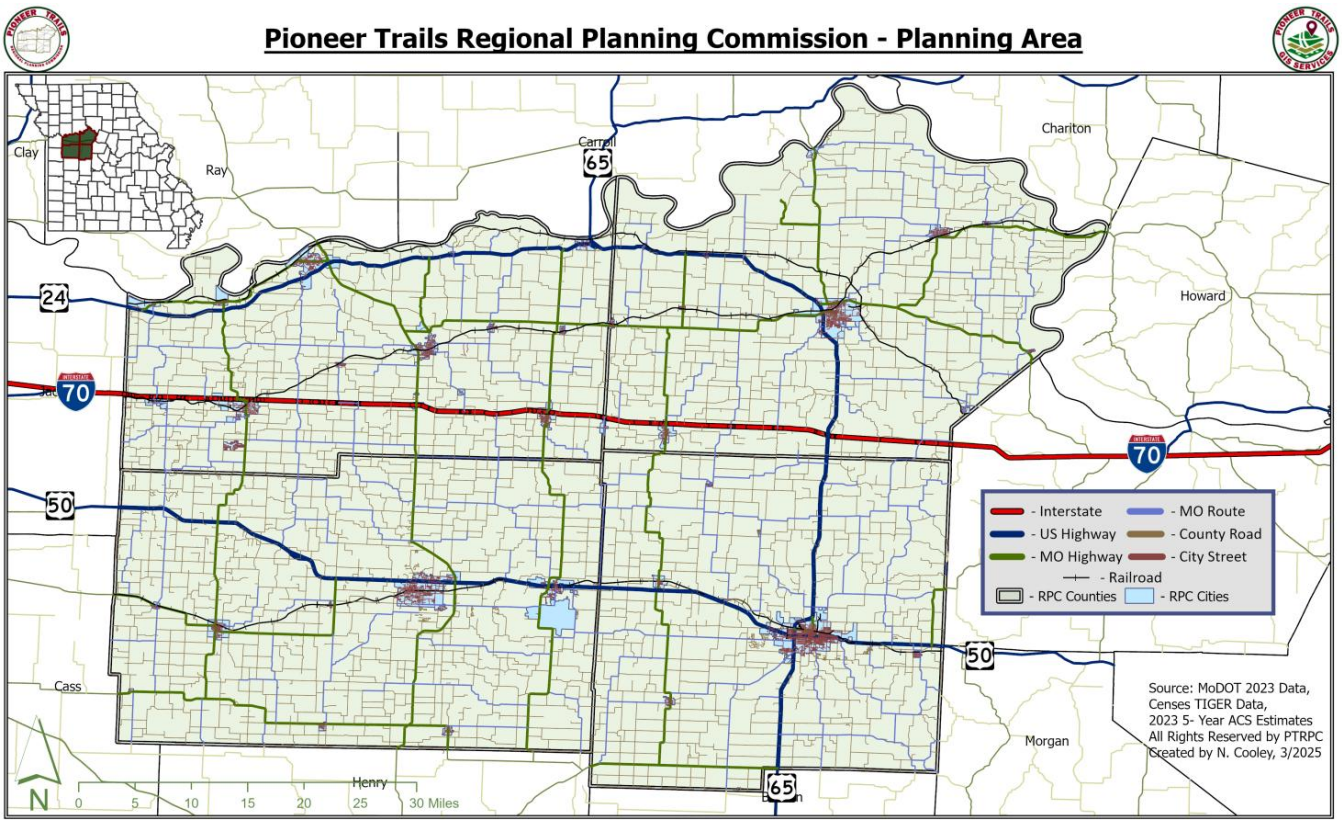
Regional Transportation Plan

Pioneer Trails Regional Planning Commission

2025

Transportation Advisory Council recommended for approval on April 17, 2025

Pioneer Trails Regional Board of Directors approved on May 28, 2025



ACKNOWLEDGMENTS

The Pioneer Trails Regional Planning Commission (Pioneer Trails) extends a special thanks to the Transportation Advisory Council (TAC) members who gave their time, talent and expertise to assist the Pioneer Trails in developing this Regional Transportation Plan.

Pioneer Trails Transportation Advisory Council

April 2025

Name	County	Affiliation
Jimmy Tye	Johnson	County Highway Department
James Bell	Johnson	Concerned Citizen
Phil Adlich	Johnson	Concerned Citizen
Paul Engelmann	Johnson	University of Central Missouri
Rusty Sproat	Johnson	County Commission
Tom Charette	Johnson	Concerned Citizen
John Marr	Johnson	County Commission
Richard Strobel	Johnson	Concerned Citizen
Randy Florence	Lafayette	City of Wellington, Mayor
Kris White	Lafayette	Concerned Citizen
Harold Hoflander	Lafayette	County Commission
Craig Williams	Lafayette	Concerned Citizen
Adam Couch	Lafayette	Concerned Citizen
Michael Brown	Lafayette	City of Concordia, Mayor
Gary Bauer	Lafayette	Concerned Citizen
Monica Ritter	Lafayette	County Commission
James Hill	Pettis	County Road & Bridge Superintendent
Israel Baeza	Pettis	County Commission
Mark Edwards	Pettis	County Commission
Jim Marcum	Pettis	County Commission
David Brown	Pettis	Concerned Citizen
Bill Taylor	Pettis	County Commissioner
Chris Marshall	Pettis	Concerned Citizen
Ron Toellner	Pettis	Concerned Citizen
Clark Fobian	Pettis	Concerned Citizen
Paul Porter	Saline	Concerned Citizen
Bryan Berlin	Saline	Concerned Citizen
Jim Wiseman	Saline	Concerned Citizen
Jack Harvey	Saline	Concerned Citizen
Stephanie Gooden	Saline	County Commissioner
Greg Swift	Saline	Swift Carriers, Inc.
Keith Windmeyer	Saline	Concerned Citizen
Cindy Schroeder	Saline	Concerned Citizen
Tracy Walkup (ex officio)	Regional	OATS Transportation

Pioneer Trails Regional Planning Commission Board

PTRPC Board Members
April 2025

Name	County	Affiliation	Seat Position
Tracy Brantner	Johnson	Johnson County Ec. Dev. Corp.	Johnson County Small City/Village Caucus
Troy Mathews	Johnson	Johnson County Commission	Johnson County Commissioner
Marsha Corbin	Lafayette	Old Trails Regional Tourism Partnership	Lafayette County Stakeholder
Tracy Dyer	Lafayette	County of Lafayette	Lafayette County Private Sector
Stephanie Gooden (V. Chair)	Saline	County of Saline	Saline County Commissioner
Jessica Craig	Pettis	County of Pettis	Pettis County Stakeholder
Jim Marcum	Pettis	Marcum Hauling, Inc.	Pettis County Private Sector
Allan Rohrbach	Pettis	City of Green Ridge	Pettis County Small City/Village Caucus
Greg Swift	Saline	Swift Carriers, Inc.	Saline County Private Sector
Brad MacLaughlin	Lafayette	County of Lafayette	Lafayette County Commissioner
JD Kehrman	Saline	City of Marshall Administrator	City of Marshall Representative
Kristen Dorman	Johnson		City of Warrensburg Representative
	Pettis		City of Sedalia Representative
Beth Hansen (ex officio)	Lafayette	City Council Member	City of Lexington Representative
Ron Kumm	Lafayette	Concerned Citizen	City of Higginsville Representative
Shawna Davis (ex officio)	Lafayette	Odessa City Administrator	City of Odessa Representative
Israel Baeza (Chair)	Pettis	County of Pettis	Pettis County Commissioner
Kit Lindsay	Johnson		Johnson County Private Sector
Mitchell Moon	Johnson		Johnson County Stakeholder
Becky Plattner	Saline		Saline County Small City/Village Caucus
Connor Swift	Saline	Asst. Director of MSDC	Saline County Stakeholder
Vacant	Lafayette		Lafayette County Small City/Village Caucus

Pioneer Trails Regional Planning Commission Staff

Christopher Hess
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Debbie Brackman
Janet Luetjen
Susan Flandermeyer
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REGIONAL TRANSPORTATION PLAN

PIONEER TRAILS REGIONAL PLANNING COMMISSION

2025

CHAPTER 1 — INTRODUCTION / GOALS AND OBJECTIVES

STUDY ORGANIZATION

Pioneer Trails Regional Planning Commission (Pioneer Trails) is one of 19 regional planning organizations chartered by the governor of the State of Missouri. Originally chartered in 1967 as the "Show Me Regional Planning Commission," the organization was renamed in 1995 as the "Pioneer Trails Regional Planning Commission." In 1996, Pioneer Trails became an inactive (but not dissolved) district. After numerous local, state, and federal organizations began working with local elected officials to revitalize the district; in March 2003, the Missouri Office of Administration recognized the Pioneer Trails district as a functioning active council of governments. In September 2003, the Pioneer Trails Board of Directors began hiring start-up staff and once again began operations. The leadership of Pioneer Trails adopted the following mission/vision statement: "The Pioneer Trails Regional Planning Commission serves as a cooperative of the local governments of our four-county region to coordinate and prioritize the community development needs of the region."

Pioneer Trails assists in the governance of Johnson, Lafayette, Pettis, and Saline counties. Pioneer Trails administers the Transportation Advisory Council (TAC) for the region and has prepared this transportation plan on behalf of the member governments and citizens of the region to aid the Missouri Department of Transportation (MoDOT) in developing and maintaining the region's transportation systems.

Since its inception, Pioneer Trails has provided professional services to its members. Additional services provided by Pioneer Trails include mapping services, assisting with grant writing and administration, hosting training sessions and workshops, community and economic development, environmental services, program administration and forums to address regional concerns. Today, Pioneer Trails continues to provide professional services to its member jurisdictions and associate members to address the issues effectively and efficiently that impact the quality of life within the region.

The Pioneer Trails Regional Planning Commission (PTRPC) Transportation Advisory Council (TAC) is composed of 32 members who represent the counties of Lafayette, Johnson, Pettis and Saline. The eight TAC members who represent each county are appointed by their respective county commission.

The purpose of the council is to advise the Pioneer Trails Board of Directors on transportation issues and recommend transportation priorities to the Pioneer Trails Board of Directors. The TAC serves as a channel of communication between the public, MoDOT and the Pioneer Trails Board. The TAC gathers input from local elected officials and the public in order to identify transportation needs in the region, studies those needs and recommends priorities. The TAC also serves as a conduit for information through helping make the public aware of transportation issues, needs and priorities.

The TAC meets quarterly with special meetings scheduled as needed. Staff from MoDOT serve as ex officio members of the council. Johnson, Lafayette, Pettis, and Saline counties are within the boundaries of the Kansas City area MoDOT district.

STUDY AREA

Pioneer Trails is located in West Central Missouri. Neighboring jurisdictions are Ray, Carroll and Chariton counties to the north; Howard, Cooper and Morgan counties to the east; Benton and Henry Counties to the south and Cass and Jackson counties to the west. The Missouri River provides the northern boundary of the region.

The area encompasses 2923 square miles, 43 municipal governments and four county governments.

- Johnson County covers 833 square miles and has eight municipalities including Centerview, Chilhowee, Holden, Kingsville, Knob Noster, Leeton, Warrensburg and Whiteman Air Force Base. Warrensburg serves as Johnson County's county seat.
- Lafayette County covers 639 square miles and has 16 municipalities including Alma, Aullville, Bates City, Blackburn, Concordia, Corder, Dover, Emma, Higginsville, Lake Lafayette, Lexington, Mayview, Napoleon, Odessa, Waverly, and Wellington. Lexington serves as Lafayette County's county seat.
- Pettis County covers 686 square miles and has six municipalities including Green Ridge, Houstonia, Hughesville, La Monte, Sedalia, and Smithton. Sedalia is the county seat of Pettis County.
- Saline County covers 765 square miles and has 13 municipalities including Arrow Rock, Blackburn, Emma, Gilliam, Grand Pass, Malta Bend, Marshall, Miami, Mount Leonard, Napoleon, Slater, and Sweet Springs. Marshall is Saline County's county seat.

See the "Study Area" map at the end of chapter 1.

CONNECTION TO MODOT LONG-RANGE TRANSPORTATION PLAN AND PLANNING FRAMEWORK

The Federal Highway Administration, by law, partners with state transportation departments. The state transportation department consults with local elected officials to create future transportation plans. Therefore, Pioneer Trails has prepared this transportation plan on behalf of the member governments and the citizens of the region to aid MoDOT in developing and maintaining the region's transportation system.

The purpose of this document is to submit the transportation needs of the Pioneer Trails region to MoDOT for inclusion in the state's Long-Range Transportation Plan (LRTP) and the State Transportation Improvement Program (STIP). The LRTP deals with needs over a 20-year planning horizon. The STIP includes projects to which MoDOT has committed over the next five years.

Missouri's Long-Range Transportation Plan addresses how Missourians' expectation for Missouri's transportation system can be met over the next 20 years. Through the On the Move initiative, MoDOT communicated with thousands of Missourians throughout the state to learn about their expectations of Missouri's transportation system. The LRTP examines:

- **"Trends** that will impact Missouri in the next 20 years
- The current state of **Missouri's transportation system**, including highways, bridges, transit systems, railroads, airports, waterways and bicycle and pedestrian facilities
- The **Financial Situation** including current status and outlook
- **Feedback** from On the Move, the largest and most impactful community engagement effort MoDOT has ever undertaken
- **Missouri's Five Transportation Goals** including:

  - **Take care of the transportation system** and services we enjoy
  - **Keep all traveler's safe,** no matter the mode of transportation
  - Invest in projects that spur **economic growth and create jobs**
  - Give Missourians **better transportation choices**
  - **Improve reliability and reduce congestion** on Missouri's transportation system
- **Delivering transportation solutions** will improve business practices and collaboration with partners
- **How to move forward** towards Missouri's transportation vision, including specific strategies to achieve the transportation priorities Missourians have identified"

For more information about the LRTP, see the *Missouri Long-Range Transportation Plan* –Missouri Department of Transportation or Web link at https://www.modot.org/long-range-transportation-plan.

MoDOT developed *The Planning Framework for Transportation Decision Making* which describes the policies utilized to involve the right people being involved in discussing and evaluating transportation needs and making decisions about which projects will move forward. Persons involved in this process to decide which transportation projects will receive available funding include planning partners, transportation stakeholders and the general public. *The Planning Framework for Transportation Decision Making* can be found in Appendix J of *Missouri Long-Range Transportation Plan.*

With assistance from MoDOT, Pioneer Trails has developed an inventory of transportation stakeholders (all modes) with contact information. Pioneer Trails continues to update this inventory as needed.

Planning Process Used to Develop Plan

The Pioneer Trails staff updated their existing Regional Transportation Plan by using the *Regional Transportation Plan Guidelines* provided by MoDOT in May 2008. For more information on the May 2008 guidelines, see the web link at

https://macog.org/document-archive/

TAC members reviewed the RTP and recommended accepting the plan to the Pioneer Trails Board of Directors on April 18, 2024. After considering the TAC's recommendation and reviewing the plan, the Pioneer Trails Board of Directors accepted the RTP on May 29, 2024.

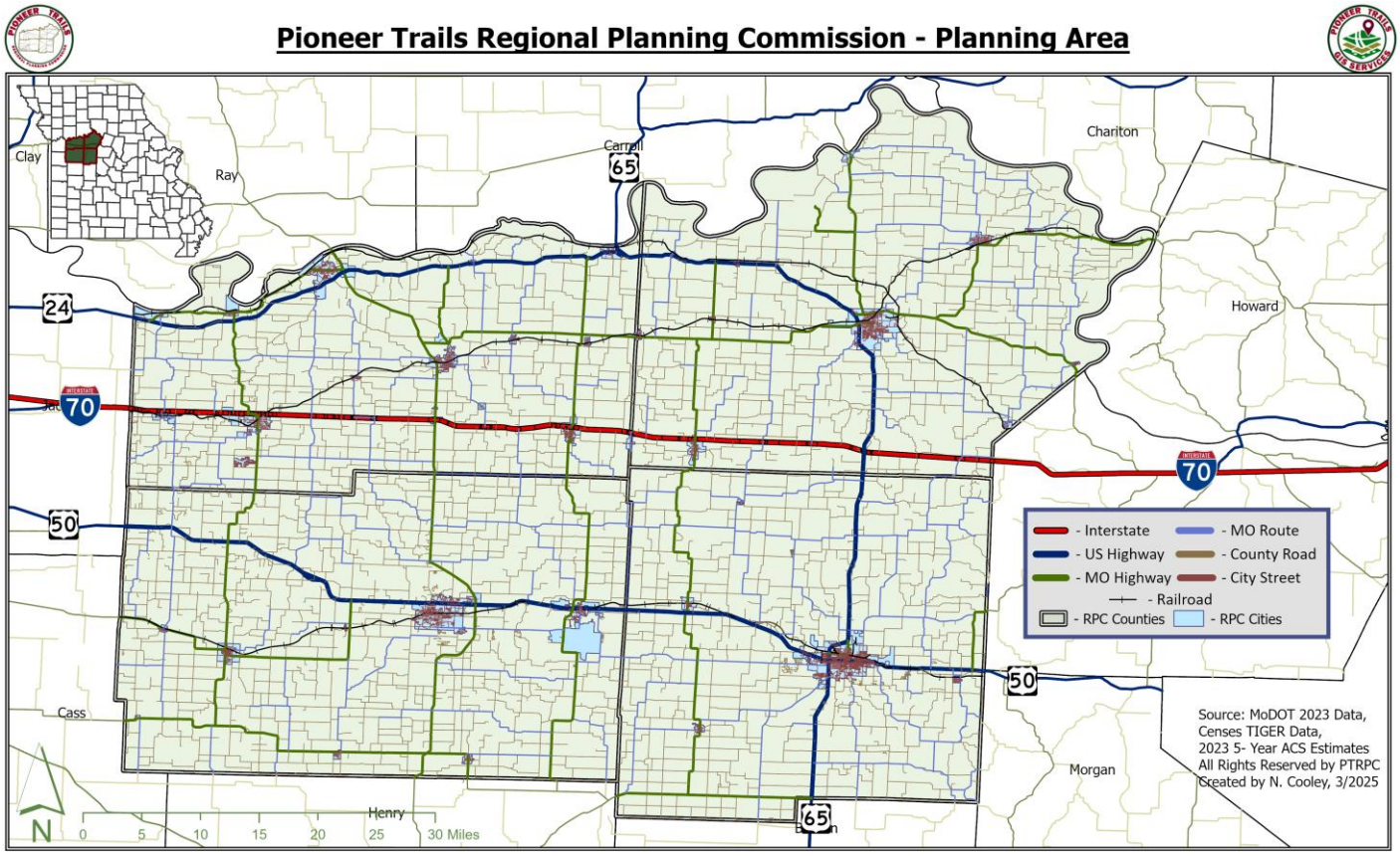
Goals and Objectives

The goals of the Pioneer Trails region are:

1. Provide a safe transportation system.
2. Maintain the existing transportation system.
3. Reduce congestion and travel delays.
4. Support economic growth and development.
5. Reduce the number and severity of accidents.
6. Reduce travel hazards within the region.
7. Respond to regional emerging needs.

8. Provide access to opportunities for all residents.
9. Provide for the efficient movement of goods and people through the region.
10. Promote the utilization of all modes of transportation.

The outcomes of these goals can be monitored using data collected by MoDOT information systems.



CHAPTER 2 — TRENDS AND CONDITIONS

POPULATION FORECASTS

The Pioneer Trails region's population has changed over the past ten years. From 2013 to 2023, the region grew by 1,512 people or about .99%. Johnson and Pettis were the only two counties showing growth in the region.

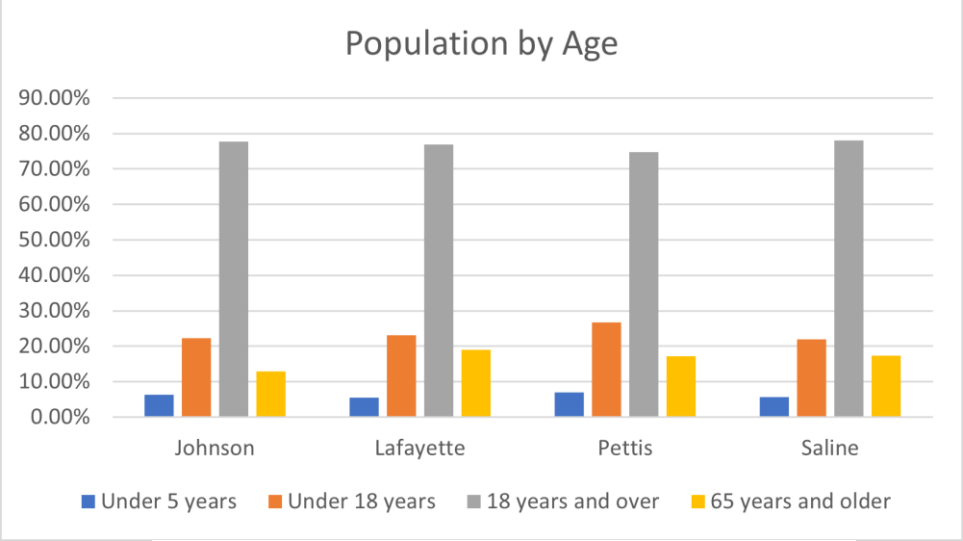
	Total Population		Change, 2013-2023	
County	**2013**	**2023**	**Number**	**% of Change**
Johnson County	53,517	54,331	814	1.52%
Lafayette County	33,188	32,974	-214	-.64%
Pettis County	42,146	43,205	1,059	2.51%
Saline County	23,324	23,177	-147	-.63%
Totals	152,175	153,687	1,512	.99%

Source: U.S. Census Bureau, Population Division, 2023 ACS 5-year Estimates

Figure 2.1

Pioneer Trails Area Population (2023)

	Johnson	Lafayette	Pettis	Saline
Under 5 years	6.30%	5.50%	6.90%	5.60%
Under 18 years	22.20%	23.10%	26.70%	21.90%
18 years and over	77.80%	76.90%	74.80%	78.10%
65 years and older	12.90%	18.90%	17.10%	17.40%



Source: U.S. Census Bureau, Population Division, 2023 ACS 5-year Estimates

Figure 2.2

Missouri's population is expected to approach 6.8 million people in 2030, a growth of roughly 1.2 million people from the year 2000, which will represent a 21% increase in the state's population according to the State of Missouri Office of Administration/Division of Budget and Planning projections.

Population forecasts for the Pioneer Trails region counties by 2030 project a population of 165,134 for the four-county area. (See Figure 2.3.)

County	2015	2020	2025	2030
Lafayette	32,785	32,869	32,923	32,947
Johnson	55,520	57,691	59,771	61,668
Pettis	42,731	44,237	45,781	47,349
Saline	22,082	21,740	21,430	21,140
Totals	**155,133**	**156,537**	**161,930**	**165,134**

Source: Missouri Office of Administration

Figure 2.3

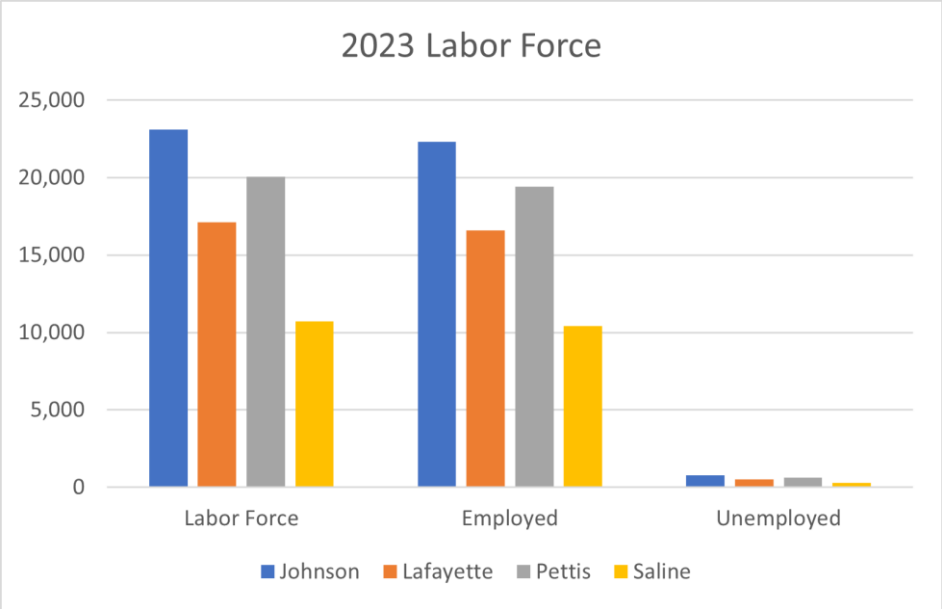
See the “Population Change” map, the “Population Density” map and the “School Districts” map at the end of Chapter 2.

EMPLOYMENT FORECASTS

According to statistics from the Missouri Economic Research and information center, a total of 3.1% of the civilian labor force for the Pioneer Trails region was unemployed in December of 2024, compared to 5.3% in December 2014. (See Figure 2.4.) “Labor Force” is a term used by the U.S. Bureau of Labor Statistics (BLS) to describe the subset of Americans who have jobs or are seeking a job, are at least 16 years old, are not serving in the military and are not institutionalized. The civilian labor force includes all Americans who are eligible to work in the everyday United States economy.

Local Area Unemployment Statistics

	Labor Force	Employed	Unemployed	Unemployment Rate
Johnson	23,099	22,330	769	3.30%
Lafayette	17,122	16,614	508	3.00%
Pettis	20,045	19,432	613	3.10%
Saline	10,711	10,423	288	2.70%



Source: U.S. Census Bureau, 2023 ACS 5-year Estimates

Labor Force

One of the largest assets of the Pioneer Trails Region is the people that make up the population. According to U.S. Census Bureau, 2023 American Community Survey 5-Year Estimates, there were 73,882 persons in the region available to create the labor force. Of the 71,148 (96.30%) were employed and 2,693 (3.70%) were unemployed.

