. (The Vermont Long-Range Transportation Plan is broad and sets general policy direction; modal plans such as the rail, intercity bus, and aviation system plans establish goals and objectives with more specificity and often identify project priorities.)⁷³



^{73 2040} Vermont Long-Range Transportation Plan

Appendix S. Local Technical Assistance Program Curriculum⁷⁴

Table 22: Oklahoma Local Technical Assistance Program FY21 Work Plan Training Classes

OKLTAP FFY 21 Work Plan Training Classes						
Course No.	Road Scholar Classes	Class Periods	No. of Classes	Core Classes	Class Periods	No. of Classes
1	Aggregate Road Maintenance	1	3	FHWA EDC Classes	1	4
2	Excavation Safety	1	3	Global Positioning System (GPS)	1	1
3	Testing for Soil Properties	2	2	Geographic Information System (GIS)	1	1
4	MUTCD, Part 6	2	4	Winter Maintenance	1	4
5	Pavement Preservation	2	3	Commercial Driver's License Test Prep	2	6
6	Traffic Incident Management	1	4	CDL Pre-Trip Inspection	1	6
7	Construction Project Management	2	2	Wildland Fire	1	4
8	Plan Reading	2	2	Equipment Maintenance	1	2
				Concrete Composition	1	2
				Leadership Skills	1	2
				Heavy Equipment Training	1	2
				Erosion Control	1	2
				Defensive Driving	1	4
				Grader Training	1	2
				Chain Saw/Mower Safety	1	4
				Bridge Welding Certification	2	1
				Equipment Air Conditioner	1	2
				Bridge Basics	1	2
Total Class			23			51

Source: Oklahoma State University

⁷⁴ Oklahoma Local Technical Assistance Program (LTAP) | Center for Local Government Technology | Oklahoma State University (okstate.edu)

Appendix T. LOFT's Projection for Completion of Deficient County Bridges Across State, by District

Using data provided from Table 03 on Page 17 of this report, LOFT estimates the subsequent completion years for each district:

ODOT District	Estimated Completion Year
District 1	2042
District 2	2027
District 3	2041
District 4	2029
District 5	2025
District 6	2022
District 7	2036
District 8	2056

Source: Legislative Office of Fiscal Transparency

The table to the right shows the estimated year for construction or reconstruction of all structurally deficient county bridges. This analysis is based on the current trends within each district, which includes appropriation and funding formulas in place at the time of LOFT's evaluation. As of the date of this report, ODOT is working to obtain and provided additional data to LOFT regarding the "net" bridges completed within each district. This additional data would enhance the estimated completion year projections provided.

Using the same data set, *Oklahoma could have all bridges completed by 2032* if resources were pooled and redistributed to districts based on need. Of note, this analysis does not factor in funding above current appropriation levels, ODOT's current capacity to construct or repair bridges, inflation, and a myriad of other factors which should be considered when conducting a more comprehensive analysis. This analysis is based solely on the current trends and data

provided within the scope and framework of the CIRB Priority Evaluation presented to the Legislative Oversight Committee on June 21, 2021.

Methodology: Estimation for Completion Year for Each ODOT District

LOFT conducted a trendline analysis on the data provided by ODOT regarding the total number of bridges which remained classified as "deficient" for the period from 2008 to 2019. The data was scatter plotted within Excel to calculate a trendline and obtain the base equation of y=Mx + b. The y-intercept (b) and slope (M) for each district, and the State as a whole, were then calculated. For the purposes of this analysis, the number of bridges were established as the "y-axis" and the year established as the "x-axis." Once equation inputs were determined, zero was plugged into the based equation for "y" to form 0=Mx + b. The equation for each ODOT district and State are as follows:

Oklahoma: y = -195.52x + 397,165

District 1: y = -12.185x + 24,878	District 5: y = -27.755x + 56,189
District 2: y = -19.559x + 39,645	District 6: y = -32.063x + 64,820
District 3: y = -23.552x + 48,057	District 7: y = -14.456x + 29,446
District 4: y = -51.564x + 105,191	District 8: y = -14.08x + 28,940

Agency Response

• ODOT Response to LOFT, June 8, 2021



ODOT would like to thank those involved in their tremendous effort and insight in evaluating the effectiveness of the CIRB funds administered through the Oklahoma Department of Transportation (ODOT). The findings and recommendations provided the agency a new perspective in some of the areas identified. Many of the suggested improvements have already been implemented by ODOT. The agency substantially agrees with the findings, and looks forward to refining and ultimately implementing changes to improve the effectiveness and efficiency of the CIRB program.