Figure 2.4

Civilian Labor Force

	2015	2020	2021	2022	2023
Missouri					
Total Civilian Labor Force	3,042,538	3,071,591	3,081,928	3,103,274	3,102,218
Total Employed	2,880,309	2,932,918	2,939,431	2,987,867	2,974,499
Johnson County					
Total Civilian Labor Force	25,968	25,023	25,598	25,146	25,229
Total Employed	23,900	23,873	24,417	23,951	23,989
Lafayette County					
Total Civilian Labor Force	16,128	16,009	16,023	16,069	16,346
Total Employed	15,021	15,549	15,605	15,678	15,986
Pettis County					
Total Civilian Labor Force	20,032	20,174	20,458	20,979	21,089
Total Employed	18,740	19,208	19,573	20,167	20,239
Saline County					
Total Civilian Labor Force	11,262	10,911	10,790	10,762	11,218
Total Employed	10,642	10,596	10,533	10,467	10,934
Pioneer Trails Region					
Total Civilian Labor Force	**73,390**	**72,117**	**72,869**	**72,956**	**73,882**
Total Employed	**68,303**	**69,226**	**70,128**	**70,263**	**71,148**

Source: U.S. Census Bureau, 2010-2023 American Community Survey 5-Year Estimates

		Distribution of Employed Civilian Labor Force by Occupation, 2023					
Area Summarized		Employed					
County			Occupations				
FIPS Code		Total Employed	Management Professional and Related	Service	Sales and Office	Natural resources, Construction, and maintenance	Production Transportation and Material
	Pioneer Trails RPC	71,148	23,201	12,402	13,345	8,170	14,030
29101	**Johnson County**	23,989	8,448	4,121	4,602	2,611	4,207
29107	**Lafayette County**	15,986	5,624	2,315	3,030	2,195	2,822
29159	**Pettis County**	20,239	5,740	3,835	3,699	2,399	4,566
29195	**Saline County**	10,934	3,389	2,131	2,014	965	2,435

Source: U.S. Census Bureau, 2023 American Community Survey 5-Year Estimates

The per capita change in the Pioneer Trails area from 2022 to 2023 saw a 7.49% increase. (See Figure 2.6.)

Per Capita Income 2021-2023				
			Change, 2020-2023	
	2021	2023	Number	Percent
Missouri Totals				
Missouri	$56,136	$63,562	$7,426	13.23%
Regional Planning Commission: Pioneer Trails Regional Planning Commission				
Pioneer Trails RPC	$46,446	$49,923	$3,477	7.49%
Johnson	$46,838	$46,540	$-298	-.64%
Lafayette	$49,783	$54,277	$4,494	9.03%
Pettis	$43,794	$47,237	$3,443	7.86%
Saline	$45,367	$51,636	$6,269	13.81%

Figure 2.6

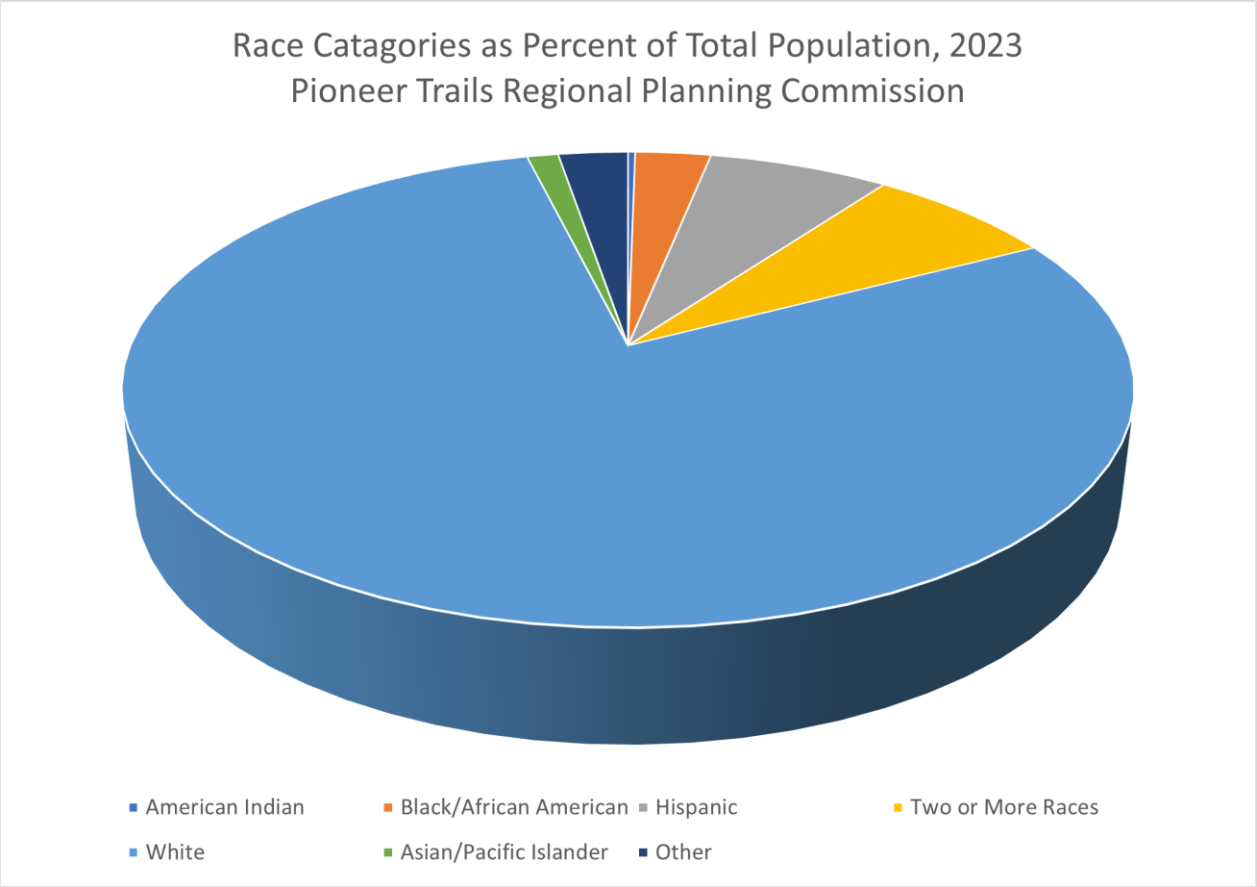
See the “Economic Hubs/Employment Centers/Travel Demand” map at the end of Chapter 2.

Environmental Justice Related Demographics

Transportation projects often hold the potential to adversely affect various segments of a local population. Issues such as access to employment and access to health services can represent significant effects for low-income and/or minority populations. Pioneer Trails values input from all people and values the diversity of the region’s population.

Ethnic Diversity

According to the United States Census Bureau 2023 decennial census, 85.93% of the Pioneer Trails population was White, 3.15% Black or African American, 0.3% American Indian, 1.3% Asian/Pacific Islander, 7.53% Hispanic, 7.93% mixed race, and 2.9% other. (See Figure 2.7.)



Source: U.S. Census Bureau, 2023 Decennial Census

Figure 2.7

DISADVANTAGED POPULATIONS

The regional transportation system must provide travel services appropriate to the needs of the residents; especially disadvantaged residents. By holding this goal in the forefront, we can effectively enhance the quality of life for those facing disadvantages and, therefore, the community as a whole. Figure 2.8 provides information specific to Pioneer Trails' four counties.

Pioneer Trails Region – Disadvantaged Populations

	Johnson County	Lafayette County	Pettis County	Saline County
Population estimate, 2023	54,331	32,974	43,205	23,177
Population, 2010	52,041	33,313	41,587	23,126
Population, percent change, 2010 to 2023	4.4%	-1.02%	3.39%	0.22%
Persons under 5 years old, percent, 2023	6.30%	5.50%	6.90%	5.60%
Persons under 18 years old, percent, 2023	22.10%	23.10%	25.20%	21.90%
Persons 65 years old and over, percent, 2023	12.90%	18.90%	17.10%	17.40%
High School graduates or higher persons age 25+, 2023	10,583	8,783	9,782	5,133
Bachelor's degree or higher persons age 25+, 2023	9,362	5,609	5,342	3,840
Persons per household, 2023	2.43	2.60	2.50	2.70
Median Household income, 2023	$67,123	$79,091	$50,232	$56,566
Persons below poverty, percent, 2023	11.9%	9.7%	13.4%	14.7%

Source: U.S. Census: 2023 ACS 5-Year Estimates

Figure 2.8

Poverty

Different definitions are used to define "poverty" and different measurements are used to determine eligibility for programs for persons living in poverty. The following excerpts are being used to provide some background from two sources that address poverty:

"Following the Office of Management and Budget's (OMB) Statistical Policy Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using Consumer Price Index (CPI-U). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps)." (Source: https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html)

"State and federal officials often implicitly recognize that official poverty thresholds are unrealistically low by setting income eligibility criteria for antipoverty programs higher than the poverty level. Households with incomes of 125%, 150%, or even 185% of the federal poverty line are eligible for a number of federal and state programs. In addition, the Census Bureau publishes figures on the number of households with incomes below 200% of the federal poverty line—a level many social scientists call "near poor" or "working poor." (Source: http://dollarsandsense.org/archives/2006/0106dollar.html)

The following chart provides estimates of people living in poverty within the Pioneer Trails region in 2023. (See Figure 2.9.)

Estimated Number of People Living in Poverty
In Pioneer Trails Area in 2023

County	Area Population Estimate	Persons living in poverty	% of persons living in poverty
Johnson	50,064	5,955	11.9%
Lafayette	32,508	3,161	9.7%
Pettis	42,526	5,714	13.4%
Saline	21,627	3,169	14.7%
All counties	146725	17,999	12.27%

Figure 2.9

See the "Poverty" map at the end of Chapter 2.

Older Adults

There was a 22.8% increase in the Pioneer Trails area of the senior population (age 65 to 84) from 2010 to 2023. The Pioneer Trails area population of persons aged 85 years and older increased 6.1% from 2010 to 2023. (See Figure 2.11.)

Change in Senior Population in Missouri, 2010 – 2023
Pioneer Trails Regional Planning Commission
Figure 2.11

Area Summarized		Population Age 65 to 84 Years				Population Age 85 Yrs. and Older			
County				Change, 2010-2023				Change, 2010-2023	
FIPS Code		2010	2023	Number	Percent	2010	2023	Number	Percent
	Pioneer Trails RPC	17,747	21,794	4,047	22.80%	2,738	2,905	167	6.10%
29101	**Johnson**	4,840	6,204	1,364	28.18%	572	809	237	41.43%
29107	**Lafayette**	4,564	5,570	1,006	22.04%	700	670	-30	-4.29%
29159	**Pettis**	5,406	6,573	1,167	21.59%	749	834	85	11.35%
29195	**Saline**	2,937	3,447	510	17.36%	717	592	-125	17.43%

Source: U.S. Census; 2023 ACS 5-Year Estimates

See the "Elderly" map at the end of Chapter 2.

Disabled Persons

During 2017-2021, 14.6% of persons of all ages (civilian non-institutionalized) in the Pioneer Trails area were estimated to be disabled. (See Figure 2.12.)

Pioneer Trails Regional Planning Commission Disabled Missouri Population 18 and Over		
Civilian Non-institutionalized Persons		
	Number	**Percent**
Pioneer Trails RPC	21722	19.60%
Johnson County	6360	16.68%
Lafayette County	4824	19.35%
Pettis County	6840	21.61%
Saline County	3698	20.77%

Source: U.S. Census Bureau, 2023 American Community Survey 5-Year Estimates

Figure 2.12

See the "Disabled" map at the end of Chapter 2.

Work Disabilities

In 2015, the percentage of persons aged 16 and over years of age in the Pioneer Trails area with a work disability that were employed was determined to be 2.46% of the total population. In 2020 that employed population rose to 2.67% with the number of unemployed decreasing by 0.08%. (See Figure 2.13.)

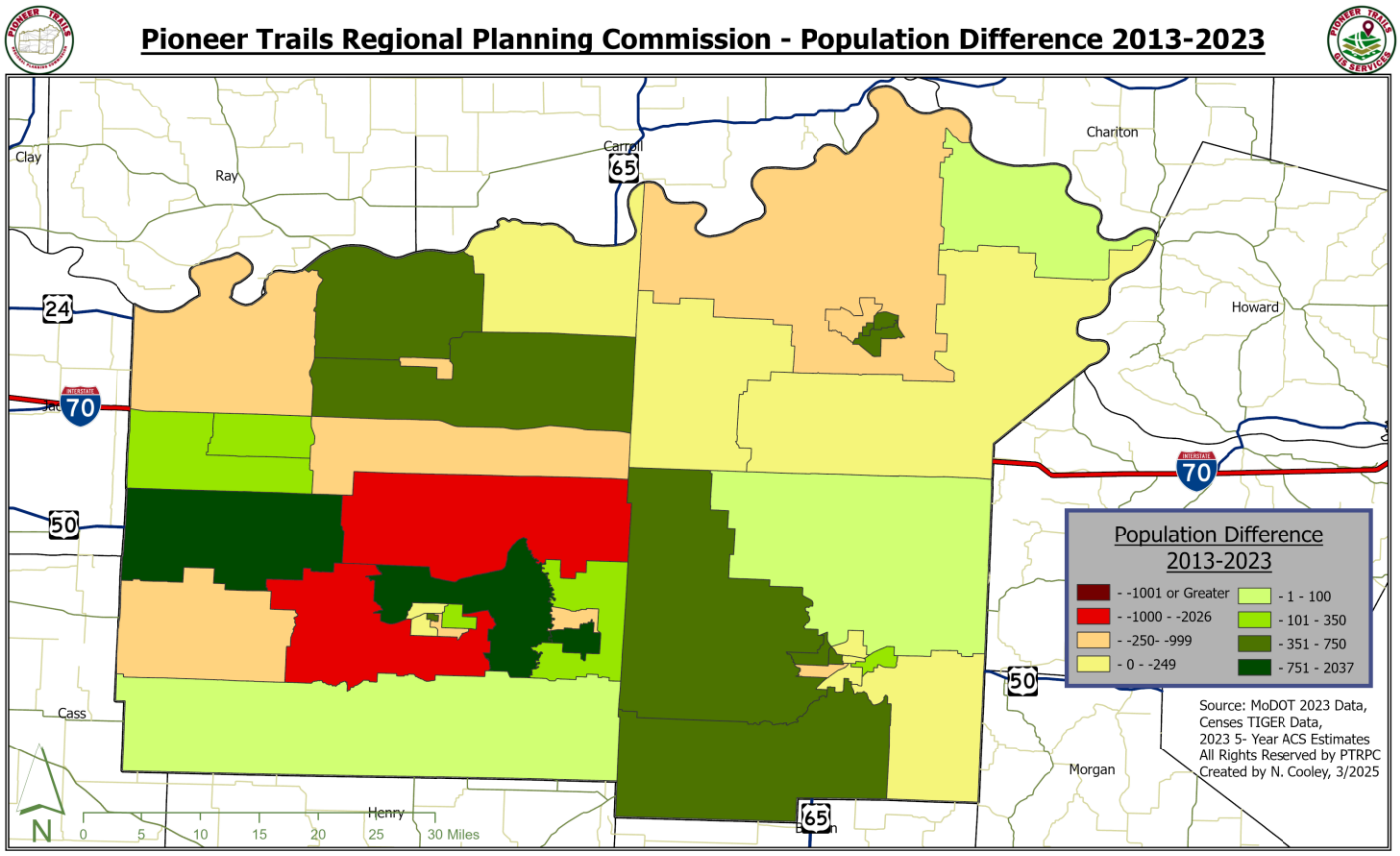
Missouri Person Age 18-64 Years with a Disability Employed and Unemployed. 2015-2023

			Change 2015-2023		**Percent of Total Population**	
	2015	**2023**	**Number**	**Percent**	**2015**	**2023**
Pioneer Trails RPC						
Employed	3,731	5,316	1,585	42.48%	2.44%	5.98%
Unemployed	642	364	-354	-55.14%	0.42%	0.41%
Lafayette County						
Employed	641	761	120	18.72%	1.95%	1.94%
Unemployed	164	17	-147	-89.63%	0.50%	0.09%
Johnson County						
Employed	1,239	2,221	982	79.26%	2.29%	4.03%
Unemployed	238	134	-104	-43.70%	0.44%	0.42%
Pettis County						
Employed	1,138	1,603	468	40.86%	2.70%	6.56%
Unemployed	153	173	20	13.07%	0.36%	1.96%
Saline County						
Employed	713	731	18	2.52%	3.06%	5.26%
Unemployed	87	40	-47	-54.02%	0.37%	0.29%

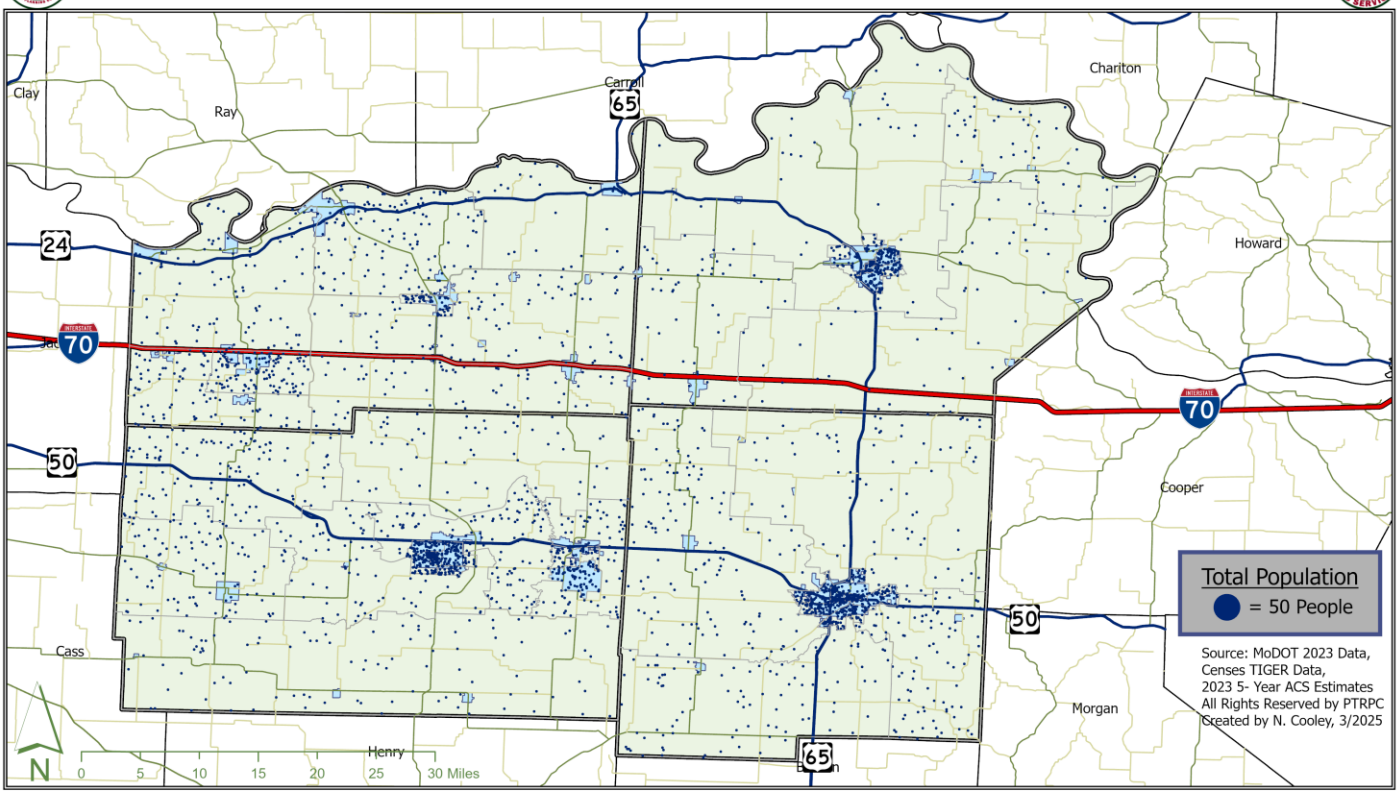
Source: U.S. Census Bureau, 2023 American Community Survey 5-Year Estimates

Figure 2.13

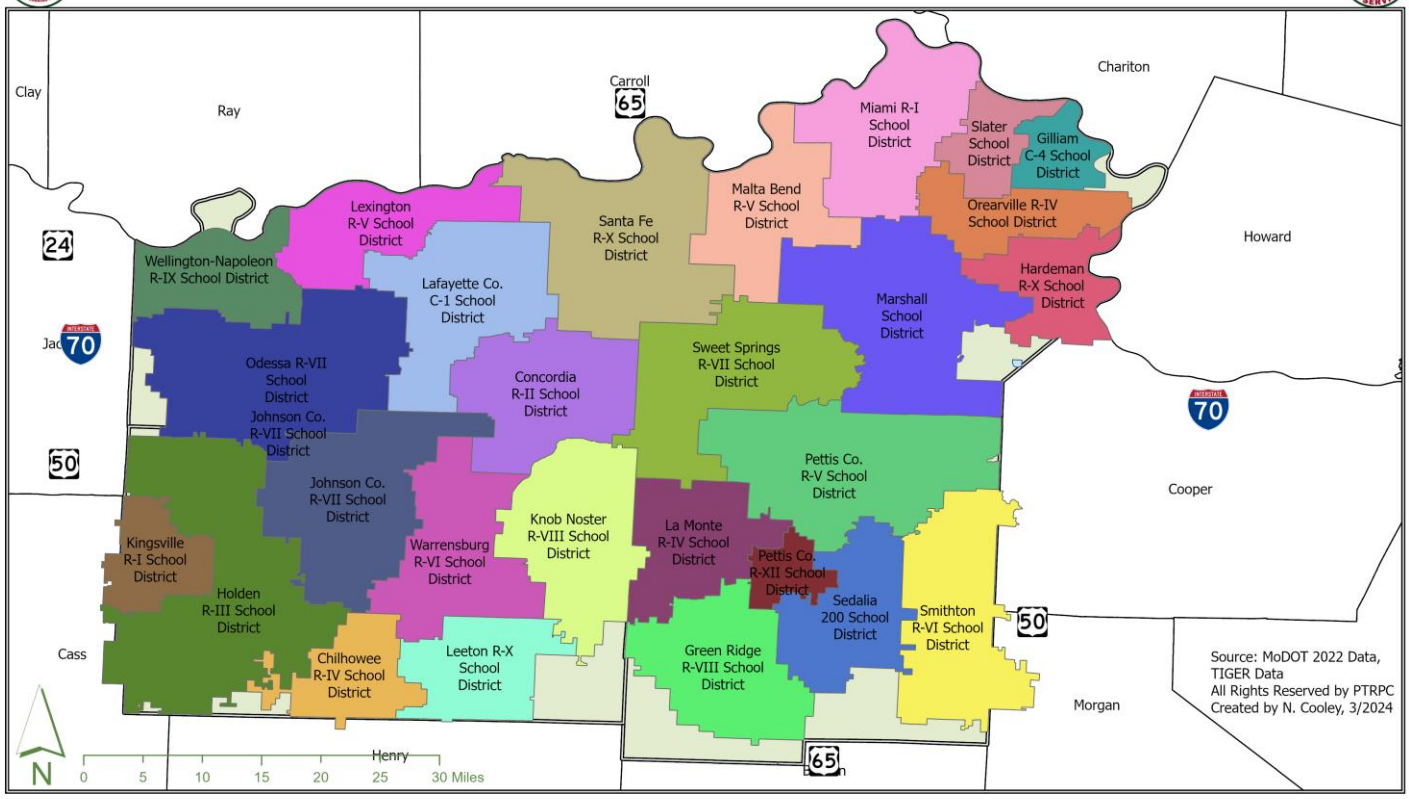
The “Poverty and Disabled” map located at the end of Chapter 2 combines the factors of poverty, and disability. The map shows the concentration of these special consideration groups.



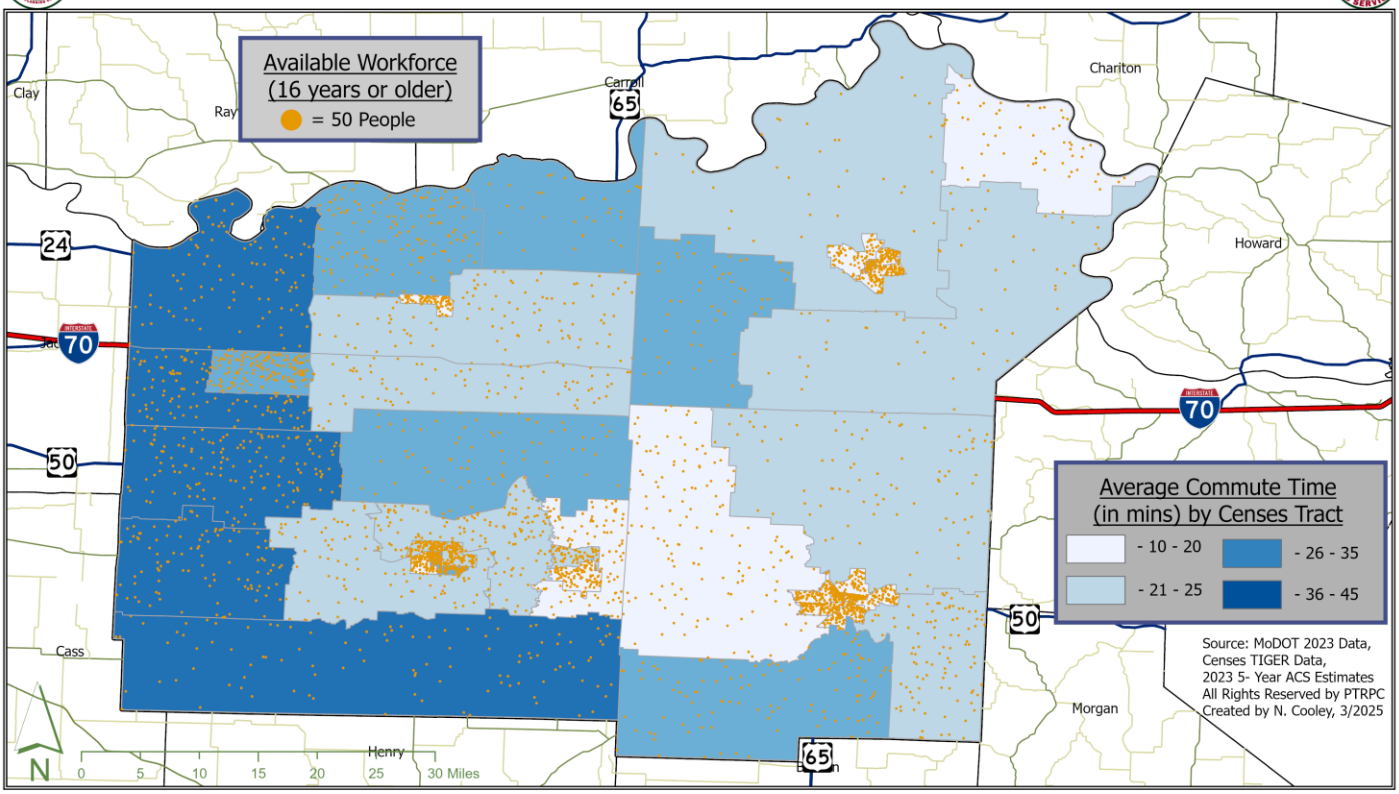
Pioneer Trails Regional Planning Commission - Population Density



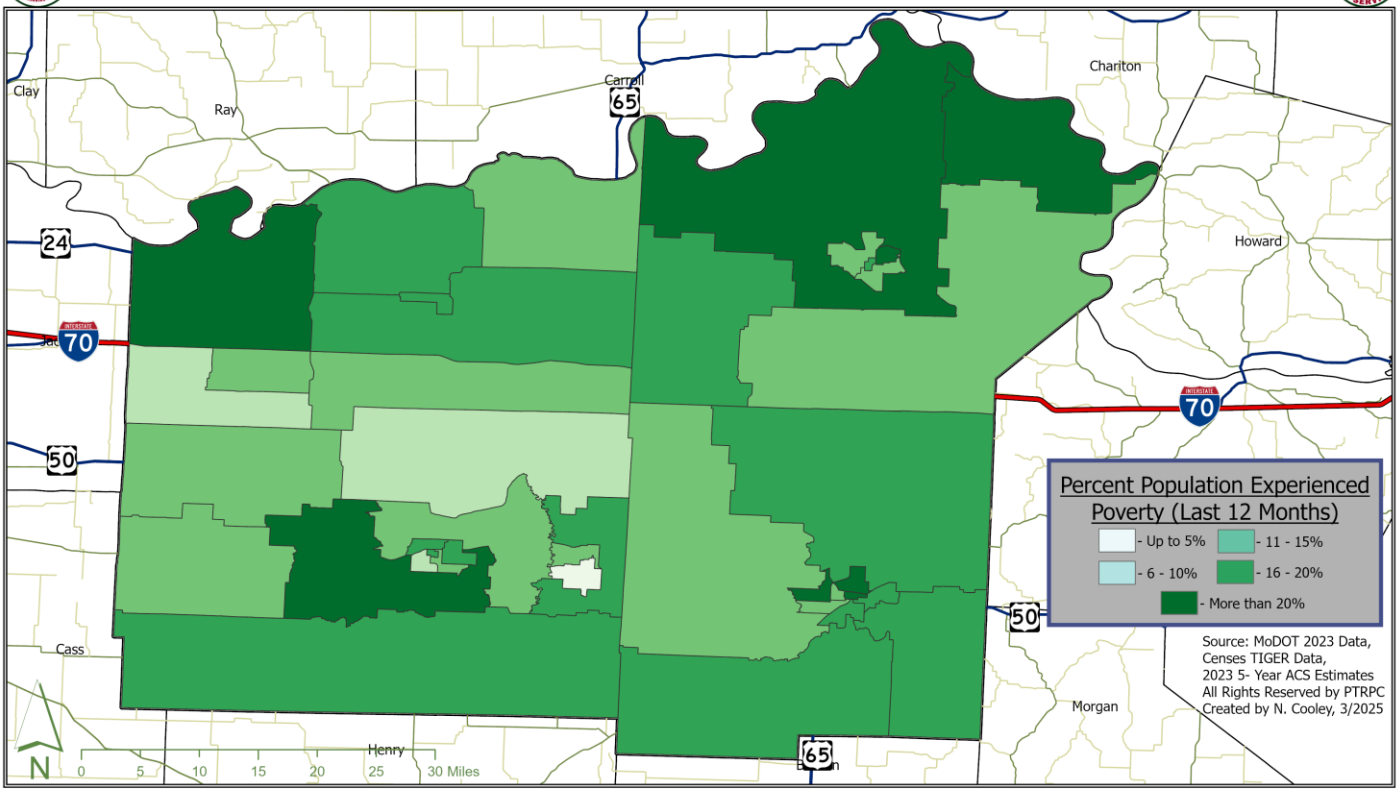
Pioneer Trails Regional Planning Commission - School Districts



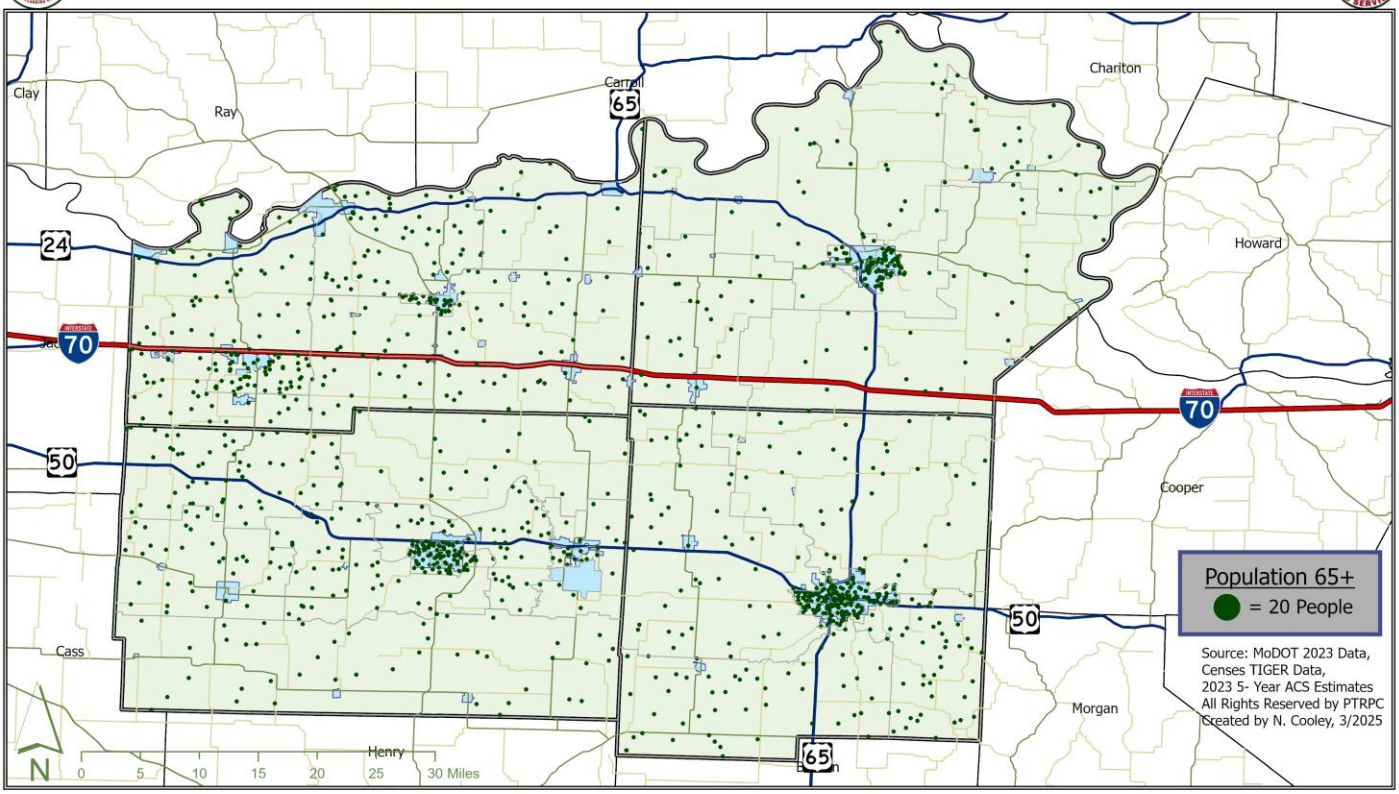
Pioneer Trails Regional Planning Commission - Available Workforce / Average Commute Time



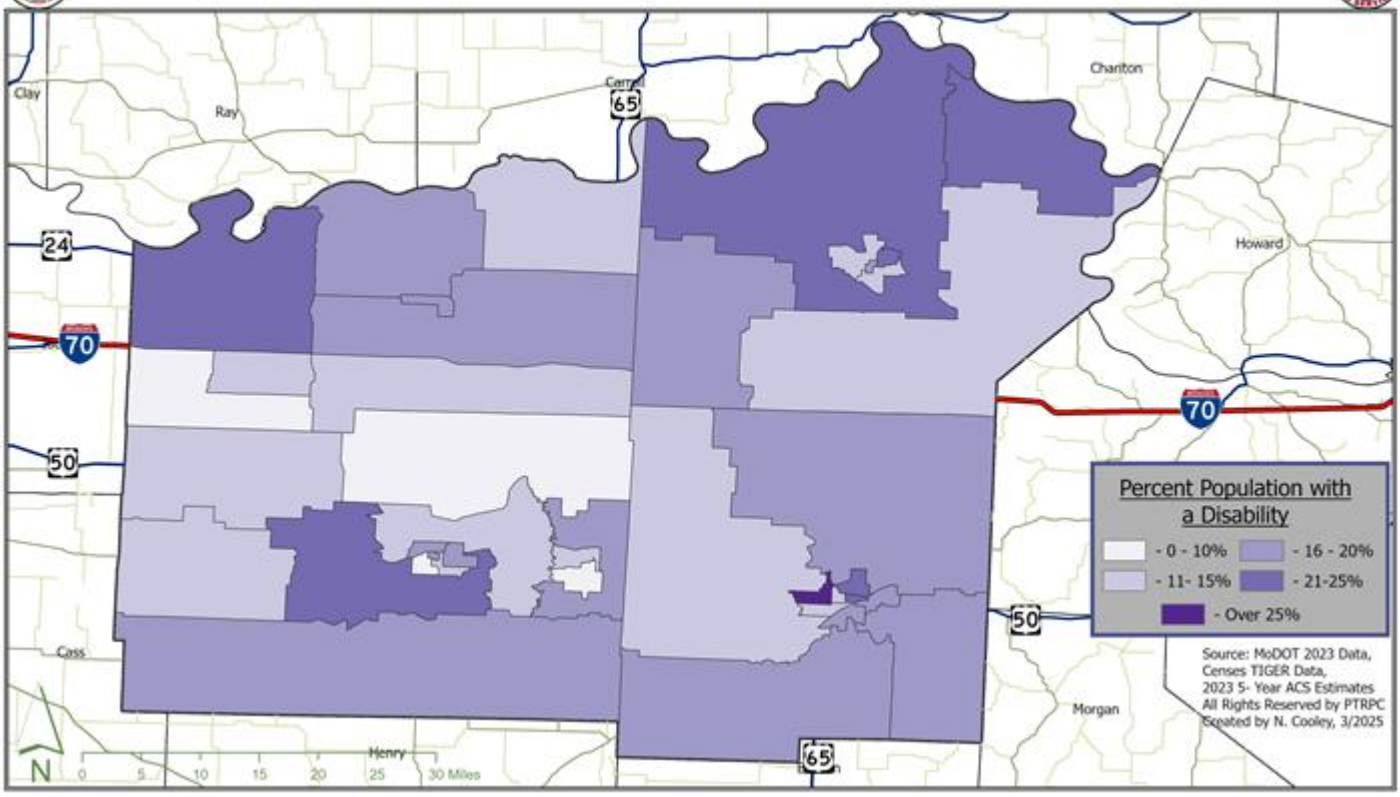
Pioneer Trails Regional Planning Commission - Poverty Population



Pioneer Trails Regional Planning Commission - Population Density 65 Years or Older



Pioneer Trails Regional Planning Commission - Population with Disability



CHAPTER 3 — EXISTING TRANSPORTATION FACILITIES

STATE HIGHWAYS

The Pioneer Trails Region encompasses about 3400 miles of MoDOT roadways including about 230 miles on Interstate 70, about 1550 miles of major collectors, about 330 miles of minor arterials, about 570 miles of minor collectors and about 460 miles of principal arterials.

See the “Local Highways and Bridges” map at the end of Chapter 3.

FUNCTIONAL CLASSIFICATIONS

The Pioneer Trails region’s functional classifications include Interstate 70 and eight principal arterial highways as well as 35 minor arterial highways. Virtually all single-lettered roads are minor collectors. All but a few of the minor collectors are double-lettered roads.

See the “Functional Classification” map at the end of Chapter 3.

System Pavement Conditions

2023 on System Road Conditions		Miles
Major Routes	Good	826
	Not Good	49
Minor Routes	Good	1,184
	Not Good	461
Low Volume Routes	Good	689
	Not Good	111

Figure 3.1

MoDOT rates overall pavement condition as good or not good condition.

MoDOT’s Condition Index and the International Roughness Index (IRI) were used to determine the System Pavement Condition in the Pioneer Trails area with results as shown in Figure 3.1

For more information on pavement rating condition see “Pavement Management Condition” in Chapter 4.

See the “Pavement Condition” map at the end of Chapter 3.

2023 Mileage of County Roads by Surface Types

	Major							
	Stone Mastic Asphalt mix	Superpave Asphalt	Asphalt Concrete	Ultrathin Bonded Type C	Paved Concrete Reinforced	Paved Concrete Non-Reinforced	Bituminous Material	Stone Mastic Rural
Saline	96	83	-	-	1	3	-	-
Pettis	-	208	-	-	-	4	-	-
Lafayette	136	44	-	-	-	27	59	-
Johnson	-	152	3	10	5	19	26	-

	Minor							
	Bituminous Material	Asphaltic Leveling Course	Oil Aggregate	Paved Concrete Non-Reinforced	Ultrathin Bonded Type C	Superpave Asphalt	Asphalt Concrete	Gravel
Saline	111	94	18	22	10	-	39	-
Pettis	215	153	39	3	1	1	4	2
Lafayette	309	54	44	8	-	-	8	-
Johnson	313	113	99	10	-	2	-	-

	Low Volume				
	Asphalt Concrete	Bituminous Material	Asphaltic Leveling Course	Oil Aggregate	Paved Concrete Non-Reinforced
Saline	43	85	2	228	2
Pettis	10	5	-	149	-
Lafayette	60	34	2	82	-
Johnson	1	45	-	60	-

Source: MoDOT Transportation Planning Datazone

Figure 3.2

State Bridges

The state transportation system includes 346 bridges within the Pioneer Trails Region. The number of non-state bridges within the Pioneer trails area is 835. MoDOT uses three criteria for bridge ratings: deck condition, substructure condition and superstructure condition. For each criterion, a bridge's condition is assessed as failed, imminent failure, critical, serious, poor, fair, satisfactory, good, very good, excellent or not applicable. For more information about the bridge rating description, see the "Bridge Rating Description" in Chapter 4.

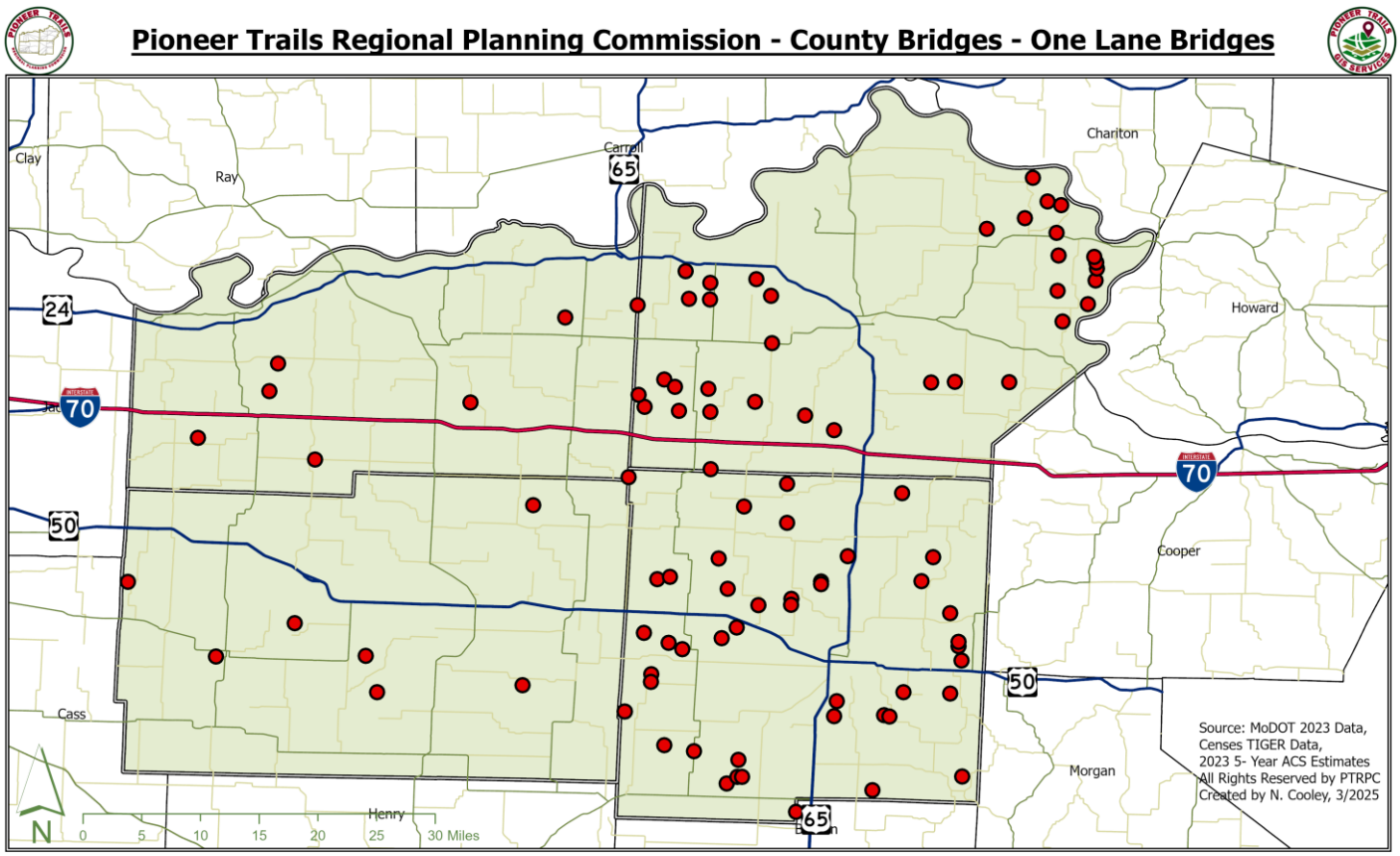
See the "Bridges" map and the "Bridge Condition" map at the end of Chapter 3.

Ports, Airports, and Rail Stations

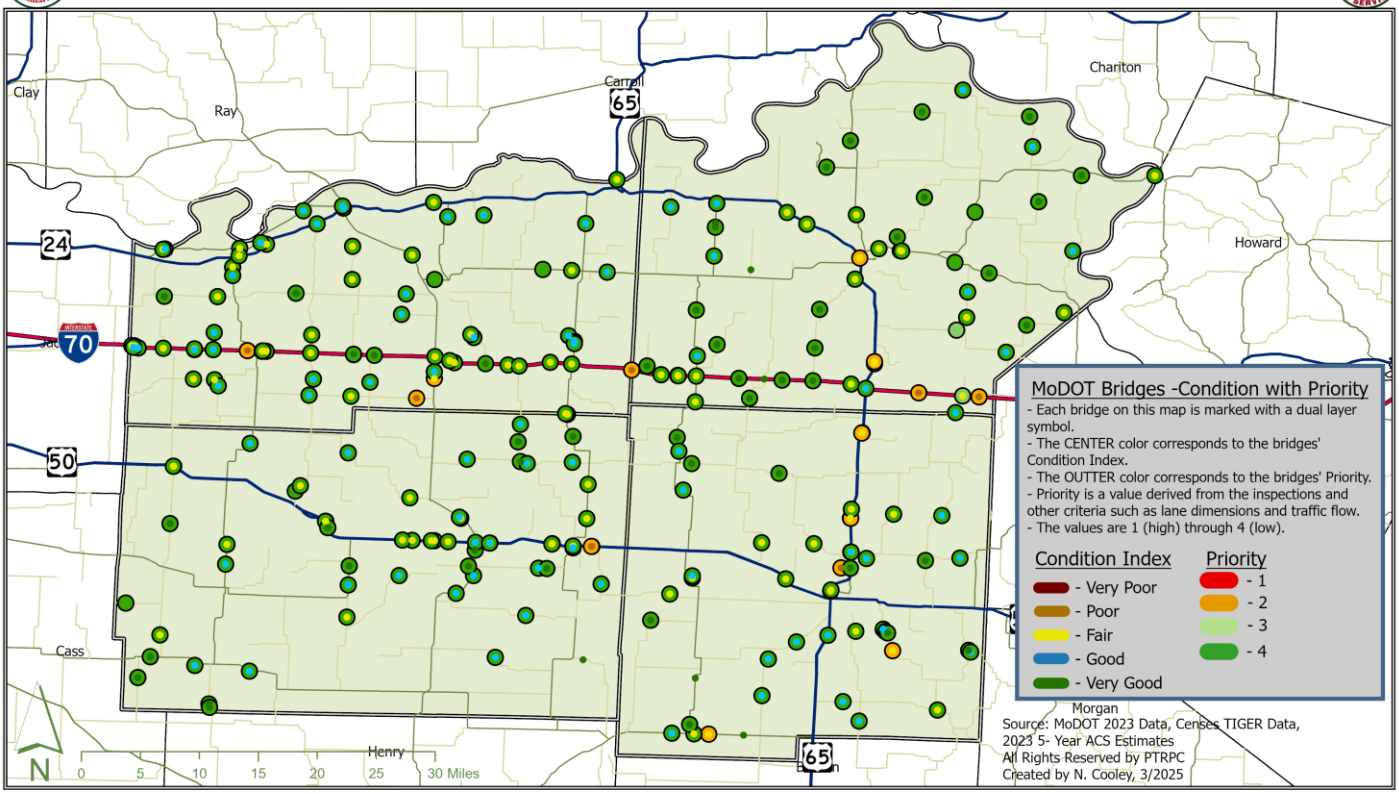
See the “Transportation Assets” map at the end of Chapter 3.

Signalized Intersections

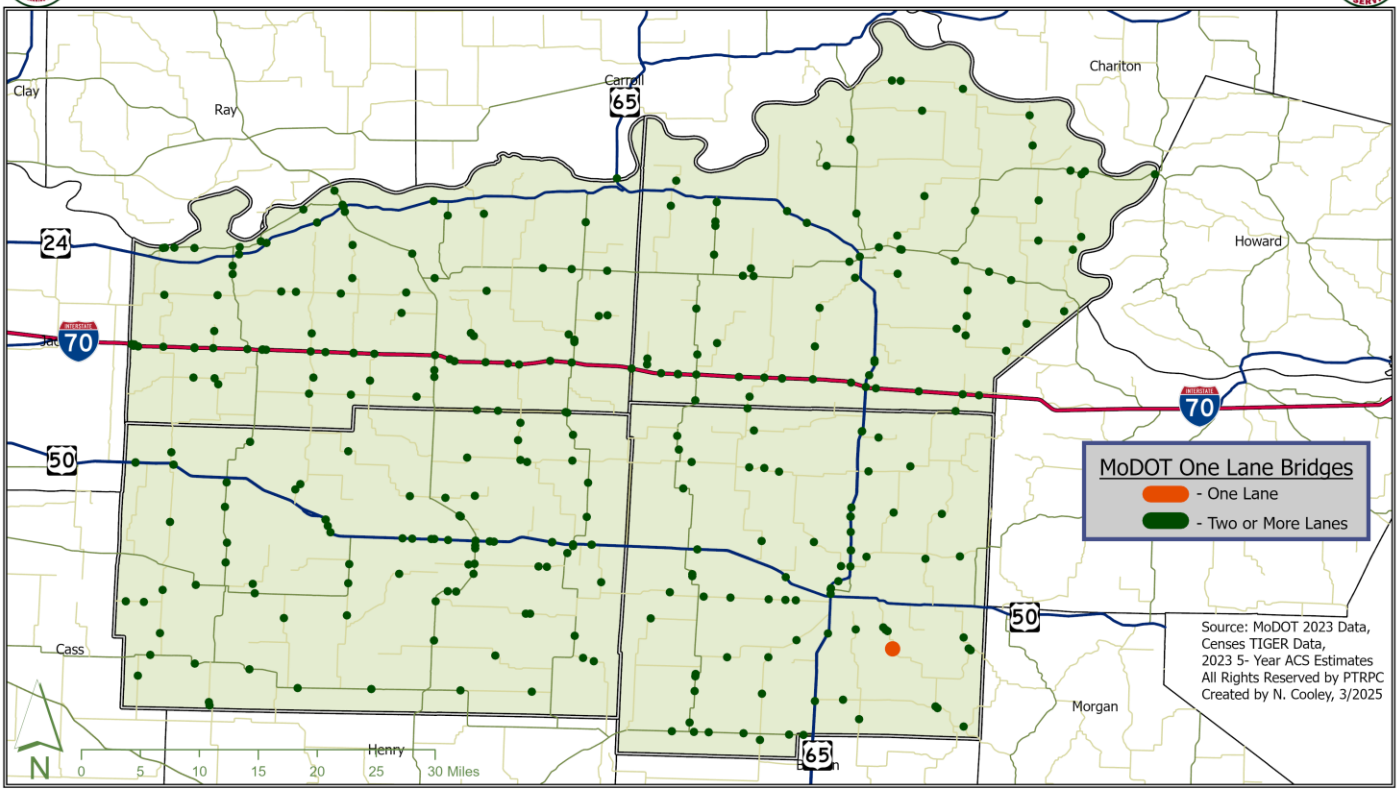
See the “Signalized Intersections” map at the end of Chapter 3.