The CIRB was established for the sole purpose of construction or reconstruction of roads or bridges on the county highway system, that are of the highest priority for each ODOT Commission district, as defined by the Transportation Commission. As such, the Department cooperatively developed and promulgated rules identifying the use of funds, project eligibility and approval, project selection, programming of projects as well as the implementation of all CIRB projects.

The Department, outside of the administration and management of the CIRB program and projects, federal STBG funding and projects, and bridge condition reporting, has no other jurisdictional or regulatory oversight responsibility on the County system. The board of county commissioners of the various counties shall have exclusive jurisdiction over the designation, construction and maintenance and repair of all of the county highways and bridges therein. The county highway system is comprised of all public roads within any county, less any part of any road or road which may be designated as a state highway by the State Transportation Commission.

As stated previously, CIRB funds are used for the construction or reconstruction of roads and bridges on the county system. CIRB funding is not eligible for or dedicated to the routine maintenance of the county system. This distinction is critical in establishing and identifying roles and responsibilities of both the Department and the respective county commissioners and boards.



TECHNICAL RESPONSE

FINDING 1: Despite infrastructure improvements under the CIRB, one out of five county bridges remain structurally deficient.

Does the agency agree with the facts as presented?

ODOT substantially agrees with the facts as presented. One clarifying point of note would be in regards to the more than 69 bridges constructed within the last 20 years that are currently deficient. All of these structures, as identified by the report, are on the county system and a vast majority of them are scour related. Flooding events, like the statewide impact of the 2019 floods, are a primary contributor to this issue and could be handled through maintenance of effort.

Does the agency agree with the recommendations related to the findings?

- 1. ODOT agrees that performance benchmarks for the CIRB program should be cooperatively established. The success of ODOT's 8 Year Workplan is grounded in transparency, the establishment of goals, and delivery of the projects identified. ODOT's focus on reducing the number of On-system SD bridges resulted in there being less than 1% SD bridges on the highway system today (from 49th to 9th in the nation), for the bridges under ODOT's jurisdictional responsibility. Similar goals could be established for CIRB projects to address deficiencies on the county system.
- 2. The creation of an annual roads report that includes data metrics for improved roads with minimum traffic counts would be beneficial in assisting in the determination of priority projects. The Department can readily provide technical assistance in the production of the report. However, this responsibility should remain with the County as they have the jurisdictional responsibility for county road improvements and operations.
- 3. Based on the recommendation from LOFT, to improve communication and data sharing regarding school bus critical bridges, ODOT has already produced and placed GIS based maps on the public facing web site showing all SD bridges with school districts. This will allow school administration to access the data as needed. An additional layer will be added to delineate load ratings under 15 tons.
- 4. Although not CIRB related, the agency can work cooperatively to develop load posting signage standards to delineate load ratings under 15 Tons, further making the driver aware that the load posted bridge is school bus critical. The current federal standard only requires weight limit posting. Additional signage above the current federal standard, if deemed necessary, should be cooperatively developed to ensure uniformity. Deficiencies in load postings is identified during the bridge inspection process. Counties are notified when load posting signs are not in place, and photo documentation of the corrected deficiency is required.



Finding 2: CIRB's funding formula could more efficiently target county infrastructure challenges.

Does the agency agree with the facts as presented? ODOT substantially agrees with the facts presented.

Does the agency agree with the recommendations related to the findings?

- ODOT agrees that any additional apportionments, such as special appropriations
 provided by legislation could be applied to projects outside the CIRB 5 Year Plan that
 represent the greatest critical infrastructure challenges, outside the current statutory
 allocation of 1/8 to each District.
- 2. ODOT agrees that collection of roadway data, similar to the bridge data could assist the counties in establishing priorities. In accordance with statute, ODOT currently provides assistance to the county commissioners in the functional classification of roadways and if improved or unimproved, as part of the certified road mileage as is required by federal regulation. Condition ratings, similar to the federal requirement for the state system, could be established at the county level. ODOT can provide technical assistance and subject matter expertise to aid the county in the data collection for their jurisdictional responsibility.
- ODOT agrees that raising the awareness of federal grant opportunities could help counties improve their infrastructure. The Department has subject matter expertise in the pursuit of federal transportation infrastructure grants and will continue to provide this assistance to the counties as requested.

Finding 3: CIRB's processes lack prioritization, are overly complex and undercoordinated.

Does the agency agree with the facts as presented? The agency substantially agrees with the information provided with the exception of 'Inconsistent Standards and Lack of Oversight'. The Department has worked collaboratively with stakeholders to develop County Bridge Standards and the County Road Design Guide to establish minimum criteria that are applied to all CIRB projects, to ensure safety is addressed and engineering judgement is used to provide longevity to the infrastructure investment. The responsibility of the Department in the application of these standards only apply to CIRB and STBG projects. The Department has no other jurisdictional authority or responsibility on other construction and maintenance operations performed by the respective counties. Additionally, the report identifies that bridge inspections are subsidized, through a portion of CIRB funds. However, the Department utilizes federal STBG funds to pay for this federal mandate.