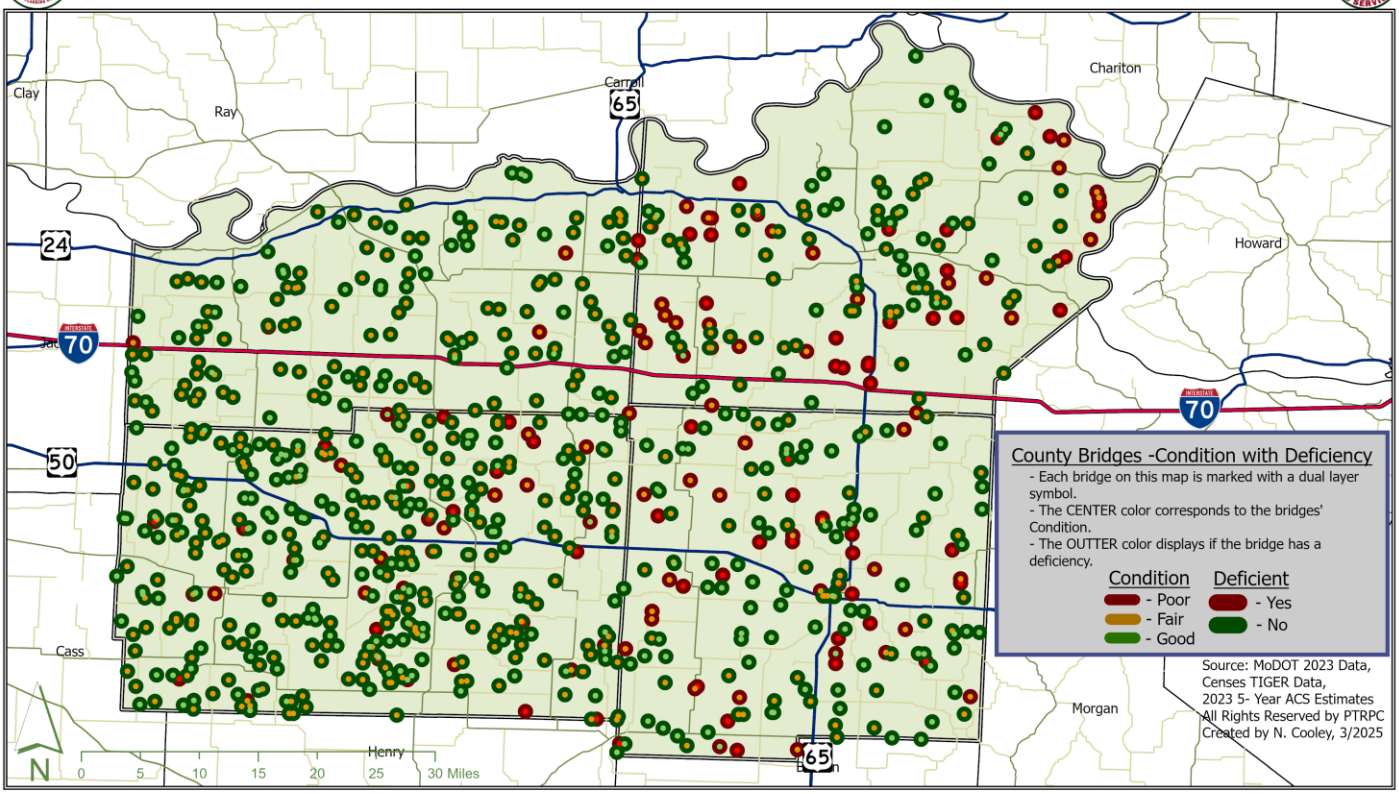
Pioneer Trails Regional Planning Commission - MoDOT Bridges - Condition with Priority



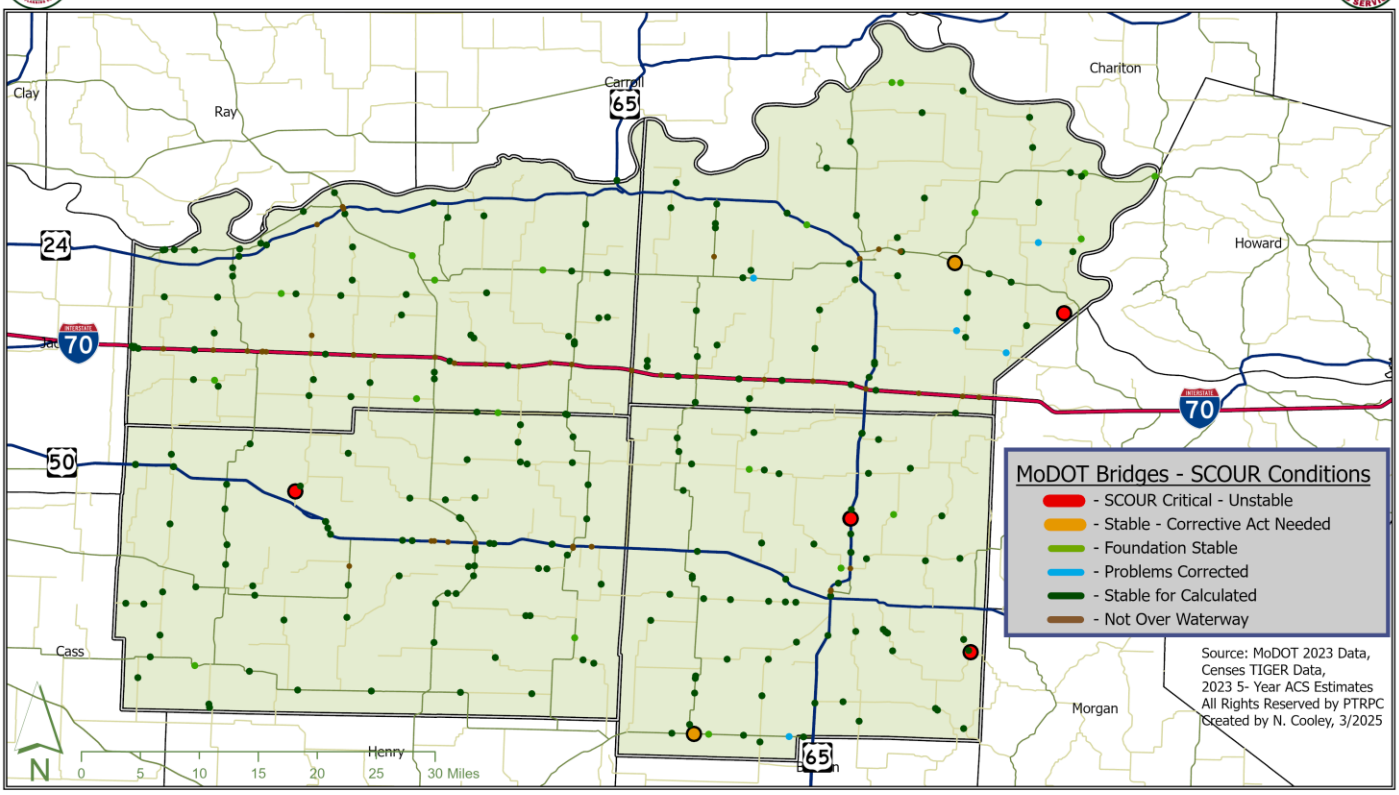
Pioneer Trails Regional Planning Commission - MoDOT Bridges - One Lane Bridges



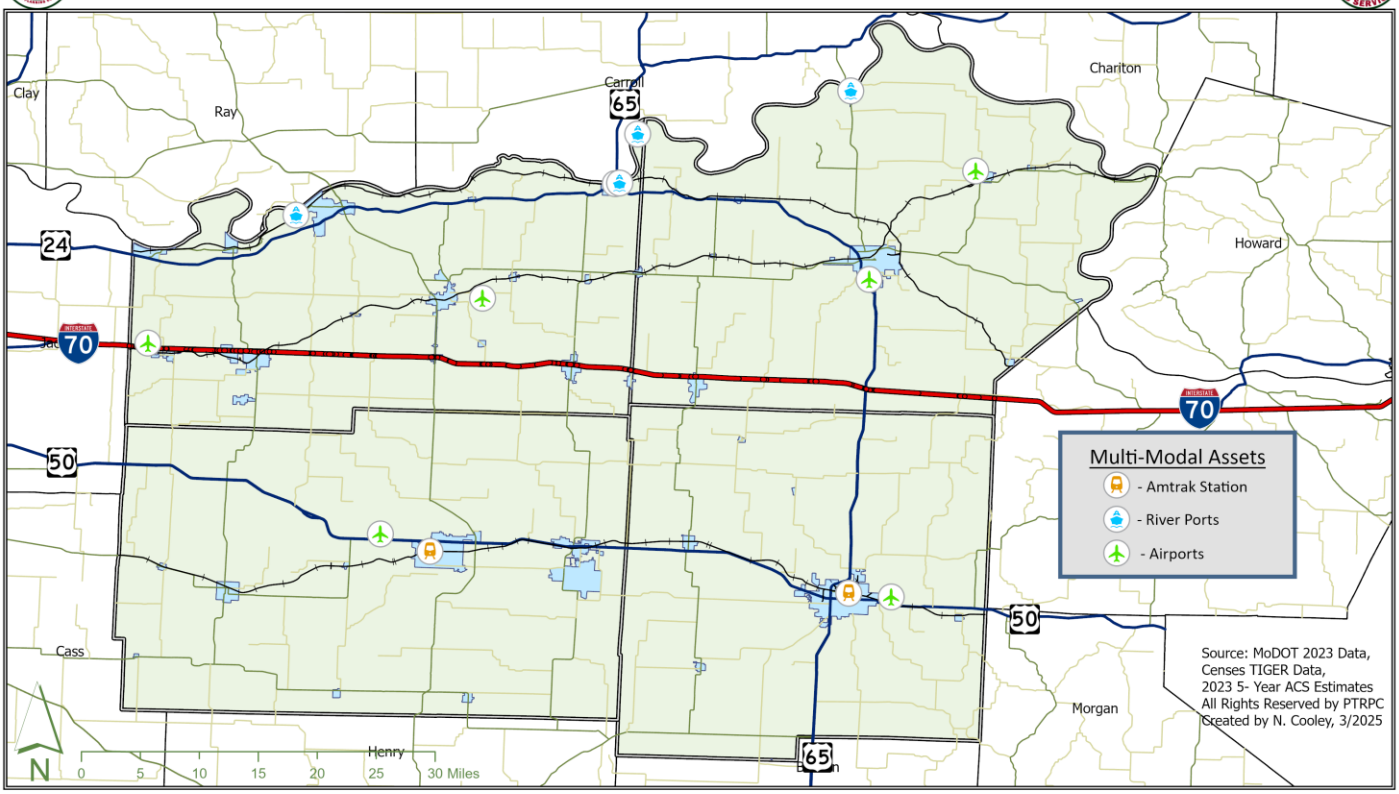
Pioneer Trails Regional Planning Commission - County Bridges - Condition with Deficiency



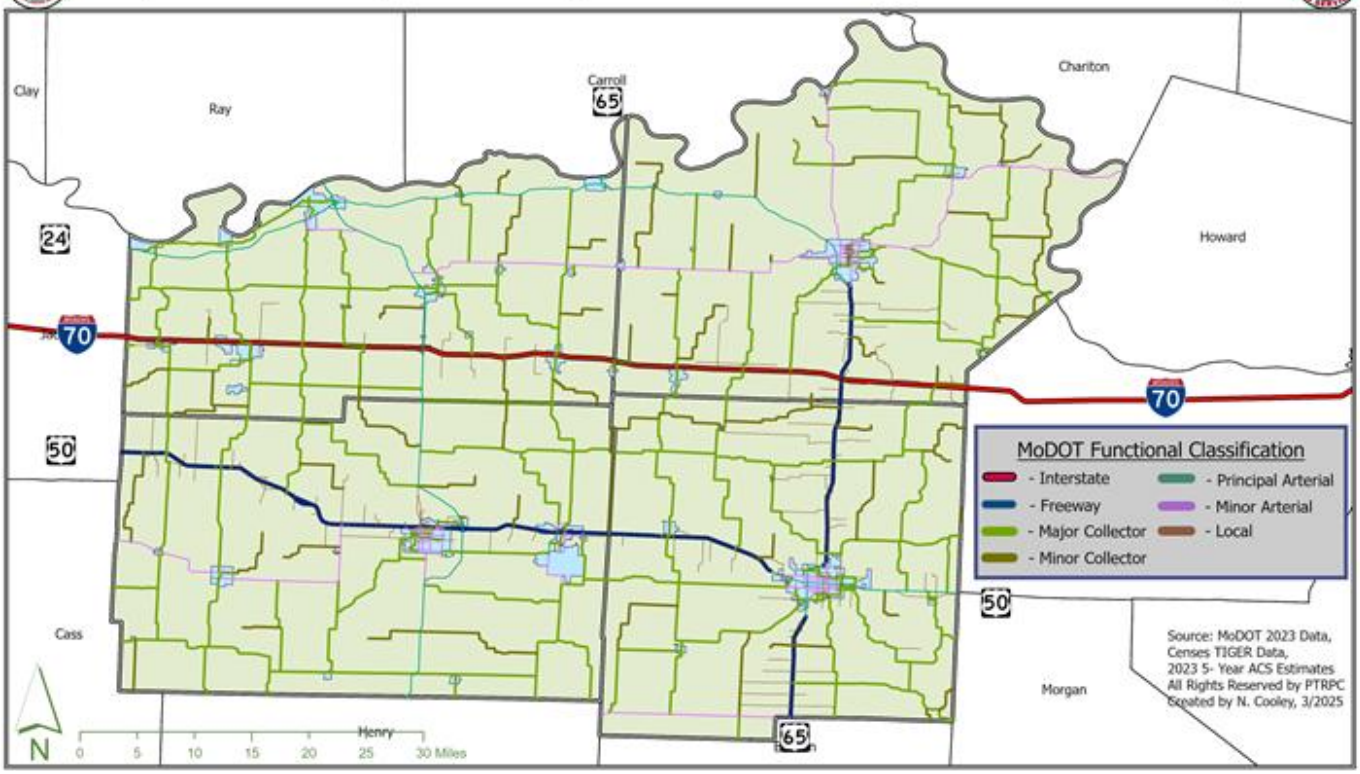
Pioneer Trails Regional Planning Commission - MoDOT Bridges - SCOUR Conditions

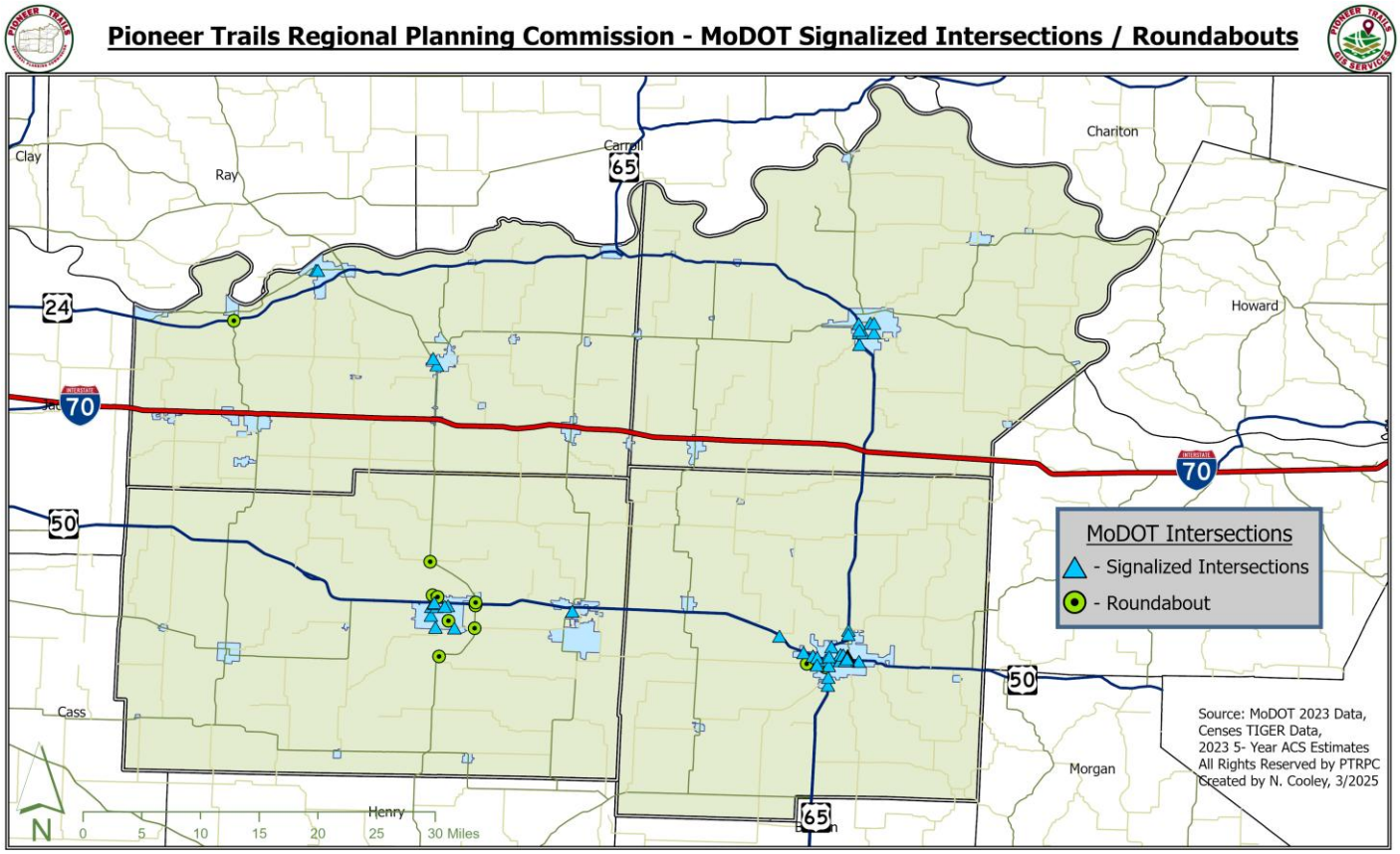


Pioneer Trails Regional Planning Commission - Multi-Modal Assets

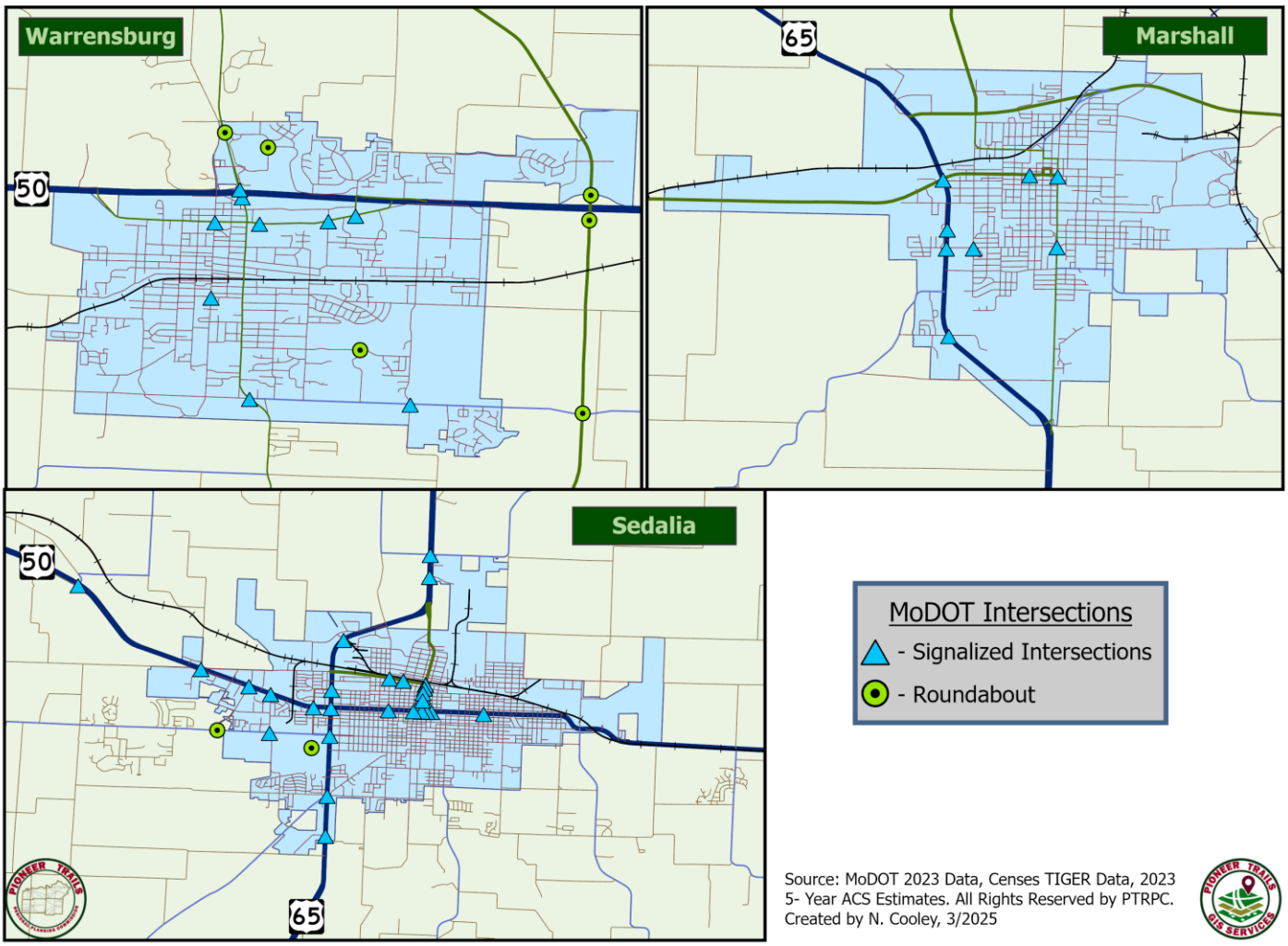


Pioneer Trails Regional Planning Commission - MoDOT Functional Classification




Pioneer Trails Regional Planning Commission - MoDOT Signalized Intersections / Roundabouts
Clay
Ray
Carroll
Chariton
Howard
Cass
Henry
Morgan
24
70
50
65
MoDOT Intersections
- Signalized Intersections
- Roundabout
Source: MoDOT 2023 Data,
Censes TIGER Data,
2023 5- Year ACS Estimates
All Rights Reserved by PTRPC
Created by N. Cooley, 3/2025
N
0 5 10 15 20 25 30 Miles

Pioneer Trails RPC - MoDOT Signalized Intersections / Roundabouts



CHAPTER 4 — EXISTING TRANSPORTATION MANAGEMENT

TRANSPORTATION MANAGEMENT SYSTEMS

TMS is MoDOT's Transportation Management Systems software that was first implemented back in 1998. At that time, TMS consisted of four major business areas, which included Safety, Traffic, Bridge and Pavement.

Over the years, TMS has expanded to meet the needs of many business units and users. We continue to build applications and tools that assist MoDOT and our partners with decision making. Most TMS applications/maps are available from the TMS Homepage: http://modatazone.modot.org/. Many of our Metropolitan Planning Organization/Regional Planning Commission (RPC) partners access TMS by using a virtual machine and logging into the MoDOT network.

TMS originated with business areas of Bridge, Pavement, Traffic and Safety but has expanded tremendously over the years.

Bridge Management System – this system includes:

- Inventory Management
- Media Loader

TMS is the single source for all bridge data in the department. The bridge part of the system includes National Bridge Inventory (NBI) data, inspection information, as well as media for that structure. Media could include things such as photographs, plans, correspondence, inspection reports, and other data related to a bridge.

MoDOT personnel inspect state-maintained bridges and culverts and the majority of all of the locally owned (referred to as non-state) bridges and culverts. A small portion of non-state bridges and culverts are inspected by local agency staff or consultant engineers. All bridges and culverts that are part of the NBI are required to have a general inspection done on a two-year inspection cycle. In addition to the general inspection, some structures require fracture critical inspections, underwater inspections, or special inspections to look at specific items. Intervals for these other inspections vary depending on what is being looked at. Structures that are in "poor" or "serious" condition may have inspections done at more frequent intervals.

Bridge and culvert condition ratings have been supplied to the RPCs for the development of their Regional Transportation Plans (RTPs). This data is being provided for the purpose of assisting the RPCs and MoDOT in identifying local needs and priorities for a region. These condition ratings are assessed by inspectors when the various types of inspections are done on a structure. These condition ratings basically describe the in-place condition of a structure. Ratings are assigned for the physical condition of the deck, superstructure and substructure components of a bridge and an overall rating is assigned for culvert structures.

The deck is the portion of the bridge that includes the riding surface. The superstructure is the girders and other span elements of the bridge that support the deck. These superstructure elements may be comprised of structural steel, concrete or timber, depending on the design of the bridge. The substructure is comprised of those elements of the structure that support the superstructure (girders, span elements, etc.).

The substructure elements are the columns, footings and beam caps that the girders rest on. The deck, superstructure and substructure are rated independently; however, the lowest rating of the three is traditionally what is considered the overall rating for a structure. Culverts are typically buried structures built out of concrete or steel. An overall condition rating is assigned for a culvert and takes into account how all of the different elements of the structure are functioning.

The following general condition ratings are used as a guide in evaluating the deck, superstructure, substructure and overall culvert.

Bridge/Culvert Rating Description

N	NOT APPLICABLE
9	EXCELLENT CONDITION
8	VERY GOOD CONDITION – no problems noted.
7	GOOD CONDITION – some minor problems.
6	SATISFACTORY CONDITION – structural elements show some minor deterioration.
5	FAIR CONDITION – all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
4	POOR CONDITION – advanced section loss, deterioration, spalling or scour.
3	SERIOUS CONDITION – loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
2	CRITICAL CONDITION – advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored, it may be necessary to close the bridge until corrective action is taken.
1	IMMINENT FAILURE COND – major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic, but corrective action may put back in light service.
0	FAILED CONDITION – out of service – beyond corrective action.

Traffic Management System

Traffic Data Acquisition System. Previously, traffic data was collected by a variety of methods. All traffic data reporting was done on the mainframe system. With the acquisition of Traffic Data Acquisition System (TRADAS), all traffic data is collected and processed uniformly. The traffic data collected includes such items as traffic volumes (both vehicular traffic and truck traffic), Level of Service (LOS) (congestion condition) and vehicle classifications. This data is used to understand traffic patterns and identify locations of need. Inventories in the Traffic Management System include:

- Flasher Inventory
- Lighting Inventory
- Signal Inventory
- District Defined Types
- Highway Capacity Interface
- Site ID Maintenance
- Traffic Information Segment Maintenance
- Traffic Segment Hourly Volume

Congestion Management. Traffic congestion and travel delay are among the most visible signs of transportation problems. Drivers experience congestion for the most part as a personal annoyance, although traffic congestion is a problem that wastes time, consumes energy resources and contributes to poorer air quality.

Traffic congestion in the urban area is typically confined to the morning and evening peak hours of travel. Delays from congestion occur on roadways with inadequate capacity or at specific locations such as interstate ramps and signalized intersections.

Congestion in the rural area can occur at any time when the roadway is unable to handle the traffic flow. This can be related to peak hours of travel, including work and holiday travel. It can also be because the typical two-lane roadway is restricted and traffic is unable to flow freely, often times because of incidents or slow moving vehicles.

Expanding the capacity of roadways is not the sole solution to congestion. The new roadways, bridges, and highways built to relieve congestion satisfy latent and shifted demand for travel. The use of alternate modes, land use regulation, access management, and improvements to intersections and traffic signals can all contribute to an overall program to manage traffic congestion.

There are two major methods of gauging congestion: facility-based measures and travel time. The facility-based congestion method focuses on the road itself and usually is based on traffic volume and capacity comparisons. Such comparisons may include volume-to-capacity ratios and traffic volume per lane mile. The travel time method of measuring congestion indicates the same conclusion, however. These trip-based measures are tied to the individual traveler's congestion problems and oriented to the length of the trip. Average travel time to work is an example of one such measure.

A number of indicators may be used to gauge and manage congestion. These are divided into four categories.

1. Facility-based measures:

    Average vehicle speed in peak hour

    Ratio between peak volume & nominal capacity (V/C)

    Total vehicle hours of delay

    Proportion of daily travel by speed or V/C range

    Frequency and duration of incidents

    Average daily traffic (ADT) per freeway lane

2. Personal travel effects:

   Proportion of personal travel by speed range

   Delay added to average person's trips by time of day, travel purpose

   Delay added to average person's trip by place of residence

   Delay to transit vehicles

   Number of crashes due to congestion

3. Effects on the economy:

   Delay added to average commuter trip by place of work

   Percentage of truck travel by speed or V/C range

   Vehicle hours of delay to trucks/delivery vehicles

   Truck scheduling costs attributable to travel time uncertainty

   Market perceptions of congestion as an influence on economic activity

4. Environmental impacts:

   Extra vehicle emissions due to stop-and-go conditions

   Extra gas consumption due to stop-and-go conditions

LOS is defined as conditions within a traffic stream as perceived by the users of a traffic facility. MoDOT's Transportation Management System provides LOS information in the Traffic Segment Browser. In practice, LOS has been defined by measures of effectiveness for each facility type, relating more to speed, delay and density than to qualitative factors or safety. LOS is rated A, representing the best operating condition, to F, representing the worst. The following describes LOS according to the Highway Capacity Manual.

LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS B describes reasonably unimpeded operations. The ability to maneuver within the traffic stream is only slightly restricted, and control delay at the boundary intersections is not significant. The travel speed is between 67% and 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS C describes stable operation. The ability to maneuver and change lanes at midsegment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed, and the volume-to-capacity ratio is greater than 1.0.

LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS E is characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.

LOS F is characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed or the volume-to-capacity ratio is greater than 1.0.

Transportation Demand Management (TDM). This is a strategic response to roadway capacity deficiencies that involves the construction of new or expanded roadways. TDM actions are calculated to reduce vehicle demand by increasing vehicle capacity or providing an alternate mode. While new construction is the most direct and effective practice to eliminate congestion, this approach may not offer a complete solution. A variety of strategies is available to reduce congestion and may include methods to increase vehicle occupancy and promote alternative modes of transportation. Approaches may include:

a. Ridesharing programs, local and regional.

b. Transportation management associations which coordinate opportunities and incentives for shared travel, usually through employers or business associations.

c. Cash-out parking subsidies which allow employees to convert employer paid parking subsidies to transit subsidies or cash.

d. Restricted availability and/or increased parking cost for single occupancy vehicles.

e. Mixed use development of walking, cycling and transit alternatives.

f. Transportation enhancements projects such as improved bicycle paths and pedestrian facilities to improve choices available to commuters.

g. Staggered/flexible work hours to more evenly distribute the number of commuters.

h. Telecommuting and home-based businesses.

i. Electronic commerce that allows personal and business transactions electronically without physically making a trip.

Signalized Intersection Management. Signalized intersections may be necessary to allow the safe movement of vehicles through intersecting roadways. However, there is a physical limit to the number of through movements and turning movements that can be safely accommodated by a signalized intersection. When the demand for any movement at the intersection exceeds the available capacity, congestion and delays ensue, reducing the average travel speed and increasing the travel time. Roundabouts can also be constructed to facilitate the safe movement of vehicles through intersecting roadways. In some cases, roundabouts can accommodate traffic volume and movements more efficiently than traffic signals.

Safety Management System

Traffic crashes are entered into TMS by staff at the Missouri State Highway Patrol (MSHP). The crashes in the database date back to 1985, and crash images date back to 1997. MSHP enters fatal crashes into the database within 10 days of the crash. Crash data is utilized to identify where crashes occur and includes other information such as type of crash, contributing circumstances and severity of the crash. Applications in this system include:

- Crash Summary
- Crash Browser
- Intersection Expected Crash Values
- Statewide Average Crash Rates

Travelway Safety Features – this includes inventories for:

- Guardcable
- Rumblestrips
- Concrete Barrier
- Guardrail
- Soundwall
- Emergency Reference Markers
- Curfews
- Points of Interest
- Controlled Routes

Travelways Management System

The travelways management system includes applications to manage the following data:

- Asset Management (Functional class, speed limit, access category, federal system class, etc.)
- Travelway Overlapping Browser
- Location Referencing System (Travelway Selection)
- Travelway Lane Inventory

Functional Classification and Access Management

Functional classification (FC) is the process by which streets and highways are grouped into classes or systems according to the character of service they provide. FC defines the nature of this process by defining the part that any particular road or street should play in serving the flow of trips through a highway network.

Federal legislation requires the FC of roadways to determine the funding eligibility of transportation projects.

Urban and rural areas have fundamentally different characteristics as to density and land use, density of street and highway networks, nature of travel patterns and the way in which all of these elements are related in the definitions of the highway classifications.

There are three such area definitions, and they are the following:

Area Definitions

Small Urban—Areas designated by the Bureau of the Census having a population of 5,000 (5,000 to 49,999).

Urbanized—Designated as such by the Bureau of the Census with a population of 50,000 or more.

Rural—Comprise the areas outside the boundaries of small urban and urbanized.

There are three principal roadway classifications: arterial, collector and local roads. All highways and streets are grouped into one of these classes, depending on the character of the traffic and the degree of land access they allow.

The following information was taken from FHWA's website at https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/section03.cfm.

To assist transportation planners responsible for determining the FC of roadways, the charts below offer a helpful tool that can make the classification process of classifying "borderline" roadways a bit easier. **Table 3-5** illustrates the range of lane width, shoulder width, AADTs, divided/undivided status, access control and access points per mile by FC categories.

Table 3-5: VMT and Mileage Guidelines by Functional Classifications - Arterials

	Arterials			
	Interstate	**Other Freeways & Expressway**	**Other Principal Arterial**	**Minor Arterial**
Typical Characteristics				
Lane Width	12 feet	11 - 12 feet	11 - 12 feet	10 feet - 12 feet
Inside Shoulder Width	4 feet - 12 feet	0 feet - 6 feet	0 feet	0 feet
Outside Shoulder Width	10 feet - 12 feet	8 feet - 12 feet	8 feet - 12 feet	4 feet - 8 feet
AADT[1] (Rural)	12,000 - 34,000	4,000 - 18,500[2]	2,000 - 8,500[2]	1,500 - 6,000
AADT[1] (Urban)	35,000 - 129,000	13,000 - 55,000[2]	7,000 - 27,000[2]	3,000 - 14,000
Divided/Undivided	Divided	Undivided/Divided	Undivided/Divided	Undivided
Access	Fully Controlled	Partially/Fully Controlled	Partially/Uncontrolled	Uncontrolled

Mileage/VMT Extent (Percentage Ranges)[1]				
Rural System				
Mileage Extent for Rural States[2]	1% - 3%	0% - 2%	2% - 6%	2% - 6%
Mileage Extent for Urban States	1% - 2%	0% - 2%	2% - 5%	3% - 7%
Mileage Extent for All States	1% - 2%	0% - 2%	2% - 6%	3% - 7%
VMT Extent for Rural States[2]	18% - 38%	0% - 7%	15% - 31%	9% - 20%
VMT Extent for Urban States	18% - 34%	0% - 8%	12% - 29%	12% - 19%
VMT Extent for All States	20% - 38%	0% - 8%	14% - 30%	11% - 20%
Urban System				
Mileage Extent for Rural States[2]	1% - 3%	0% - 2%	4% - 9%	7% - 14%
Mileage Extent for Urban States	1% - 2%	0% - 2%	4% - 5%	7% - 12%
Mileage Extent for All States	1% - 3%	0% - 2%	4% - 5%	7% - 14%
VMT Extent for Rural States[2]	17% - 31%	0% - 12%	16% - 33%	14% - 27%
VMT Extent for Urban States	17% - 30%	3% - 18%	17% - 29%	15% - 22%
VMT Extent for All States	17% - 31%	0% - 17%	16% - 31%	14% - 25%

Qualitative Description (Urban)	• Serve major activity centers, highest traffic volume corridors, and longest trip demands • Carry high proportion of total urban travel on minimum of mileage • Interconnect and provide continuity for major rural corridors to accommodate trips entering and leaving urban area and movements through the urban area • Serve demand for intra-area travel between the central business district and outlying residential areas	• Interconnect with and augment the principal arterials • Serve trips of moderate length at a somewhat lower level of travel mobility than principal arterials • Distribute traffic to smaller geographic areas than those served by principal arterials • Provide more land access than principal arterials without penetrating identifiable neighborhoods • Provide urban connections for rural collectors
Qualitative Description (Rural)	• Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel • Serve all or nearly all urbanized areas and a large majority of urban clusters areas with 25,000 and over population • Provide an integrated network of continuous routes without stub connections (dead ends)	• Link cities and larger towns (and other major destinations such as resorts capable of attracting travel over long distances) and form an integrated network providing interstate and inter-county service • Spaced at intervals, consistent with population density, so that all developed areas within the State are within a reasonable distance of an arterial roadway • Provide service to corridors with trip lengths and travel density greater than those served by rural collectors and local roads and with relatively high travel speeds and minimum interference to through movement

1- Ranges in this table are derived from 2011 HPMS data.

2- For this table, Rural States are defined as those with a maximum of 75 percent of their population in urban centers.

Table 3-6: VMT and Mileage Guidelines by Functional Classifications - Collectors and Locals

	Collectors		**Local**
	Major Collector[2]	**Minor Collector[2]**	
Typical Characteristics			
Lane Width	10 feet - 12 feet	10 - 11 feet	8 feet - 10 feet
Inside Shoulder Width	0 feet	0 feet	0 feet

Outside Shoulder Width	1 feet - 6 feet	1 feet - 4 feet	0 feet - 2 feet
AADT[1] (Rural)	300 - 2,600	150 - 1,110	15 - 400
AADT[1] (Urban)	1,100 - 6,300[2]		80 - 700
Divided/Undivided	Undivided	Undivided	Undivided
Access	Uncontrolled	Uncontrolled	Uncontrolled
Mileage/VMT Extent (Percentage Ranges)[1]			
Rural System			
Mileage Extent for Rural States[3]	8% - 19%	3% - 15%	62% - 74%
Mileage Extent for Urban States	10% - 17%	5% - 13%	66% - 74%
Mileage Extent for All States	9% - 19%	4% - 15%	64% - 75%
VMT Extent for Rural States[3]	10% - 23%	1% - 8%	8% - 23%
VMT Extent for Urban States	12% - 24%	3% - 10%	7% - 20%
VMT Extent for All States	12% - 23%	2% - 9%	8% - 23%
Urban System			
Mileage Extent for Rural States[3]	3% - 16%	3% - 16%[2]	62% - 74%
Mileage Extent for Urban States	7% - 13%	7% - 13%[2]	67% - 76%
Mileage Extent for All States	7% - 15%	7% - 15%[2]	63% - 75%

VMT Extent for Rural States[3]	2% - 13%	2% - 12%[2]	9% - 25%
VMT Extent for Urban States	7% - 13%	7% - 13%[2]	6% - 24%
VMT Extent for All States	5% - 13%	5% - 13%[2]	6% - 25%
Qualitative Description (Urban)	• Serve both land access and traffic circulation in higher density residential, and commercial/industrial areas • Penetrate residential neighborhoods, often for significant distances • Distribute and channel trips between local streets and arterials, usually over a distance of greater than three-quarters of a mile	• Serve both land access and traffic circulation in lower density residential, and commercial/industrial areas • Penetrate residential neighborhoods, often only for a short distance • Distribute and channel trips between local streets and arterials, usually over a distance of less than three-quarters of a mile	• Provide direct access to adjacent land • Provide access to higher systems • Carry no through traffic movement
Qualitative Description (Rural)	• Provide service to any county seat not on an arterial route, to the larger towns not directly served by the higher systems, and to other traffic generators of equivalent intra-county importance such as consolidated schools, shipping points, county parks, important mining and agricultural areas • Link these places with nearby larger towns and cities or with arterial routes • Serve the most important intra-county travel corridors	• Be spaced at intervals, consistent with population density, to collect traffic from local roads and bring all developed areas within reasonable distance of a minor collector • Provide service to smaller communities not served by a higher class facility • Link locally important traffic generators with their rural hinterlands	• Serve primarily to provide access to adjacent land • Provide service to travel over short distances as compared to higher classification categories • Constitute the mileage not classified as part of the arterial and collectors systems

1- Ranges in this table are derived from 2011 HPMS data.

2- Information for Urban Major and Minor Collectors is approximate, based on a small number of States reporting.

3- For this table, Rural States are defined as those with a maximum of 75 percent of their population in urban centers.

Pavement Management System

Currently, MoDOT's emphasis is on keeping good roads good and doing the best we can with the resources available. Because resources are scarce and MoDOT desires to provide the best service possible to the most customers, we have stratified our roadways into three tiers: Major Roads, Minor Roads and Low Volume Roads. Major Roads account for almost 80% of the Vehicle Miles Traveled (VMT) on state-owned roadways. Minor Roads are other routes that are not Major but have an AADT greater than 400. Low Volume routes are all other routes with an AADT less than 400. We track performance on these routes by category. Our resulting measures are “Good” and “Not Good”. They are calculated as follows:

- Major Roads speed limit > 45 Good: IRI < 100
- Major Roads speed limit < 50 Good: Condition_Index >=7 (visual surface distress rating)
- Minor Roads Good: IRI < 140
- Minor Roads Good: IRI between 140 and 170 and Condition_Index >=6
- Low Volume Good: IRI < 170
- Low Volume Good: IRI between 170 and 220 and Condition_Index >=6

In our state of the system tables, this measurement has been calculated, and the results are maintained in the column *Tracker Condition* with the values of “Good”, “Not Good” and “NA” or null.

Additional Business Areas with TMS include the following:

Outdoor Advertising – this system includes:

- Adopt A Highway
- Outdoor Advertising ◦Billboard
- Junkyard
- Transfer Permit
- Media for billboards and junkyards

Routine Maintenance

- Travelway Routine Maintenance is an application containing job numbers for routes and bridges throughout the state. This application enables Routine Maintenance job numbers from the Financial Management System (FMS) to be tied to a location in TMS.

Intelligent Transportation System

SIMS (five-year Statewide Transportation Improvement Program)

Realty Asset/RW Parcel Acquisition

State of the System (yearly summarized roadway, bridge, crash and pavement data)

Traffic Permitting for Right-of-Way – this application tracks the status of permits issued for conducting work on MoDOT right-of-way.

Striping Inventory

Traveler Information System

These applications are used to keep information current on MoDOT's Traveler Information Map. The Traveler Information Map is essential to the safety of Missouri's traveling public. Traffic Impact

- Work Zone
- Winter Road Conditions
- Flood Condition
- OSOW Restrictions
- Traveler Information Map (TIM) Auto Editor
  This application is used to choose and update layers which will display on the TIM. This application is used only by MoDOT Communications staff.

- TIM Alert Management
  This application will assist users in changing the alert message for the desktop TIM and the mobile TIM apps for iOS/Android mobile phones. The desktop web application only allows one message to be displayed in the upper left corner of the map. The mobile apps allow multiple messages and will display them in a list for the user. This application is used only by MoDOT Communications staff.

The following is a list of newer applications in TMS:

Stormwater

- This application helps MoDOT regulate under a National Pollutant Discharge Elimination System storm water permit. The permit requires MoDOT to develop and implement a comprehensive program to prevent pollution of surface waters resulting from storm water run-off from MODOT's system.

Local Program Application (LPA) Locations

- The LPA is used to manage jobs located on our city streets and county roads. There is a federal mandate to assign locations to these local projects.

Emergency Operations Map

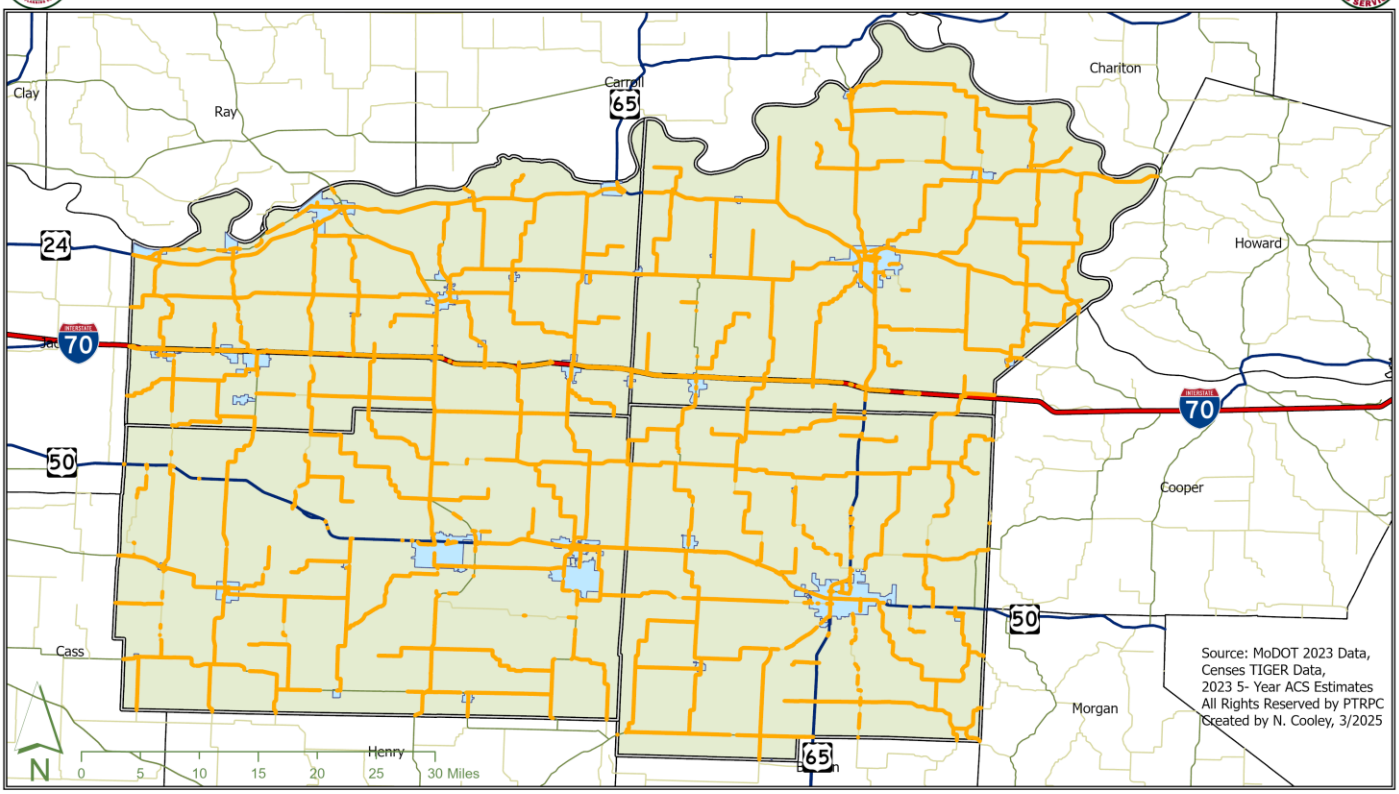
- This map is for internal use only should a natural disaster occur. It tracks the status of MoDOT roads and bridges during and after a disaster.

TMS Data Zone

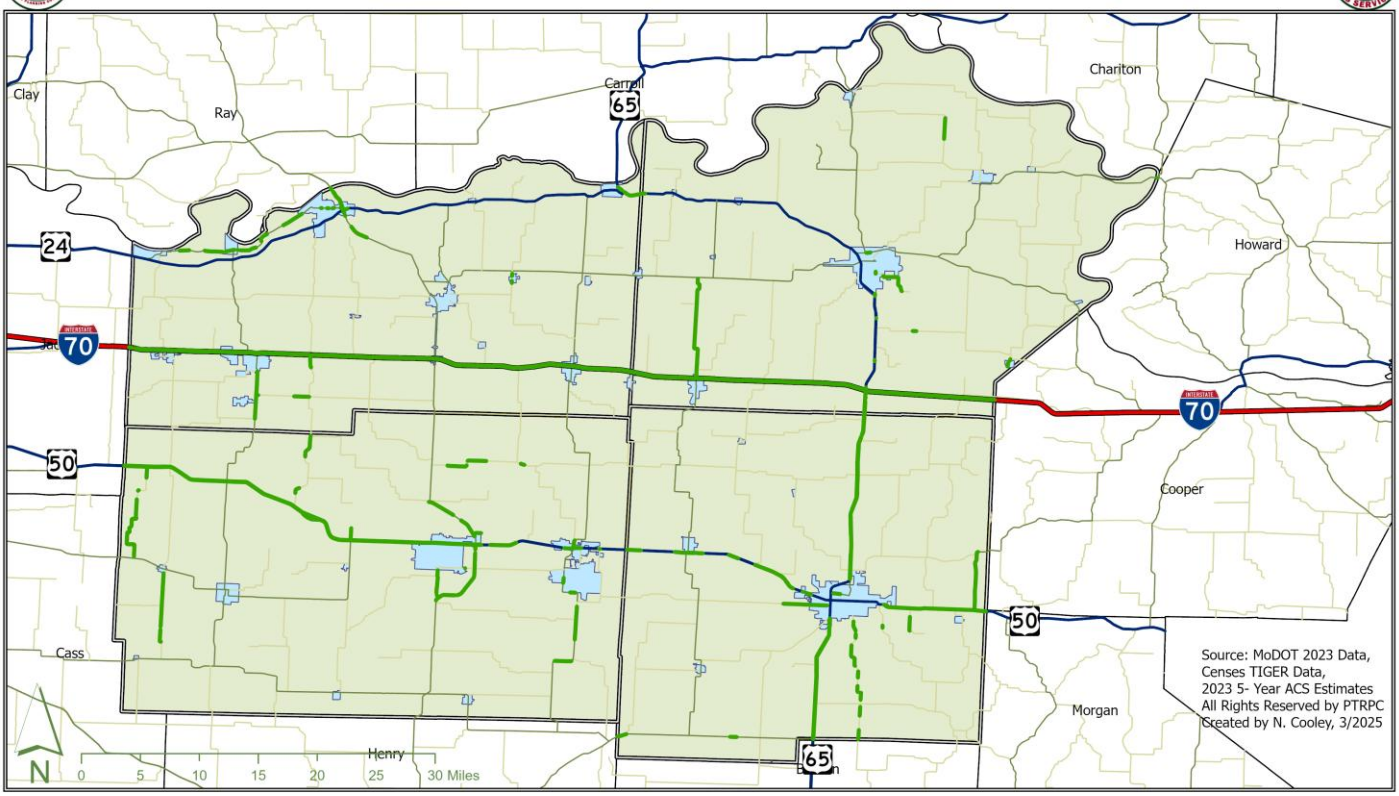
This is an internal web page containing maps and other tools that allow MoDOT customers to easily retrieve data and statistics. It contains data in the following areas: Traffic, Safety, Planning, Bridge, Design, Map-21, Construction and Multimodal. The Data Zone also houses the Pavement Tool which is used for planning pavement maintenance activities and surface treatments. The intent is to eventually open this tool to the public.

For detailed information regarding MoDOT business and engineering policy, visit the Engineering Policy Guide at http://epg.modot.org/index.php?title=Main_Page.

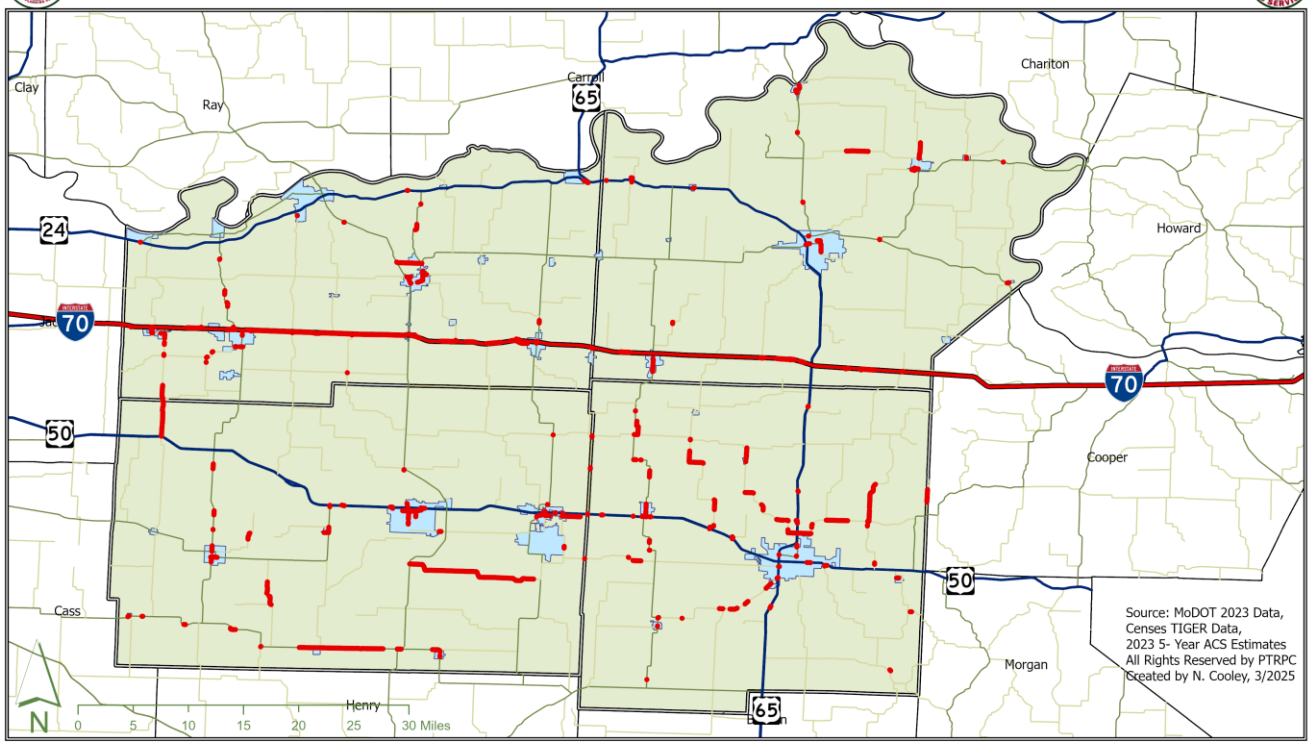
Pioneer Trails Regional Planning Commission - MoDOT Pavement Condition - Fair