Does the agency agree with the recommendations related to the findings?

- 1. The agency agrees that more specific project selection criteria and metrics could be further developed. However, CIRB projects currently reflect projects of the highest priority due to ODOT's guidance and oversight of the program. The project selection criteria and metrics will become even more critical, should the funding allocation be switched from an ODOT district distribution to a statewide project distribution model. Aligning CED boundaries and ODOT District boundaries may not be relevant should the funding allocation move away from an ODOT district boundary.
- 2. The Department agrees that a more formal data driven approach to prioritization could be beneficial.
- 3. The Department agrees with this recommendation.
- 4. Due to ODOT's familiarity with federal regulations and FHWA oversight agreements, ODOT is already involved in the coordination of county projects receiving federal funds.
- 5. ODOT is designated as the record keeping agency for historically significant bridges in the State of Oklahoma. ODOT coordinates with State Historic Preservation Office (SHPO) to maintain an updated list. Additional process could be developed to help with this educational item.
- 6. The term "structurally deficient' is defined by FHWA as part of the National Bridge Inventory System. This is a nationally accepted and recognized term to describe the condition of certain bridge elements.
- 7. The jurisdictional responsibility for maintaining county roads and bridges statutorily lies with the counties. ODOT does not have the authority to establish minimum maintenance standards for the county system.

Finding 4: Oklahoma has the opportunities to leverage best practices from peer State Transportation Departments to strengthen county education and capabilities.

Does the agency agree with the facts as presented? ODOT substantially agrees with the facts presented.

Does the agency agree with the recommendations related to the findings?

- 1. ODOT has the institutional knowledge and expertise to assist with any additional transportation related curriculum. However, ODOT has no ability to control the participation rate of the county commissioners.
- 2. The review, evaluation and reporting on statewide governance, configuration and organization strategies in coordinating management, oversight and funding of "all" forms of transportation in the state should remain according to each entities jurisdictional responsibility.



POLICY RESPONSE

FINDING 1: Despite infrastructure improvements under the CIRB, one out of five county bridges remain structurally deficient.

- The agency agrees that project selection criteria and metrics could be further developed, in cooperation with all stakeholders, to assist in prioritization of CIRB projects. Should the funding allocation be switched from an ODOT district distribution to a statewide project distribution model, the project selection criteria and metrics will be even more critical.
- 2. ODOT has developed and produced a GIS based map and has made it available via a public website. ODOT will work internally to ensure all information is updated in July so the most accurate information is provided before school begins. Additional efforts to aide in the awareness of the information can be provided.
- 3. See comment number two.
- 4. The Department will continue to provide the annual report on bridge conditions to the county for their utilization.

Finding 2: CIRB's funding formula could more efficiently target county infrastructure challenges.

- 1. Prioritizing funding concentrations to structurally deficient bridges could assist in the counties effort of reducing SD bridges.
- 2. The Department agrees that transparency in infrastructure investment is important.
- 3. No opinion.
- If adjustments in the apportionment of funds are deemed necessary, the development of criteria should be cooperatively developed with input from CAB, OCCEDB, ACCO, and other transportation stakeholders.

Finding 3: CIRB's processes lack prioritization, are overly complex and undercoordinated.

- If the ODOT district allocation remains in place, aligning CED boundaries with ODOT Districts could ease complexity. Currently, a county is not required to be part of a CED and has the capability of joining with another county to create another CED.
- 2. The Department welcomes suggestions to enhance efficiency in all our programs.
- 3. ODOT encourages local leaders to collect and utilize data to improve planning decisions in all areas of transportation.
- 4. The definition of historical significance is established by Section 106 of the national historic preservation act.



Finding 4: Oklahoma has the opportunities to leverage best practices from peer State Transportation Departments to strengthen county education and capabilities.

- 1. ODOT is not in favor of managing, regulating, or enforcing education requirements for elected officials.
- 2. No opinion.
- 3. No opinion.

The Department would like to commend the Legislative Office of Fiscal Transparency for the very comprehensive and objective review that has culminated into this report. This report will be a very valuable and useful tool to advance the efficiency and effectiveness of the CIRB program moving forward. Should any additional questions or comments develop, please don't hesitate to call on us for assistance.

Sincerely,

—DocuSigned by:

Tinnous 91 Gatz

Secretary of Transportation

Executive Director