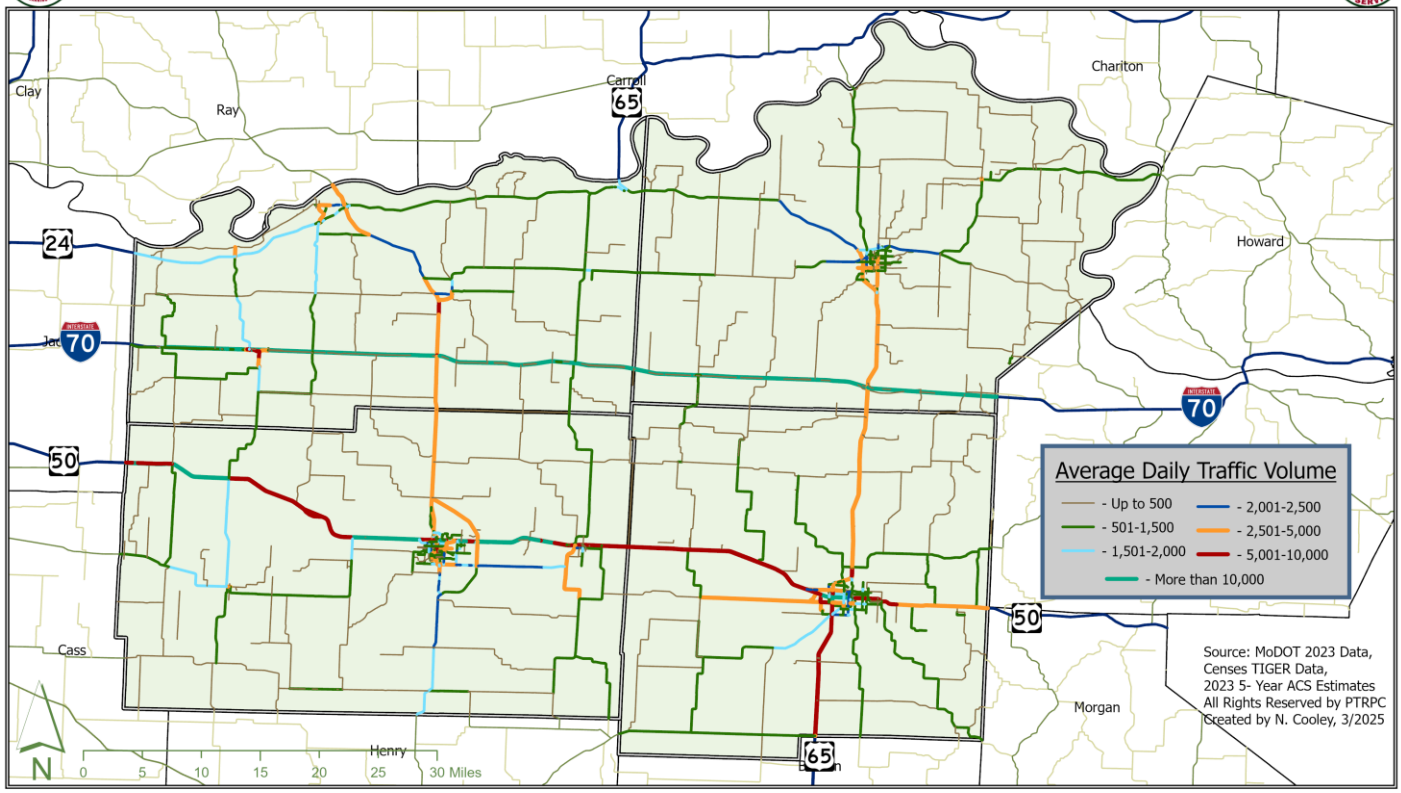
Pioneer Trails Regional Planning Commission - MoDOT Pavement Condition - Good

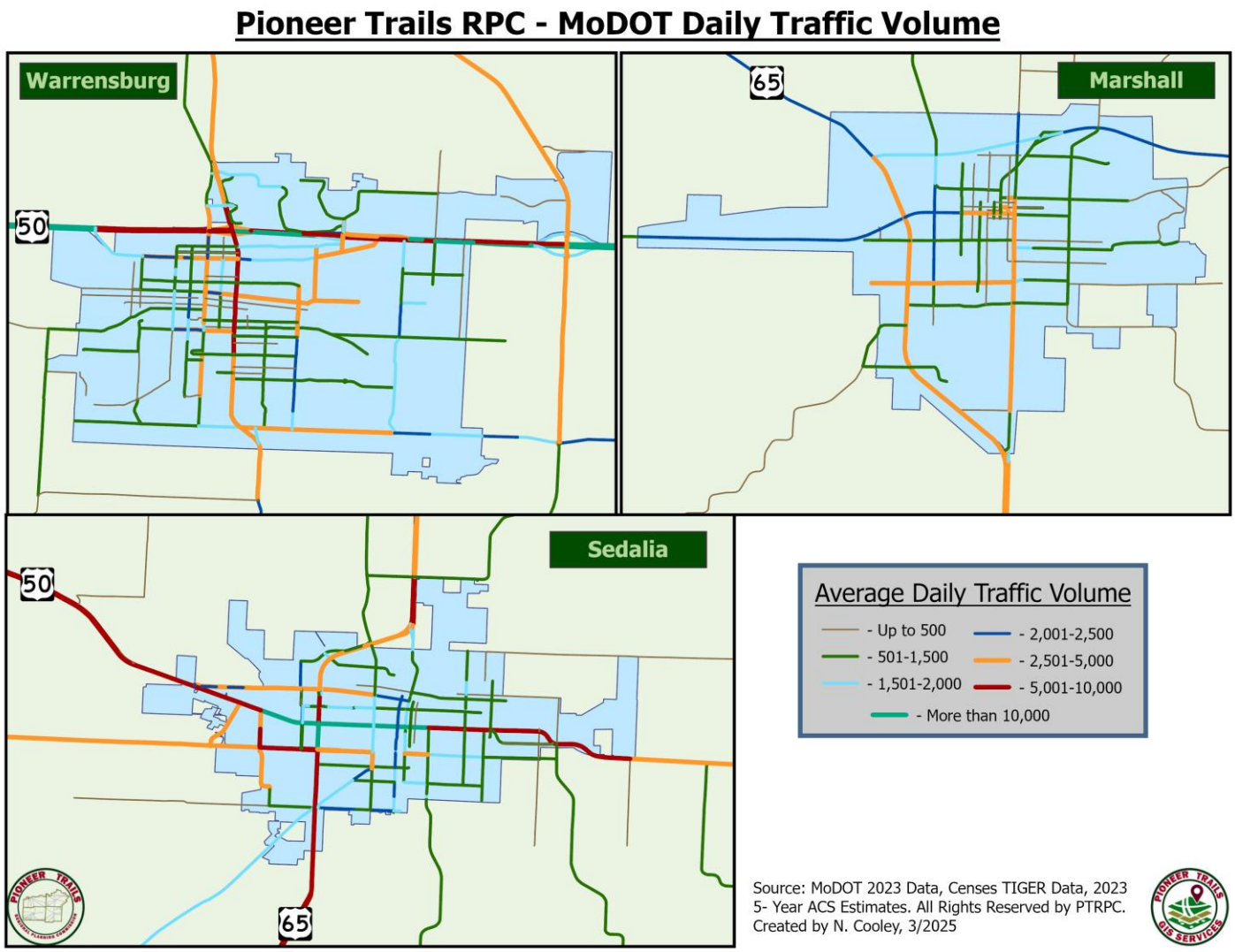


Pioneer Trails Regional Planning Commission - MoDOT Pavement Condition - Poor



Pioneer Trails Regional Planning Commission - MoDOT Average Daily Traffic Volume





CHAPTER 5 — NEEDS IDENTIFICATION

CONDITION SUMMARY

The Pioneer Trails 2024 Regional Transportation Plan, an update of the 2023 Regional Transportation Plan, reflects current needs and future projects determined by the member jurisdictions of PTRPC. Since the original report, dated 2023, the overall condition of MoDOT roads within the Pioneer Trails Region has remained the same.

TRANSPORTATION PLANNING GOALS

GOAL: TAKE CARE OF THE TRANSPORTATION SYSTEM AND SERVICES WE ENJOY TODAY

Throughout on the Move, Missourians expressed their desire to take care of the existing transportation system so that it can continue to serve the state's people, businesses and economy. When the infrastructure is well maintained, it helps save people and businesses money by making vehicles less expensive to operate. Costs to maintain infrastructure have increased over the years; however, it is still a priority for Missourians to maintain the existing transportation system.

During the past years, MoDOT has made a commitment to focus on the most heavily travelled roads to increase the impact to the greatest number of road users. A goal set by MoDOT for major roads is to maintain 85 percent of pavements in good condition.

Even though the minor roads receive less daily travel, Missourians have expressed that the minor road conditions need to be improved. 20.4% Missouri's minor highways were judged to be in not good condition in 2023.

The condition of Missouri's 10,424 bridges consists of 804 bridges in poor condition, an improvement of 19 in 2022. Misosuri also has 935 weight-restricted bridges, with 313 of them also in poor condition.

Local governments maintain local roadways. Across Missouri, city and county governments preserve the 96,000 miles of roadways. In addition to local taxes and fees, local governments receive annual funding from federal highway funds administered by MoDOT and annual funds in dedicated state highway user taxes and fees.

Along with roadways and bridges, the State of Missouri also has a role in maintaining transit service, rail, airports, waterways, sidewalks, and trails.

MoDOT has developed the following strategies to move forward with taking care of the transportation system:

- Establishing condition and service goals for all components of Missouri's transportation system
- Securing dependable funding to support the current system and services for all modes of transportation
- Continuing to explore technology and developing business practices that result in lower costs to stretch funding for more improvements

GOAL: KEEP ALL TRAVELERS SAFE, NO MATTER THE MODE OF TRANSPORTATION

MoDOT believes that even one life lost to a traffic crash is one too many and has a Zero Lives Lost goal. The number of lives lost on Missouri's roadways due to traffic crashes has increased since 2012 despite a number of efforts. The Missouri's Coalition for Roadway Safety which includes law enforcement agencies, health care providers, courts, government agencies, advocacy groups, planning organizations and concerned citizens has provided leadership actions for making Missouri's roadways safer.

The coalition produces the 2021-2025 Missouri's Show Me Zero plan that establishes goals and strategies to reduce the number of fatalities and serious injuries on Missouri's roadways. The coalition's efforts have included targeted law enforcement efforts, safety improvements on Missouri's roadways and educational campaigns that promote transportation safety.

Focus areas have included keeping drivers on the road, improving curves, improving intersections, accommodating pedestrians and bicyclists, improving work zone safety and implementing strategies to increase safety belt usage.

MoDOT has developed various strategies aimed at various groups such as family and individuals, Counties and Cities, Businesses and Corporations, Schools, Civic Clubs and more to encourage all Missourians to implement change in areas of influence. The plan can be found at https://www.savemolives.com/mcrs/show-me-zero.

GOAL: INVEST IN PROJECTS THAT SPUR ECONOMIC GROWTH AND CREATE JOBS

Missouri's transportation system impacts Missouri's economy in many ways. The economy depends on a well-maintained and well-connected transportation system to move products and people. It has been

estimated that 800 million tons of freight annually originate, terminate, or pass-through Missouri by rail, trucks, ports and airports.

A direct economic benefit of a strong transportation system is more efficient movement of people and goods thereby reducing travel and transport times. Good transportation connections can result in less waiting time. Well maintained driving surfaces can mean less wear on vehicles and lower vehicle maintenance costs. When people are spending less time to travel and transport goods and less money on vehicle maintenance, they have more money available to put into the economy.

New or relocating businesses will consider ease of transportation when choosing their location. The construction of transportation infrastructure creates jobs. The economic effects can be far reaching when the equipment and supplies needed for construction are considered.

For FY 2024, Cost-Share Program funds of $1.9 million have been committed to four projects. For every $1 of Cost-Share Program funds awarded, 48 cents of local cash were leveraged. This includes the City of Bowling Green's Route 54 and Industrial Park Intersection project that demonstrated economic development and allowed for funding greater than 50% of the total project costs from the Cost-Share Program. In addition, the City of Liberty's Route 291 Blue Jay Traffic Signal and Sidewalk Improvements project funded with sub-allocated federal funding, reduced the city's cash contribution. These projects result in local cash leveraged below the target of $1.

The Missouri General Assembly appropriated $50 million for MoDOT to work cooperatively with the Missouri Department of Economic Development to create the Governor's Transportation Cost-Share Program and build partnerships with local entities to deliver road and bridge projects. In FY 2021, 20 projects were awarded funds. For every $1 of Governor's Transportation Cost-Share Program funds awarded, 82 cents of local cash were leveraged.

The Missouri General Assembly appropriated an additional $75 million for the Governor's Transportation Cost-Share Program. In FY 2023, 28 projects were awarded funds. For every $1 of Governor's Transportation Cost-Share Program funds, 91 cents of local cash were leveraged.

MoDOT has developed the following strategies to move forward with investing in projects that spur economic development:

- Increasing partnerships with local communities, businesses, transportation service providers and other sectors to specifically identify what transportation projects can be undertaken what local economies
- Expanding MoDOT’s cost share opportunities to include all transportation modes
- Identifying the statewide freight network to serve the needs of Missouri businesses
- Developing intermodal connectors that better link the states rivers, rails, roads and runways
- Providing reliable and accessible transportation options to get people to work and customers to businesses

GOAL: GIVE MISSOURIANS BETTER TRANSPORTATION CHOICES

During the On the Move initiative, Missourians expressed a desire for more choices in modes of transportation. Even though most persons choose to travel in their own personal vehicle, the roadway

network must continue to be improved and expanded to accommodate Missourians' transportation needs. With the baby boomer population aging and many young adults choosing to drive less than previous generations, there was an expressed desire for increased scheduled services, improved speeds and more reliable arrival times for bus and rail travel.

Additional urban and rural transit options are needed. Passenger rail service is increasing in popularity. Bicycle and pedestrian facilities are important especially for those who do not drive. Aviation options allow residents and business to connect to the national and international airspace system.

MoDOT has developed the following strategies to move forward with giving Missourians better transportation choices:

- Increasing regional involvement to include all transportation stakeholders when identifying and prioritizing projects
- Securing reliable funding that is flexible and can be used to address each region's transportation priorities
- Evaluating the impact to all transportation modes during the development of an improvement
- Connecting travel options – passenger rail to bus stops to sidewalks to airports
- Expanding and improving transit, air, passenger rail, bicycle, and pedestrian options throughout the state
- Providing accessibility to all users of the transportation system

FUNDING CATEGORIES AND WORK TYPE DEFINITIONS

TAKING CARE OF THE SYSTEM ACTIVITIES

Pavement and Bridge

Pavement and Bridge taking care of the system activities include the following:

- Rehabilitation and Reconstruction
- Thin Lift Overlay
- Contract Level Course
- Preventative Maintenance
- System Operations

Safety

Safety projects include hazard elimination, railroad/highway crossings, signals, lighting and lighting modifications, lighting in commuter lots, turn lanes at intersections and sight distance improvements**,** coldmill and resurfacing, and adding non-continuous turn lanes less than one-half mile.

TAKING CARE OF THE SYSTEM DEFINITIONS

Rehabilitation and Reconstruction:

- **Bridge Replacement:** Includes only the replacement of a bridge structure or box culverts greater than 20'. This work type does not include rehabilitation or new bridges. Does not include bridge deck replacement. Bridge deck replacement is included in Bridge Rehabilitation.

- **High Type Resurfacing:** Resurfacing on any 3R (resurfacing, restoration and rehabilitation) project greater than 2" thick. Intended for NHS routes.

- **Pavement Replacement:** Includes the complete removal and replacement of existing pavement.

- **Bridge Rehabilitation:** Includes any work done to improve an existing structure such as joint repair, overlays, redecking and deck repair of a structure. Also includes stream realignment, abutment protection and channel stabilization.

- **Bridge Retrofit and Strengthening:** Includes any work done to an existing structure to increase the resistance to earthquakes. Also includes any work done to strengthen the girders of an existing structure to increase the load capacity.

- **Other:** Weigh stations, flood mitigation, slide corrections, drainage corrections, ferry boat ramps, raising roadway to eliminate flooding, flood walls, sound walls, wetland mitigation, retaining walls, fencing and demolitions.

Thin Lift Overlay:

- **Medium Type Resurfacing:** Superpave (1 ¾" overlay) on any route greater than a collector.

Contract Level Course:

- **Low Type Resurfacing:** Resurfacing (1" hot mix) on any 3R (resurfacing, restoration and rehabilitation) project. Intended for collector routes.

Preventive Maintenance:

- **Preventive Maintenance – Bridge:** Includes waterproofing, painting (including major bridges) and epoxy bridge deck seals.

- **Preventive Maintenance – Pavement***:* Any work that extends life but doesn't add structure to the pavement. Includes chip seal, slurry seal, diamond grinding, microsurfacing, etc**.**

Routine Maintenance:

- **Routine Maintenance:** Any work that doesn't extend life of pavement. Projects programmed with right of way and construction funds could include guard rail and cable repair, crack sealing, pothole patching, or maintenance of ITS apparatus.

System Operations:

- **Congestion Management:** Includes any work being done to improve congestion. Should also include work that improves the flow of the transportation system, which may include traffic signals and highway lighting. Could be used as a secondary work type.

MAJOR PROJECTS/EMERGING NEEDS/OTHER ACTIVITIES

Major Projects/Emerging Needs/Other categories include the following activities:

- **Adding Lanes**: Increased Capacity
- **Corridor Preservation**: Purchase Right of Way
- **Dual Divided:** Building separated travelways
- **Enhancements:** Aesthetic, landscaping, sidewalks, facades, etc.
- **Freeway:** Construction of new or upgraded freeway
- **Interchange:** New or upgraded interchange
- **Major Bridge:** (Any greater than 1,000')
- **New or Improved Two Lane:** Realignment, widening, shoulder widening.
- **Shoulder Widening**: New shoulders, repair or widening.
- **Location Studies and MIS:** Location study
- **Other additions/enhancements:** Weigh stations, flood mitigation, sound walls, etc.
- **Highway Rail Safety:** Highway and at-grade crossing projects.

MAJOR PROJECTS/EMERGING NEEDS/OTHER DEFINITIONS

- **Add Lanes** includes the addition of one or more lanes to increase overall capacity. This category can include the addition of a continuous turn lane but shall exclude lanes added to upgrade to "Dual Divided". Adding non-continuous turn lanes (less than one-half mile) is safety work type.

- **Corridor Preservation:** Right of Way purchased to eliminate development on a proposed corridor. No construction funds can be programmed and would require new job number.

- **Dual Divided:** Includes "Separated Travelways" as per the "Missouri Standard Specifications for Highway Construction, 1996" page 6--Divided Highways. This work type shall include any work to achieve a divided highway including <u>new</u> bridges, which will become a part of an ultimate dual lane. This work type <u>will not</u> include "Major Bridges." A divided highway shall be further defined as a dual lane with a "positive barrier" (i.e. median, concrete barrier etc.) A flush painted barrier is not included as a positive barrier.

- **Enhancements:** Aesthetic additions, landscaping, sidewalks, bicycle/pedestrian and facades.

- **Freeway:** The construction of a new or the upgrading of an existing facility to "Freeway" standards. This work type includes the removal of at grade crossings to create a fully limited access facility.
- **Interchange:** Includes any work to construct a new interchange or to upgrade or modify an existing interchange.

- **Major Bridge:** This work type includes any structure with a length greater than 1000'. If painting and redecking, bridge rehabilitation will be the secondary work type.

- **New or Improved Two Lane:** Includes combination of realignment, pavement widening,

new bridges over state routes, and shoulder widening. Also includes upgrading to "Super 2" Standards, which are considered to be 24' pavement width, 10' shoulders and design speed of 60 mph. This work type does not include shoulder widening only.

- **Shoulder Widening:** New Shoulders, repair or widening.

- **Location Studies & MIS:** MIS (Major Investment Study) is current phrase for a location study in urban areas.

- **Other:** Weigh stations, flood mitigation, slide corrections, drainage corrections, ferry boat ramps, raising roadway to eliminate flooding, flood walls, sound walls, wetland mitigation, retaining walls, fencing, and demolitions.

TRANSPORTATION PLANNING GOALS BY CATEGORIES

Pioneer Trails' transportation needs are listed three major categories: Road and Bridge/ Bike, Pedestrian and Public Transit/ Long Range. Taking Care of the System will be added as a fourth category during the next Transportation needs update. Within these priority categories, the needs are listed in order of scores from the TAC. The top five from each category are listed at the top as the most needed regionally.

2024

TRANSPORTATION NEEDS LIST

Road and Bridge		
Saline	Intersection improvements of at the intersection of Hwy 240 and Hwy 41, East of Marshall	30.4
Saline	Intersection improvements at the intersection of Rte. 240 and Rte. C in Slater	27.2
Lafayette	Expanding Hwy 13 to four lanes, or constructing a designated center turn lane, combined with a decreased speed limit from Rte. MM to the city limits of Higginsville	24
Pettis	Congestion control at Northbound entry to US 65 from Main St. and Southbound access from US 65 to Main St. in Sedalia	22.4
Pettis	Dedicated turn lane for Smithton at US 50 spur	19.4
Lafayette	Improve traffic and pedestrian safety at the intersection of Hwy OO, 9th St. and Cox Rd. in Odessa	19
Pettis	Intersection improvements due to safety concerns at the intersection of Hwy Y and 127, North of Green Ridge	18.4
Johnson	Interchange improvement at US 50 and Business Rte. 13 (McGuire St.) in Warrensburg	12
Saline	Widen roadway to alleviate unsafe conditions along Hwy 122 from Van Meter State Park to Hwy 41	10.2
Pettis	Widen Katy Trail underpass along US 50 between the US 50 intersections of S. Ingram Ave. and S. Massachusetts to alleviate bottlenecking and deteriorating underpass conditions	10
Saline	Roadway improvements to correct right and left turn conflicts and congestion at US 65 from Arrow St. to the Marshall city limits	9.2
Johnson	Intersection signage to address safety concerns created by new development at the intersection of US 50 and NE 501 Rd in Warrensburg/Knob Noster	9.2
Johnson	Turn lane construction to allow safe entry into new High School football stadium on Hwy 13 near entrance of MoDOT shed in Knob Noster	8.2
Saline	Paved 4 ft. shoulders, signage and rumble strips, with surface and guardrail improvements on Hwy 41 from Rte. AA to Tre TT in Arrow Rock	7.2
Lafayette	Reconfiguration of intersection to allow for turning, proper deceleration and acceleration of commercial trucks at Hwy 13 and 24th St. Terrace to improve congestion control and alleviate safety concerns	6.2
Lafayette/Saline	Paved 6 ft. shoulders, signage, rumble strips and surface improvements on Hwy 20 from Rte. W to Rte. EE, North East of Alma	5.2
Lafayette	Install guardrail on Mo 23 approximately ½ mile south of Hwy 20 on all four sides of the K.C.S. RR underpass to improve safety and decrease run off the road incidents	5.2
Saline	Improvements to sightlines and improved configuration for new development access on Hwy 122 North of I-70 in Sweet Springs	5.2
Saline	Intersection improvements at the intersection of Hwy 240 and Rte. C to improve safety in Slater	5
Saline	Paved 6 ft. shoulders and rumble strips on Hwy 20 from Rte. EE to Hemlock Ave., West of Marshall	5
Pettis	Construct roundabout at the intersections of Sacagawea Rd. and Hwy B to improve traffic flow and safety	4.2
Lafayette	Reduce speed limit to 45 MPH on Hwy 13 at Rte. MM, due to new business construction on West side of roadway	4
Johnson	Deceleration/acceleration lane at entrance 1921 of US-50 at Lone Jack 64070	3.2
Lafayette	Address large traffic volumes at peak times on Hwy 13 at the intersections of 31st, 34th, and 35th streets in Higginsville, to alleviate safety concerns, and traffic congestion	3.2
Saline	Resurfacing and roadway maintenance with added safety measure such as rumble strips and guardrails along Hwy 41 South from Hwy 240 to Cooper County Line	2
Saline	Repetitive flood mitigation on Hwy 127 North of Sweet Springs	1.2
Lafayette	Roadway improvements to address safety concerns in the Waverly area on US 65 from MO River East to Saline County line	1
Unscored Needs		
Pettis	Construct new truck route at the intersection of Hwy 50 and Hwy MM to the North 65 overpass, connecting to previously identified need "Construct new truck route from N. 65 heading South East to Hwy 50 (West of O Hwy)"	
Bike and Pedestrian/Public Transit		
Saline	Construct pedestrian overpass over US 65 Between Marshall Highschool and Walmart in Marshall	38.2
Pettis	Add pedestrian and bike facilities to N. Ohio Ave from Amtrak depot to Katy Trail depot in Sedalia	29.5
Saline	Sidewalk construction to allow pedestrian access to retail and human service establishments along US 65, between Fitzgibbon and W. Vest St. in Marshall	28.8
Pettis	Construct shoulders and a bike path on Hwy Y from State Fair Community College to Quisenberry Rd. in Sedalia	26.4
Pettis	Operating cost for Amtrak depot at Pacific St. in Sedalia	25.333
All PTRPC Counties	Oats replacement vehicle funding for entire region	15.4
Johnson	Add pedestrian facilities connecting to school and Rock Island Trail on Mo 2 from Brazier Ave. to South City Limits in Leeton	14.4
Saline	Add bicycle and pedestrian accommodations on US 65 between College St. and Walmart in Marshall	13.2
Saline	Designate and upgrade shoulders as a major bike/pedestrian corridor and Hwy 20 between Marshall and Higginsville	12
Lafayette	Increase/retain public transit for people with medical needs in Lafayette County	11.4
Johnson	Expand shoulders and establish designated bike land on Mo 131 from Rock Island Medford trailhead North to Holden City Limits	9.6
Johnson	Expand Hwy 58 shoulders to accommodate designated bike/pedestrian lane that will connect with previously completed MoDOT sidewalk project near the park from the intersection of 9th St. to the Eastern city limits	9.4
Pettis	Bike route expansion from SFCC to Quisenberry (West of Walnut Hills) in Sedalia	7
Johnson	Security and structural improvements to the Amtrak Depot at S. Holden St. and Marshall St.	6.2
Johnson	Retention of Amtrak operations	6
Lafayette	Improve traffic and multi-modal and pedestrian safety, through implementation of crosswalk and warning signs at the intersection of Mo 131 and College St.	5.2
Pettis	Add sidewalk to US 50 North to W. Third St, and W. Third St to US 65 in Sedalia	5.2
Pettis	Add pedestrian facilities on US 50 from 800 ft. East of Oak Grove Ln. to US 65 in Sedalia	5

Pettis	Add a sidewalk to US 65 from 7th St. to Liberty Park Blvd, in Sedalia	5
Lafayette	Improve traffic, multi-modal and pedestrian safety through implementation of crosswalks on Rte. OO at Owl Creek Parkway in Odessa	4.4
Lafayette	Maintain, repair, and/or replace fencing and parking at commuter lot on Old 40, from commuter lot, around commuter lot and east to railroad overpass in Odessa.	4.4
Lafayette	Improve traffic, multi-modal, and pedestrian safety through speed reduction on Rte. OO from 131 to Fox Trot Dr. in Odessa	4.2
Lafayette	Add sidewalks along Old 40 from Johnson Dr., West to N. 4th St, in Odessa, to improve pedestrian safety	4
Lafayette	Improve traffic, multi-modal and pedestrian safety through speed reduction on Mo 131 from Star School Rd. to Rte. OO in Odessa	3
Long Range		
Saline	Utilize 2 + 1 expansion on US 65 from Marshall to Waverly	35.25
Pettis	Construct outer road from Hwy 765 North to new HH overpass in Sedalia, to relieve traffic congestion	34.833
Saline	Widen US 65 to four lanes from the intersection of S. Odell Ave and Lexington Ave to approximately 1/8 mile North of N. Speyer Ln in Marshall, to relieve traffic congestion to the Fairgrounds, Fitzgibbon Hospital, retail, etc.	32.875
Pettis	Widen US 65 to four lanes from Hwy 765 to Main St. with on/off ramps on North side of Hwy 65 Main St. bridge in Sedalia	26.5
Lafayette	Roundabout construction at the intersection of MO 20 and MO 23 (included in FY25 high priority needs list)	25.625
Lafayette	Replace the KC Southern Railroad overpass on MO 13 in Higginsville and construct sidewalk with rail or shoulder under rail line in Higginsville	20.208
Johnson	Upgrade MO 13 to 4 lanes from Warrensburg to Southern Johnson County line	17.417
Johnson	Address repetitive flooding and closures on MO 234 South of Concordia through Martha Perry Conservation Area (Scoping: KRO199)	13.917
Pettis	Construct new truck route from N. 65 heading South East to Hwy 50 (West of O Hwy)	8.4167
Johnson	Replace/improve bridge at Maguire St. and US 50 in Warrensburg	8.125
Johnson	Upgrade MO 13 to 4 lanes in the Warrensburg area (MO 13 East Loop)	7.2083
Pettis	Construct multi-modal transload dock from Sedalia industrial park, along Boonville St. to Sedalia Airport	3.625
Taking Care of System (TCOS)		
Saline	Redo 2 newly replaced (2023) culverts on Hwy 122 that are dipped out and failing	2.68
Saline	Resurfacing and maintenance of Hwy 41 from Marshall to Miami	2.64
Saline	Resurfacing and maintenance of entire lettered route O, North of Slater	2.64
Johnson	Resurfacing of MO 131 from the northern city limits of Holden to Pittsville	2.36
Pettis	Culvert replacement at the junctions of East Lane & Front St, and Sunnyside & Front Street adjacent to US 50 in La Monte	2.28
Saline	Culvert replacement at the intersection of Hwy 127 & Chestnut St. in Mt. Leonard	2.28
Lafayette	Widen/shoulder repair on Rte. O South, from Lexington to I-70 in Lexington	1.72
Lafayette	Roadway repair/resurfacing of Rte. FF from Higginsville to Jackson County line	1.72
Lafayette	Maintenance of roadway and shoulder to improve safety on E. Old 40 Hwy, east of 131 South to Johnson Dr. in Odessa	1.68
Lafayette	Bridge decking and resurfacing maintenance of Johnson Dr. bridge of I-70 in Odessa	1.68
Lafayette	Resurfacing, drainage control, ditch cleanup, and shoulder repair of Hwy 224 from Lexington to Wellington	1.68
Lafayette	Resurfacing and striping of Rte. OO from 131 to 9th St. in Odessa	1.64
Lafayette	Resurfacing of Rte. MM South of Higginsville to West of Hwy 13 in Higginsville	1.04

CHAPTER 6 — FUTURE PROJECT PLAN FOR 5 YEARS

FUTURE PROJECTS ALREADY PROGRAMMED

The 2025-2029 Statewide Transportation Improvement Program (STIP) covers highways, bridges, transit, aviation, rail, waterways, enhancements and other projects. Future projects include the following:

Johnson County			
Route	**Project**	**Completion FY**	**Cost (in thousands)**
BU 13	Bridge rehabilitation over Rte. 50 and pavement resurfacing 0.3 mile south of Cooper Avenue and 0.1 mile north of Russell Avenue. Project involves bridge A0143.	2029	1,587
MO 13	Add turn lanes, grading and drainage at the intersection of Rte. E.	2025	2,255

MO 13	Intersection improvements at Rte. 2.	2029	2,942
MO 23	Pavement resurfacing, upgrade signal and add turn lanes from Rte. 50 to Rte. DD.	2025	1,869
BU 50	Upgrade pedestrian facilities to comply with the ADA Transition Plan in Knob Noster from Washington Avenue to Sunshine Lane and Rte. J from Allen Street to Monroe Avenue.	2026	4,132
US 50	Bridge rehabilitation over Blackwater Creek and bridge replacement over Butchers Branch, 0.4 mile east of County Road 671 and 1.4 miles west of County Road NW 601. Project involves bridges A1175 and A1176.	2026	6,978
US 50	Bridge rehabilitation over South Fork Blackwater River 1 mile west of County Road NW 1601 and 0.1 mile east of Rte. Z. Project involves bridge A1223.	2027	3,584
US 50	Bridge rehabilitation over Devils Branch and Post Oak Creek, 0.6 mile west of County Road 105 and 0.7 mile east of County Road NW 191. Project involves bridges A1042 and A1043.	2027	4,104
US 50	Add J-turns at NW 1601st Road. $527,000 Open Container funds.	2025	2,968
US 50	Add J-turns from 0.7 mile east of Rte. 58 and 0.2 mile east of Northwest 121st Road.	2025	10,149
US 50	Modify intersection configuration at Bus. 50 in Warrensburg.	2025	1,965
US 50	Bridge rehabilitation over Clear Fork Creek, 1.3 miles west of Rte. 23 and 0.9 mile east of 175th Street. Project involves bridge L0901.	2026	1,534

Lafayette County

Route	Project	Completion FY	Cost (in thousands)
MO 13	Pavement resurfacing and add turn lanes from Northwest 435th Road to 0.5 mile south of I-70.	2025	28,928
MO 20	Pavement resurfacing from Rte. W to Rte. EE in Saline County.	2026	4,350
MO 224	Upgrade signal interconnect along Rte. 224 in Lafayette County and along Rte. 13 in Ray County.	2026	1,137

US 24	Pavement resurfacing and guardrail replacement from Rte. 224 to Rte. 65.	2025	7,937
US 24	Bridge rehabilitation over Tabo Creek, 1.1 miles east of Northrup Road and 0.4 mile west of Garr Road. Project involves bridge A2850.	2029	2,770
US 24	Bridge rehabilitation on the Waverly River Bridge over the Missouri River. Project involves bridge A5910.	2028	10,643
US 24	Pavement resurfacing from Lafayette County line to Rte. 224 in Lexington.	2025	9,100
RT Y	Bridge replacement over I-70, 0.5 mile east of Alexander Road and 1 mile west of Amber Road. Project involves bridge A0120.	2025	4,649

Pettis County

Route	Project	Completion FY	Cost (in thousands)
US 50	Bridge rehabilitation, pavement resurfacing and upgrade guardrail over Muddy Creek 0.5 mile east of Rte. MM and 1.7 miles west of Main Street. Project involves bridge A2663.	2026	5,946
US 65	Bridge rehabilitation over Turkey Creek, 0.1 mile south of John Road and 1.2 miles north of Smelser Road. Project involves bridges A0808 and A3039.	2026	2,434
US 65	Intersection improvements at Rebar Road in Sedalia.	2027	8,080
RT H	Bridge replacement over Sewer Branch, 0.6 mile west of Rte. 65 and 0.1 mile east of Georgetown Road. Project involves bridge W0535.	2029	1,641
RT M	Bridge replacement over Lake Creek, 0.1 mile south of Rte. V and 0.6 mile north of Echo Road. Project involves bridge X0340.	2025	2,440

Saline County

Route	Project	Completion FY	Cost (in thousands)
MO 127	Add turn lanes and lower vertical curve at I-70. $624,999 Cost Share funds. $639,999 Sweet Springs funds.	2025	1,280
US 65	Upgrade signals from Rte. 20 (Arrow Street) to Fairground	2026	420

	Road in Marshall.		
RT E	Bridge rehabilitation over Salt Fork Creek, 1.2 miles north of 170th Trail and 0.3 mile south of Mallard Trail. Project involves bridge R0545.	2027	1,510

FY24 Legislatively Designated and Funded Initiative Off the State-Owned System (House Bill 4)				
County	**Route**	**Project**	**Completion FY**	**Cost (in thousands)**
Pettis	US 65	Add interchange at Rte. B in Sedalia.	2025	5,034
Johnson	RT F	Pavement resurfacing on Rte. F in Johnson County, Rte. AA in Lafayette County, Rtes. O and W in Pettis County, Rte. EE in Saline County and Rte. 127 in Pettis and Saline Counties.	2025	8,559

CHAPTER 7 — FINANCING

The primary sources of revenue provided to the Missouri Department of Transportation to manage this system are user fees: fuel taxes, registration and licensing fees and motor vehicle sales taxes. In May of 2021, the Missouri General Assembly passed Senate Bill 262, raising Missouri's motor fuel tax by 2.5-cents per gallon per year over the next five years. The average Missouri driver pays about $32 per month in state and federal fuel taxes and fees. This amount does not include initial estimates of motor vehicle fees and federal general revenue transfers for transportation. After distributions to other entities that are required by law, and payment of debt, MoDOT receives 60% of these funds to design, build, operate and maintain the system. When compared to other states, MoDOT ranks 48th in the nation in revenue per mile, which leads to significant unfunded transportation needs across Missouri.

Missouri's transportation revenue, including bond proceeds, totaled nearly $2.9 billion in fiscal year 2022. The July 2021 enactment of the additional 12.5 cents of state motor fuel tax will gradually increase the state's previous 17 cents per gallon over five years. It is important to note that Missouri's tax per gallon is collected whether the price at the pump is $1.99 or $3.99. Each year, about four billion gallons of fuel are sold – three billion gasoline and one billion diesel. In fiscal year 2022, Missouri travelers paid $734 million of state fuel taxes – nearly one-half of all Missouri transportation user fees. The July 2021 increase in the state motor fuel tax will gradually increase the tax per gallon by 2.5 cents per year starting in Oct. 2021 and every July 1 through 2025. Eventually, the Missouri tax per gallon will be 29.5 cents per gallon.

Federal Funding Sources

Federal revenue sources include the 18.4 cents per gallon tax on gasoline and 24.4 cents per gallon tax on diesel fuel. Other sources include various taxes on tires, truck and trailer sales, and heavy vehicle use. In Nov. 2021, the federal transportation bill, called the Infrastructure Investment and Jobs Act (IIJA), was reauthorized. The new bill is estimated to increase federal funding to Missouri approximately 25% for five years. MoDOT does not receive the entire $2.9 billion of transportation revenue and bond proceeds or the $32 per month from the average Missouri driver. After allocations to cities, counties, other state agencies and debt payment, MoDOT received $1.8

billion of transportation revenues in fiscal year 2022 to invest in the state transportation system.

Federal Funding - FAST Act

According to the US Department of Transportation, the Fixing America's Surface Transportation (FAST) Act is a $305 Billion five-year bill to improve the Nation's surface transportation infrastructure, including roads, bridges, transit systems, and rail transportation network. The bill, which was signed by President Obama on Dec. 4, 2015, is the first long-term transportation bill to be passed in 10 years, and was granted a one-year continuing resolution upon its expiration in September 2020. Since the 2012 expiration of the previous bill, MAP-21, 36 extensions had been filed to maintain transportation funding and was replaced in 2022 by the Bipartisan Infrastructure Law. The following information, according to the U.S. House of Representative's Committee on Transportation and Infrastructure, provides a summary of the bill:

Roads and Bridges

- Facilitates commerce and the movement of goods by refocusing existing funding for a National Highway Freight
- Program and a Nationally Significant Freight and Highway Projects Program
- Expands funding available for bridges off the National Highway System
- Converts the Surface Transportation Program (STP) to a block grant program, increases flexibility for states and local governments, and rolls the Transportation Alternatives Program into the STP Block Grant
- Streamlines the environmental review and permitting process to accelerate project approvals
- Eliminates or consolidates at least six separate offices within the Department of Transportation and establishes a National Surface Transportation and Innovative Finance Bureau to help states, local governments, and the private sector with project delivery
- Increases transparency by requiring the Department of Transportation to provide project- level information to Congress and the public
- Promotes private investment in our surface transportation system
- Promotes the deployment of transportation technologies and congestion management tools
- Encourages installation of vehicle-to-infrastructure equipment to improve congestion and safety

- Updates research and transportation standards development to reflect the growth of technology

Public Transportation

- Increases dedicated bus funding by 89 percent over the life of the bill
- Provides both stable formula funding and a competitive grant program to address bus and bus facility needs
- Reforms public transportation procurement to make federal investment more cost effective and competitive
- Consolidates and refocuses transit research activities to increase efficiency and accountability
- Establishes a pilot program for communities to expand transit through the use of public- private partnerships
- Eliminates the set aside for allocated transit improvements
- Provides flexibility for recipients to use federal funds to meet their state of good repair needs
- Provides for the coordination of public transportation services with other federally assisted transportation services to aid in the mobility of seniors and individuals with disabilities
- Requires a review of safety standards and protocols to evaluate the need to establish federal minimum safety standards in public transportation and requires the results to be made public

Highway and Motor Vehicle Safety

- Focuses funding for roadway safety critical needs
- Increases percentage of National Priority Safety Program states can spend on traditional safety programs
- Ensures more states are eligible for safety incentive grant funds and encourages states to adopt additional safety improvements
- Encourages states to increase safety awareness of commercial motor vehicles
- Increases funding for highway-railway grade crossings
- Requires a feasibility study for an impairment standard for drivers under the influence of marijuana
- Improves the auto safety recall process to better inform and protect consumers
- Increases accountability in the automobile industry for safety-related issues

Truck and Bus Safety

- Overhauls the rulemaking process for truck and bus safety to improve transparency
- Consolidates truck and bus safety grant programs and provides state flexibility on safety priorities
- Incentivizes the adoption of innovative truck and bus safety technologies
- Requires changes to the Compliance, Safety, Accountability program to improve transparency in the FMCSA's oversight activity
- Improves truck and bus safety by accelerating the introduction of new transportation technologies

Hazardous Materials

- Grants states more power to decide how to spend training and planning funds for first responders
- Requires Class I railroads to provide crude oil movement information to emergency responders
- Reforms an underutilized grant program for state and Indian tribe emergency response efforts
- Better leverages training funding for hazmat employees and those enforcing hazmat regulations
- Requires real-world testing and a data-driven approach to braking technology
- Enhances safety for both new tank cars and legacy tank cars
- Speeds up administrative processes for hazmat special permits and approvals
- Cuts red tape to allow a more nimble federal response during national emergencies

Railroads

- Provides robust reforms for Amtrak, including reorganizing the way Amtrak operates into business lines
- Gives states greater control over their routes, by creating a State-Supported Route Committee
- Speeds up the environmental review process for rail projects
- Creates opportunities for the private sector through station and right-of-way development
- Consolidates rail grant programs for passenger, freight, and other rail activities
- Establishes a Federal-State Partnership for State of Good Repair grant program
- Strengthens Northeast Corridor planning to make Amtrak more accountable and states equal partners
- Allows competitors to operate up to three Amtrak long-distance lines, if at less cost to the taxpayer
- Strengthens passenger and commuter rail safety, and track and bridge safety
- Preserves historic sites for rail while ensuring that safety improvements can move forward
- Unlocks and reforms the Railroad Rehabilitation and Improvement Financing (RRIF) loan program
- Includes reforms to get RRIF loans approved more quickly with enhanced transparency
- Provides commuter railroads with competitive grants and loans to spur timely Positive Train Control implementation
- Provides competitive opportunities for the enhancement and restoration of rail service

Additional Provisions

- Includes strongly bipartisan measures to simplify rules and regulations, aid consumers, enhance our capital markets, assist low-income housing residents, and help build a healthier economy
- Includes bipartisan provisions to provide energy infrastructure and security upgrades
- Streamlines the review process for infrastructure, energy, and other construction projects

Financing Provisions

- Includes fiscally responsible provisions to ensure the bill is fully paid for
- FAST Act ensures the Highway Trust Fund is authorized to meet its obligations through FY 2020, and was extended through 2021. BIL replaced funding authorization through 2026.

- Directs offsets from the FAST Act into the Highway Trust Fund to ensure fund solvency
- Reauthorized in 2021 the dedicated revenue sources to the Highway Trust Fund, which periodically expire. Funding authorized after expiration through BIL until end of 2026.

What the Fast Act Means for Missouri

In early January 2016, MoDOT produced an executive summary that provides an overview of the impact of the FAST Act on Missouri's transportation system. The following information is taken from that executive summary:

From Fiscal Year 2016 to Fiscal Year 2020, the availability of federal funds Missouri will be able to match will be approximately $1 billion, which is an increase of 9.8 percent over the previous federal bill – MAP 21. Federal dollars represent the largest source of funds in MoDOT's budget. With current state revenue projections, it is anticipated that MoDOT will be able to fully match its available federal funds. FACT Act funding was extended through 2021. New and increased funding was established through the Bipartisan Infrastructure Bill (BIL) through 2026.

Safety

The Office of Highway Safety is required to conduct a survey every two years of all automated traffic enforcement systems to include red light running cameras and speed enforcement camera systems. The legislation requires a separate grant application for states to implement the 24- 7 sobriety programs.

A study was completed in 2017 regarding Marijuana-Impaired Driving to Congress. As required through the FAST act.

States will be allowed to submit a multi-year plan detailing motor carrier safety efforts.

These reports include annual updates. States undertake efforts to emphasize and improve enforcement of state and local traffic safety laws and regulations.

BIL established the Safe Streets for All Program to fund local efforts to reduce roadway crashes and fatalities through grants for planning and projects — especially for people who walk and bike who are disproportionately impacted by crashes. These funds will support existing safety efforts as well as establish new local data-driven efforts to reverse trends comparable to similar safety-oriented plans and programs such as Vision Zero and the Road to Zero Coalition.

Freight

The Fast Act bill establishes a competitive grant program for very large, predominantly highway projects that benefit the national freight network. One condition of this program is a project estimated cost of $100 million or 30 percent of a state's annual federal appropriation. The minimum grant is $25 million. However, there are some reserves (10 percent) for smaller projects of less than $5 million and 25 percent for rural areas (population less than 200,000). A local match will be required for funds used to support the capital needs of public ferries. FAST revises the formula for apportionment. The biggest change is the minimum fiscal year allocation of $100,000.

Performance metrics will be developed on the nation's top 25 ports in each category of tonnage, containers and dry bulk. The St. Louis port is the only one that qualifies as a mandate on the list.

New funding is designated to improve the freight highway network. The language includes requirements to be designated as a "freight project." MoDOT will need to add these elements to its planning processes. Missouri has more than two percent of the national freight mileage so its apportionment must be spent on the primary freight network, critical urban and critical rural freight corridors instead of the broader freight system.

State Freight Plans are now mandated and must be in place within two years for Missouri to be able to access the freight funds. State Freight Advisory Committees remain as an encouraged activity, but not mandated.

The Bipartisan Infrastructure Law (BIL) effective November 2021, continues all requirements that applied to NHFP and the FAST Act.

National Highway Freight Program (NHFP)				
2022	**2023**	**2024**	**2025**	**2026**
$1.374 Billion*	$1.401 Billion*	$1.429 Billion*	$1.458 Billion*	$1.487 Billion*

*Calculated (sum of estimated individual State NHFP apportionments)

Transit

The infrastructure Investment and Jobs Act (IIJA) authorizes $89.9 billion for public transit through a combination of competitive and formula funds from both the mass transit account of the highway trust fund and general fund appropriations.

FTA Section 5304 – Statewide Transit Planning FFY23 Allocation - $470,347

FTA Section 5339 -The statewide allocation for the Bus & Bus Facilities provides capital funding to replace, rehabilitate and purchase buses, vans and related equipment, and to construct bus related facilities. Statewide allocation is distributed to urban and rural programs. FFY23 Allocation- $4,805,117

FTA Section 5311 – Non-Urbanized/Rural Transit Program FTA provides grants to states on a formula basis for nonurban transit in the Section 5311 program. Rural transit providers and intercity bus carriers apply to MoDOT's Transit Section for these Section 5311 grants to carry out rural public transit related service, planning and capital projects. In addition, $410,022 is dedicated to the RTAP (rural technical assistance) program which provides training to rural transit providers. FFY23 Allocation - $25,809,338

FTA Section 5310 - Enhanced Mobility of Seniors and Individuals with Disabilities program formula grants target agencies serving the mobility needs of senior citizens and/or persons with disabilities. MoDOT administers the Section 5310 program as a capital program to procure and fund 80% of the cost of vehicles for such agencies as developmental disability resource boards (Senate Bill 40 boards), sheltered workshops, senior citizen services boards (House Bill 351 boards), and senior centers as well as not-for-profit medical service agencies. FFY23 Allocation - $5,915,716

Environment

The environmental provisions of the bill are intended to streamline the project delivery process and ensure interagency cooperation. New language under Efficient Environmental Review for Project Decision making changes definition of "project" to include multimodal projects and "lead federal agency" to "operating administration" so that projects benefit from review efficiencies; takes into account any source of federal funding. This should be helpful to multimodal projects. Similar streamlining of rail projects can be achieved once regulatory procedures are put in place.

Integration of Planning and Environmental Review: Clarifies and defines the planning products that can be adopted during National Environmental Policy Act development. Includes: Financing, modal choice, purpose and need, preliminary screening of alternatives, description of the environmental setting, methodology for analysis and programmatic level mitigation.

DOT and Heads of Federal Agencies will develop coordinated and concurrent environmental review and permitting process for Environmental Impact Statements.

Planning

The FAST Act expands the scope of the planning process to include addressing resiliency and reliability of the transportation system, mitigating storm water impacts of surface transportation and enhancing travel and tourism of the transportation system.

The act requires state DOTs to incorporate the performance measures for rural transit agencies into its planning documents. In addition, the FAST Act requires states to establish a state freight plan in order to receive National Highway Freight Program funds. The state freight plan may be part of the state's long-range transportation plan, but is more granular in requirements than a long-range transportation plan.

Performance Management

If a state DOT does not achieve or make significant progress toward achieving targets after one reporting cycle (instead of two reporting cycles), then the state DOT must include a description of the actions they plan to take to achieve their targets in the future in a report.

The penalty for falling below the minimum condition levels for pavements on the interstate system is imposed after the first reporting cycle (instead of after two reporting cycles); eliminates the need to collect safety data and information on unpaved or gravel roads.

USDOT will now assess if the state DOT has made significant progress toward the achievement of freight performance targets. If the state DOT has not made significant progress, then there are additional reporting requirements but not penalties associated with obligating freight funds.

Establishes a performance management data support program to enable the USDOT to better support state DOTs, Metropolitan Planning Organizations and the Federal Highway Administration in the collection and management of data for performance-based planning and programming.

Motor Carrier Services

FAST Act size and weight provisions ensure that a tow vehicle is equal to or exceeds the gross vehicle weight of the disabled vehicle it is towing. The act allows emergency vehicles that travel the interstate to weigh 86,000 pounds. The act increases the length limit of some automobile transport trucks. Heavy-duty tow and recovery vehicles from Federal Interstate weight limits.

Research

Every Day Counts Program has been continued.

The FAST Act establishes a new National Surface Transportation and Innovative Finance Bureau. Highway Research, Technology and Education Authorization Program funding mostly stays the same or has small increases.

The Federal Highway Administration's (FHWA's) Accelerated Implementation and Deployment of Pavement Technologies Program serves as the implementation and deployment mechanism for innovations produced by FHWA's Pavement and Materials Research and Development Program and Long-Term Pavement Performance (LTPP) research. These efforts provide tools, technology, and guidance to improve the safety, durability, sustainability, and cost effectiveness of highway pavement through performance-engineered mix design and innovative material use.

The goals for the Intelligent Transportation System have been expanded, but are mostly freight-related.

ITS program funds for operational tests can't be used for building physical surface infrastructure unless the construction is incidental and critically necessary to implement the ITS project.

The Assistant Secretary for Research and Technology's responsibilities includes coordinating departmental Research & Technology activities, advancing innovative technologies, developing comprehensive statistics and data and coordinating multimodal and multidisciplinary research. The Secretary can enter into cooperative contracts with federal, state and local and other agencies to conduct departmental research on a 50/50 cost share basis.

The Transportation Research Board provides leadership in transportation innovation and progress through research and information exchange. TRB is one of six divisions within the National Research Council, the primary operating agency of the National Academies of Science. The Executive Committee also periodically compiles and updates a list of critical issues in transportation—a document that has the broader purpose of identifying key areas and concerns of current interest to the transportation community. The publications highlight many of the issues that threaten the performance of the nation's transportation system. In recent years, the Executive Committee has added the need to respond to natural disasters; highlighted how transportation has become ever more linked to broader issues in society and in the economy; and drawn attention to the role transportation plays in energy and environmental issues.

DOT invests in the future of transportation through its University Transportation Centers (UTC) Program, which awards and administers grants to consortia of colleges and universities across the United States. The UTC Program advances the state-of-the-art in transportation research and technology, and develops the next generation of transportation professionals. The Congressionally-mandated program has been in place since 1987 to help address our Nation's ever-growing need for the safe, efficient, and environmentally sound movement of people and goods.

Rail

This is the first surface transportation bill to include a rail title; passenger rail and other rail investments total $10.4 billion over the five-year life of the legislation. Federal funding for intercity passenger rail does not begin until Federal Fiscal Year 2017.

FAST Act's most significant language to Missouri pertains to operating assistance. For the first time, Congress has provided states a chance to compete for $20 million per year to offset costs for state-sponsored service. This primarily targets states' new cost from the Passenger Rail Investment and Improvement Act of 2009 (PRIIA).

In Missouri's case, costs were relatively the same after PRIIA. Therefore, it is uncertain how much Missouri will be able to obtain from this new funding source. States can compete for this funding to improve infrastructure and vehicles used in the delivery of intercity passenger rail. This is similar to what Congress did through ARRA and the creation of the High Speed and Improved Passenger Rail Program – which delivered much needed projects like the Osage River Railroad Bridge.

Grade crossing safety remained a distinct safety program targeting improvements at highway rail grade crossings.

Congress also put funding towards a committee currently working on costs. This committee stems is made up of the Federal Railroad Administration, states, and Amtrak. The committee continues to work to help ensure states are paying only their fair share of costs and advocate for increased funding.

Safety improvements to Missouri's railways was prioritized in 2023 with House Bill 4, providing MoDOT $50 million to allocate towards improvements to public railroad crossings. Tier 1 improvements identified included 17 closures, 2 security gate systems, 27 light and gate upgrades, 3 public to private status changes and 3 passive enhancements costing a total of $18.5 million.

Highway and Bridge Revenue Sources

State motor fuel tax

The largest source of revenue from Missouri user fees is the state fuel tax. Assessed at a rate of 17-cents per gallon, it produced over 45 percent of state transportation revenues in 2016.

However, the motor fuel tax is not indexed to keep pace with inflation, and there has been no rate increase since 1996. History shows that even when fuel prices rise dramatically, Missourians are generally unwilling or unable to turn to other modes of transportation, continuing to drive their personal vehicles and to purchase fuel to do so. Trends show motor fuel tax revenues increase about one percent annually. However, if fuel prices rise and stay at higher rates, more Missourians may turn to more fuel-efficient vehicles, make fewer trips or seek other transportation options they had previously avoided. While good for the environment, these actions erode motor fuel tax revenues. The 2021 enactment of SB262 raises Missouri's motor fuel tax 12.5 cents. The motor fuel tax will increase gradually as follows: 2.5 cent increase Oct. 1, 2021. 2.5 cent increase each July 1 through 2025. Totaling 29.5 cents per gallon Missouri motor fuel tax.

Motor vehicle sales and use taxes

Motor vehicle sales and use taxes provided approximately 26 percent of state transportation revenues in 2016. This is the one source of state revenue that has recently provided substantial additional resources for transportation. In November 2004, Missouri voters passed Amendment 3. This set in motion a four-year phase in, redirecting motor vehicle sales taxes previously deposited in the state's General Revenue Fund to a newly created State Road Bond Fund. In accordance with this constitutional change, MoDOT began selling bonds to fund road improvements. From 2000- 2010, and again in FY2020 and FY2022, MoDOT sold bonds that provided additional resources for highway improvements. Bonds are debt and similar to a home mortgage – this debt must be repaid over time. The total debt payment in fiscal year 2022 totaled $299 million.

MoDOT has four kinds of bonds: senior bonds that were authorized by the Missouri General Assembly in 2000; Amendment 3 bonds that were authorized by Missouri voters in 2004; bonds

authorized by the Missouri General Assembly in 2019 to finance the Focus on Bridges program with debt service from General Revenue over seven years; and federal GARVEE (Grant Anticipation Revenue Vehicle) bonds that financed specific projects. Borrowing accelerated construction and allowed MoDOT to avoid inflation in labor and materials costs. It gave Missourians improvements that would not have been built for many years with pay-as-you-go funding. Without borrowing, many of those projects still would not be completed. Senior bonds will be paid off by 2023, Amendment 3 bonds will be paid off by 2029 and GARVEE bonds will be paid off by 2033. Focus on Bridges bonds will be paid off in 2027. The average interest rate on all outstanding debt combined is 2.63%.

Motor vehicle and driver's licensing fees

Motor vehicle and driver's licensing fees also provided approximately 21 percent of Missouri's state transportation revenue in 2016. Similar to motor fuel tax, these fees are not indexed to keep pace with inflation, and there have been no annual registration fee increases since 1984. This revenue source increases at a rate of about 2.5 percent annually.

Transportation revenues are shared

It is important to remember that cities and counties receive a substantial portion of these state transportation revenues. For example, cities and counties receive approximately 4.5 cents of the state's 17-cent per gallon fuel tax. They also receive approximately 14 percent of the remaining state transportation revenues discussed earlier. These funds go directly to cities and counties to fund local transportation.

Interest earned on invested funds and other miscellaneous collections

The remaining 8 percent of state transportation revenues comes from interest earned on invested funds and other miscellaneous collections in 2016. During the Amendment 3 bonding program, cash balances in state transportation funds have been unusually high. Bond proceeds are received in large increments and are paid out over time as project costs are incurred. When the Amendment 3 projects are completed, the balance of state transportation funds will be substantially less, and interest income will also decline.

Cities and counties in Missouri may opt to earmark part of their property tax levies for transportation purposes.

Funding for Alternative Modes of Transportation

Transportation funding for alternative modes has historically been less than 5 percent of all MoDOT transportation revenue (approximately $96 million annually). Funding for alternate modes of transportation comes from a variety of sources including motor vehicle sales taxes, aviation fuel and sales taxes, railroad regulation fees, state general revenue funds and federal grants. MoDOT Multimodal Operations is responsible for supporting alternative transportation programs within the state. The division functions to continue the advancement and strategic planning for Aviation, Rail, Transit, Waterways, and Freight Development initiatives designed to expand Missouri's infrastructure and facilitate travel and commerce. Through the integration of the various modes, the traveling public enjoys greater accessibility to the resources of the state while industry capitalizes on improved transportation efficiencies.

Multimodal Operations Functional Overview

- Assists in the development of port authorities through the distribution of capital and administrative funding while championing the efficiencies of waterborne

transportation to industry and the general public.

- Administers federal and state capital improvement funding for Missouri's eligible public aviation facilities.
- Conducts airports safety inspections.
- Provides financial and technical assistance to public transit and specialized mobility providers across the state.
- Partners with industry and local communities to promote economic development and improved freight traffic efficiency by examining existing infrastructure obstructions and proactively assessing potential obstacles.
- Regulates freight and passenger rail operations, oversees rail crossing safety and construction projects, conducts railroad safety inspections, and provides outreach educational opportunities.
- Supports the continued operation of Amtrak in the state and provides direction for the development of expanded passenger rail service.

The amalgamation of the non-highway transportation modes into a single regulatory division traces its lineage back to the formation of the Missouri Highways and Transportation Department in 1980. With the subsequent merger and reorganization, Multimodal Operations assumed charge of consolidated authority over Aviation, Rail, Transit, and Waterway operations within the state as the definitive administrative body. The division has since evolved into a very specialized organization, centered on engaging partnership participation that focuses on safe, accessible, efficient, and environmentally responsible alternative transportation solutions. In fiscal year 2012, Multimodal Operations functioned with an operating budget of $2.5 million and a staff of 31, maintained over 4,000 internal and external partnership contacts, and cumulatively delivered over $79 million in multimodal projects with partners across the state (nearly $47 million federal funds, over $14 million in state funds, and over $18 million in local match funds).

Multimodal Operations Profile – Activities by Mode

- Aviation
    - Administer grants and provide guidance for public use airports (State Block Grant Program & State Aviation Trust Fund Program)
    - Conduct airport safety inspections
    - Publish Aeronautical Chart, Airport Directory, and Show Me Flyer
    - Maintain State Airport System Plan (SASP)
    - Approve Airport Master Plans (AMP) and Airport Layout Plans (ALP)
    - Maintain Automated Weather Observing System (AWOS) equipment
    - Promote education to the aviation community and other enthusiasts
- Rail
    - Conduct railroad infrastructure safety inspections (including track, grade

crossing signals, and operating practices)
  - Support Amtrak passenger rail service through Missouri and promote ridership both through operations and project delivery
  - Maintain Statewide Rail Plan to identify the framework for freight and passenger rail development in Missouri for the next twenty years (including High Speed Intercity Passenger Rail (HSPIR))
  - Regulate safety for freight rail and passenger rail in Missouri
  - Enforce safety regulations for light rail operations (Metrolink)
  - Administer the Missouri Highway/Rail Crossing Safety Program
  - Plan and administer funding for rail/highway construction projects
  - Present outreach seminars on railroad grade crossing safety in conjunction with Missouri Operation Lifesaver
  - Catalog freight and passenger rail maps of Missouri
- Transit
  - Administer federal grant funding under Section 5310 Agencies Serving Seniors and Persons with Disabilities
  - Transportation Assistance Vehicle Program
  - Administer federal grant funding under Section 5311 Non-Urbanized Transit Assistance Formula Grant Program, Section 5311(b) Rural Transit Assistance Program (RTAP), and 5311(f) Intercity Bus Program
  - Administer federal grant funding under Section 5309 Discretionary Transit Capital Program
  - Administer federal grant funding under Section 5305 Statewide Transit Planning Grant Program
  - Administer federal grant funding under Section 5339 Bus & Bus Facilities Grant Program
  - Administer state funded Missouri Elderly and Handicapped Transportation Assistance Program (MEHTAP)(RSMo 208.250-208.265)
  - Administer state funded Missouri State Transit Assistance Program (RSMo 226.195)
  - Administer federal grant funding consistent with the new Bipartisan Infrastructure Law funding provisions
  - Provide technical support and program assistance to partners and external customers
- Waterways
  - Assist in the formation and operation of port authorities in Missouri
  - Provide technical assistance and promote use of Missouri's navigable rivers
  - Represent port interests in industry and governmental bodies
  - Assist in distributing capital and administrative funding for port improvements

  - Provide financial assistance to two ferryboat operations
  - Maintain waterways map of port authorities
- Freight Development
  - Encourage freight initiatives that promote economic development and efficient movement of goods
  - Conduct studies to determine opportunities for enhanced system capacity
  - Evaluate performance of state infrastructure to improve efficiencies
  - Host public forums and outreach opportunities for public comment and contribution

Unlike highways, MoDOT does not own multimodal facilities. Instead, MoDOT's role is to administer funding and provide an oversight role for multimodal improvements. Many of the multimodal entities receive local tax revenue and direct federal funding, which are not included in these amounts. MoDOT administered $35 million of aviation funds in fiscal year 2016. Missouri has dedicated taxes on aviation fuel to fund improvements to public use airports in Missouri.

MoDOT also administers federal funding to improve airfield pavement conditions and lighting systems, eliminate obstructions and for expansion projects.

In fiscal year 2016, MoDOT administered $34 million of transit funds. The majority of these funds are from federal programs that support operating costs and bus purchases for transit agencies across the state. There is a small amount of state and General Revenue funding to support operating costs for transit agencies. MoDOT administered $19 million of rail funds in fiscal year 2016. These funds are used to support two programs – the Amtrak passenger rail service between St. Louis and Kansas City, and safety improvements at railroad crossings. The Amtrak funding is from General Revenue, and safety improvements at railroad crossings are from state and federal sources.

Waterways funding totaled $6 million in fiscal year 2016. These funds provided operating and capital assistance to Missouri's river ports and ferry boat operators. MoDOT also administers a

$1 million freight enhancement program that provides assistance to public, private or not-for-profit entities for non-highway capital projects that improve the efficient flow of freight in Missouri.

Internal operating costs to administer the various multimodal programs totaled $3 million, including salaries, wages and fringe benefits. In fiscal year 2016, MoDOT administered $98 million for multimodal needs. Since only $96 million was available, MoDOT used $2 million of cash balances dedicated by law to multimodal activities to provide these projects and services.

Missouri's transportation needs are substantial, and the costs of the needs are enormous. Yet, the sources that have traditionally provided transportation funding in Missouri and in the nation are not adequate. They do not keep pace with the rising cost of construction and maintenance, and they provide little for alternative modes of transportation. Another complicating factor is that Missouri's transportation revenues are small in comparison to many other states.

Missouri's revenue per mile of state highway is one of the lowest in the region and in the country. Missouri ranks 47th nationally in revenue per mile which leads to significant unfunded transportation needs across the state. Missouri receives both state and federal transportation funds. Much of the funding comes with strings attached, limiting the activities for which it can be used.

For example, the state motor fuel tax can only be spent on highways and bridges. It is not available for alternative modes of transportation. Federal funds may be earmarked for specific projects or limited

to specific types of construction such as interstate maintenance. Some federal and state funds are allocated to specific modes of transportation such as transit or passenger rail.

Funding Tools for the Local or Regional Level

Funding for local county and municipal roadway maintenance and construction comes primarily from the state-distributed motor fuel tax, individual city and county capital improvement sales taxes and transportation sales taxes. Additional potential revenue options are available for local or regional transportation projects.

Economic Development Administration - Public Works and Economic Development Program

Through the Public Works and Economic Development Act of 1965, the United States Department of Commerce, through its EDA branch, offers project grants to enhance regional competitiveness and promote long-term economic development in regions experiencing substantial economic distress. EDA provides Public Works investments to help distressed communities and regions revitalize, expand, and upgrade their physical infrastructure to attract new industry, encourage business expansion, diversify local economies and generate or retain long-term private sector jobs and investment. Current priorities include Equity, Recovery and Resilience, Workforce Development, Manufacturing, Technology-Based Economic Development, Environmentally-Sustainable Development, and Exports & FDI.

Project grants may be used for investments in facilities such as water and sewer systems, industrial access roads, industrial and business parks, port facilities, railroad sidings, distance learning facilities, skill-training facilities, business incubator facilities, redevelopment of brownfields, eco-industrial facilities and telecommunications infrastructure improvements needed for business retention and expansion. Eligible activities include the acquisition or development of public land and improvements for use for a public works, public service or development facility, and acquisition, design and engineering, construction, rehabilitation, alteration, expansion, or improvement of publicly-owned and operated development facilities, including related machinery and equipment. A project must be located in a region that, on the date EDA receives an application for investment assistance, satisfies one or more of the economic distress criteria set forth in Title 13

C.F.R. 301.3(a). In addition the project must fulfill a pressing need of the region and must:

1. Improve the opportunities for the successful establishment or expansion of industrial or commercial plants or facilities in the region;
2. Assist in the creation of additional long-term employment opportunities in the region; or
3. Primarily benefit the long-term unemployed and members of low-income families. In addition, all proposed investments must be consistent with the currently approved

Comprehensive Economic Development Strategy (CEDS) for the region in which the project will be located, and the applicant must have the required local share of funds committed, available and unencumbered. Also, the project must be capable of being started and completed in a timely manner. The Pioneer Trails RPC (Counties of Johnson, Lafayette, Pettis and Saline) CEDS can be found by visiting the Pioneer Trails Regional Planning Commission Website. The State Plan is underdevelopment and should be made available in 2024.

USDA Rural Development

Community Programs, a division of the Housing and Community Facilities Programs, is part of the United States Department of Agriculture's Rural Development mission area. Community Programs

administers programs designed to develop essential community facilities for public use in rural areas. These facilities include schools, libraries, childcare, hospitals, medical clinics, assisted living facilities, fire and rescue stations, police stations, community centers, public buildings and transportation. Through its Community Programs, the Department of Agriculture is striving to ensure that such facilities are readily available to all rural communities. Community Programs utilizes three flexible financial tools to achieve this goal: the Community Facilities Guaranteed Loan Program, the Community Facilities Direct Loan Program, and the Community Facilities Grant Program.

Community Programs can make and guarantee loans to develop essential community facilities in rural areas and towns of up to 20,000 in population. Loans and guarantees are available to public entities such as municipalities, counties, and special-purpose districts, as well as to non- profit corporations and tribal governments. Applicants must have the legal authority to borrow and repay loans, to pledge security for loans, and to construct, operate and maintain the facilities. They must also be financially sound and able to organize and manage the facility effectively. Repayment of the loan must be based on tax assessments, revenues, fees, or other sources of money sufficient for operation and maintenance, reserves and debt retirement. Feasibility studies are normally required when loans are for start-up facilities or existing facilities when the project will significantly change the borrower's financial operations. The feasibility study should be prepared by an independent consultant with recognized expertise in the type of facility being financed.

Community Programs can guarantee loans made and serviced by lenders such as banks, savings and loans, mortgage companies which are part of bank holding companies, banks of the Farm Credit System or insurance companies regulated by the National Association of Insurance Commissioners. Community Programs may guarantee up to 90percent of any loss of interest or principal on the loan. Community Programs can also make direct loans to applicants who are unable to obtain commercial credit. Loan funds may be used to construct, enlarge, or improve community facilities for health care, public safety and public services. This can include costs to acquire land needed for a facility, pay necessary professional fees and purchase equipment required for its operation. Refinancing existing debts may be considered an eligible direct or guaranteed loan purpose if the debt being refinanced is a secondary part of the loan, is associated with the project facility and if the applicant's creditors are unwilling to extend or modify terms in order for the new loan to be feasible.

Additionally, Community Programs also provides grants to assist in the development of essential community facilities in rural areas and towns of up to 20,000 in population. Grants are authorized on a graduated scale. Applicants located in small communities with low populations and low incomes will receive a higher percentage of grants. Grants are available to public entities such as municipalities, counties, and special-purpose districts, as well as non-profit corporations and tribal governments. In addition, applicants must have the legal authority necessary for construction, operation, and maintenance of the proposed facility and also be unable to obtain needed funds from commercial sources at reasonable rates and terms.

Grant funds may be used to assist in the development of essential community

facilities. Grant funds can be used to construct, enlarge, or improve community facilities for health care, public safety and community and public services. This can include the purchase of equipment required for a facility's operation. A grant may be made in combination with other Community Facilities financial assistance such as a direct or guaranteed loan, applicant contributions or loans and grants from other sources. The Community Facilities Grant Program is typically used to fund projects under special initiatives, such as Native American community development efforts, child care centers linked with the Federal government's Welfare-to-Work initiative, Federally-designated Enterprise and Champion Communities and the Northwest Economic Adjustment Initiative area.

Statewide Transportation Assistance Revolving (STAR) Fund

The STAR Fund, authorized by the Missouri General Assembly in 1997, provides loans to local entities for non-highway projects such as rail, waterway and air travel infrastructure. The STAR fund can also provide loans to fund rolling stock for transit and the purchase of vehicles for elderly or handicapped persons. The STAR fund can assist in the planning, acquisition, development and construction of facilities for transportation by air, water, rail or mass transit; however, STAR fund monies cannot fund operating expenses. The local district engineer must endorse projects in cooperation with MoDOT's Multimodal Team. The Cost Share Committee evaluates STAR applications and provides a recommendation to the Missouri Highways and Transportation Commission (MHTC), which is the deciding body.

Missouri Department of Economic Development - Community Development Block Grants

Through the Missouri Department of Economic Development, the Community Development Block Grant Program (CDBG), a federal program through HUD, offers grants to small Missouri communities to improve local facilities, address critical health and safety concerns and develop a greater capacity for growth. The program offers funds for projects that can range from housing and street repairs to industrial loans and job training. State CDBG funds are only available to non-entitlement areas (incorporated municipalities under 50,000 and counties under 200,000 in population).

Larger cities receive funds directly through the Entitlement Communities Grants program. The entitlement program provides annual grants on a formula basis to entitled cities and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low-income and moderate-income persons. HUD awards grants to entitlement community grantees to carry out a wide range of community development activities directed toward revitalizing neighborhoods, economic development and providing improved community facilities and services. Entitlement communities develop their own programs and funding priorities. However, grantees must give maximum feasible priority to activities which benefit low- and moderate-income persons. A grantee may also carry out activities which aid in the prevention or elimination of slums or blight. Additionally, grantees may fund activities when the grantee certifies that the activities meet other community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community where other financial resources are not available to meet such needs. CDBG funds may not be used for activities which do not meet these broad national objectives.

Sales Tax

The 4.225 percent state sales/use tax rate in Missouri is lower than the rates in 38 other states, as of February 2024, according to Taxfoundation.org. Missouri communities have the option of adopting a local sales tax, generally ranging from one-half to one percent. Counties may also adopt a sales tax generally ranging from one-fourth to one percent that can be used for transportation.

Use Tax

Use tax is similar to sales tax, but is imposed when tangible personal property comes into the state and is stored, used or consumed in Missouri. Communities have the option of adopting a local use tax equal to the local sales tax for that community to use for transportation expense.

Local Option Economic Development Sales Tax

The Local Option Economic Development Sales Tax, approved by the Missouri General Assembly, effective August 2012, allows citizens to authorize a supplemental sales tax dedicated exclusively for certain economic development initiatives in their home municipality. The state statute section governing this program is found at 67.1305 RSMo. The voter-approved tax of not more than one half per cent is charged on all retail sales made in the municipality that are subject to sales taxes under Ch.144 RSMo. Missouri statutes define "municipality" as an incorporated city, town, village or county. Revenues generated by the tax may not be used for retail developments unless such retail projects are limited exclusively to the redevelopment of downtown areas and historic districts. A portion of the revenues may be used for project administration, staff and facilities, and at least twenty per cent of the funds raised must be used for projects directly related to long-term economic preparation, such as land acquisition, installation of infrastructure for industrial or business parks, water and wastewater treatment capacity, street extensions and for matching state or federal grants related to such long-term projects. Any remaining funds may also be used for marketing, training for advanced technology jobs, grants and loans to companies for employee training, equipment and infrastructure and other specified uses.

Neighborhood Improvement District

A Neighborhood Improvement District (NID) may be created in an area desiring certain public-use improvements that are paid for by special tax assessments to property owners in the area in which the improvements are made. The kinds of projects that can be financed through an NID must be for facilities used by the public, and must confer a benefit on property within the NID. An NID is created by election or petition of voters and/or property owners within the boundaries of the proposed district. Election or petition is authorized by a resolution of the governing body of the municipality in which the proposed NID is located. Language contained in the petition narrative or ballot question must include certain information including, but not limited to a full disclosure of the scope of the project, its cost, repayment and assessment parameters to affected property owners within the NID. Effective August 2022 State Statute 67.457 RSMo.

Community Improvement District

A Community Improvement District (CID) may be either a political subdivision or a not- for-profit corporation. CIDs are organized for the purpose of financing a wide range of public-use facilities and establishing and managing policies and public services relative to the needs of the district. By request petition, signed by property owners owning at least 50 percent of the assessed value of the real property, and more than 50 percent per capita of all owners of real property within the proposed CID, presented for authorizing ordnance to the governing body of the local municipality in which the proposed CID would be located. Unlike a Neighborhood Improvement District, a CID is a separate legal entity, and is distinct and apart from the municipality that creates the district. A CID is, however, created by ordinance of the governing body of the municipality in which the CID is located, and may have other direct organizational or operational ties to the local government, depending upon the charter of the CID.

Tax Increment Financing

Local Tax Increment Financing (Local TIF) permits the use of a portion of local property and sales taxes to assist funding the redevelopment of certain designated areas within your community. Areas eligible for Local TIF must contain property classified as a "Blighted", "Conservation" or an "Economic Development" area, or any combination thereof, as defined by Missouri Statutes. The idea behind Local TIF is the assumption that property and/or local sales taxes (depending upon the type of redevelopment project) will increase in the designated area after redevelopment, and a portion of the increase of these taxes collected in the future (up to 23 years) may be allocated by the municipality to help pay the certain project costs, partially listed above.

Transportation Development Districts

Transportation Development Districts (TDDs) are organized under the Missouri Transportation Development District Act, Sections 238.200 to 238.275 of the Missouri State Statutes. The district may be created to fund, promote, plan, design, construct, improve, maintain and operate one or more projects or to assist in such activity.

A TDD may issue notes, bonds, and other debt securities to fund projects. The debt is solely the responsibility of the district and is only payable with TDD funds. The TDD can levy sales taxes, impose tolls, impose property taxes, and use special assessments within the TDD to repay the debt. The revenue can only be used for public transportation and transportation-related improvements. The tax rate must be the same rate throughout the district, and proposed funding is subject to the qualified voters' consent. If the TDD cannot generate enough revenue to fund the project, its options include restructuring the debt financing, changing the tax rate, or seeking additional funds elsewhere.

Transportation Development Corporations

Transportation Corporations (TCs) are organized under the Missouri Transportation Corporation Act, Sections 238.300 to 238.367 of the Missouri State Statutes. TCs act in promoting and developing public transportation facilities and systems and in promoting economic development. Demands for transportation improvements have greatly outpaced the funds available to meet them. In response to this demand, the Missouri Department of Transportation has established various mechanisms for successful public/public and public/private partnerships. These expand financing options for transportation projects that serve a public purpose, including: highway and rail projects, transit equipment, air and water transportation facilities and elderly/handicapped vehicles. The benefits to a project assisted by these partnerships may include: inflation cost savings, early economic and public benefits, financing tailored to the project's needs and a reduced cost of project financing.

Partnership Debt-Financing Programs

Debt-financing programs make loans to a project that has to be repaid. The Missouri Transportation Finance Corporation's (MTFC*)* authority to form and operate is initially derived from the Transportation Equity Act for the 21st Century (TEA-21). The MTFC incorporated in August 1996, adopted bylaws and subsequently entered into a Cooperative Agreement with the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Federal Railroad Administration (FRA), agencies of the United States Department of Transportation (USDOT) and the Missouri Highways and Transportation Commission (Commission). Under the authority granted initially by TEA-21, as amended by 23 U.S.C. 610, the Missouri Non Profit Corporation Act, Chapter 355, RSMo, and pursuant to the Cooperative Agreement, the Commission organized the MTFC to assist in financing transportation improvements.

The MTFC provides direct loans for transportation projects within the state of Missouri. Loans are funded from available MTFC resources. The MTFC assistance may be any type authorized by 23 U.S.C. 610. The following are examples of potential financing options included in 23 U.S.C. 610: Primary or subordinated loans, Credit enhancements, Debt reserve financing, Subsidized interest rates, Purchase and lease agreements for transit projects, and Bond security. These direct loans must help assist the Commission to achieve continued economic, social and commercial growth of Missouri, act in the public interest, or promote the health, safety and general welfare of Missouri citizens.

Bridge Replacement Off-System (BRO)

The off-system local bridge replacement program (BRO) has changed to a distribution of money based on the area of poor condition bridge deck, rather than a distribution based upon bridges being deficient. Distribution by county has resulted in the accumulation of large unspent balances for the BRO program and will continue even with the increase in BRO funds from the passage of IIJA. Moving forward, the BRO program will be modernized to distribute the funding on a regional (per MoDOT District) basis using the total deck area of poor bridges in the region. Federal fiscal year 2022 was used as a transition year in which all existing negative county balances were cleared before the statewide funds were distributed to a region. Counties were allowed to carry existing positive balances forward into the regional program. Regions are required to honor all existing project commitments within the region prior to distributing any regional funds to new projects. Additional money was made available for the BRO program with the passage of the Infrastructure Investment and Jobs Act (IIJA) in late 2021. Under IIJA, the minimum allocation percentage for the BRO program was increased from 15% to 20%, which is estimated to add approximately $7 million to the annual BRO allocation.

The soft match credit program will continue to be available. The net result of the funding increases in IIJA means that around $214 million will be available over the five year period for bridge projects on the off-system.

IIJA also allocates new funding for the bridge replacement, rehabilitation, preservation, protection, and construction program (hereafter, Bridge Formula Program (BFP)). The BFP requires that 15% of available funds be spent on off-system bridges with no local match requirement (funded at 100%). FHWA has recommended that funding be allocated based on the percentage of poor deck area, which would be 20.35% on the off-system. For federal fiscal year 2022-2024, $15.7 million has been allocated for the off-system BFP. For federal fiscal year 2025 and 2026, $29.7 million will be allocated for the off-system BFP, which brings the total allocation for the 5 year program to 20.35% for local bridges. The funds for the BFP program will be distributed in the same manner as the BRO program. It is anticipated that the amounts available for 2023 thru 2026 will be allocated in a similar manner, making the total amount available for the off-system BFP approximately $106.5 million.

	2022 Federal Fiscal Year			2023 & 2024 Federal Fiscal Year			2025 & 2026 Federal Fiscal Year		
District	**BRO**	**BFP**	**Total**	**BRO**	**BFP**	**Total**	**BRO**	**BFP**	**Total**
KC	$2,321,478	$1,972,940	$49,294,418	$2,792,884	$1,972,940	$4,765,824	$2,792,884	$3,732,250	$6,525,134

Federal Aviation Administration - Airport Improvement Program

The Airport Improvement Program (AIP) provides grants to public agencies - and, in some cases, to private owners and entities - for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS). For large and medium primary hub airports, the grant covers 75 percent of eligible costs (or 80 percent for noise program implementation). For small primary, reliever, and general aviation airports, the grant covers 90-95 percent of eligible costs. AIP grants for planning, development or noise compatibility projects are at or associated with individual public-use airports (including heliports and seaplane bases). A public-use airport is an airport open to the public that also meets the following criteria:

1. Publicly owned, or
2. Privately owned but designated by the FAA as a reliever, or
3. Privately owned but having scheduled service and at least 2,500 annual enplanements.

Further, to be eligible for a grant, an airport must be included in the NPIAS. The NPIAS, which is prepared and published every two years, identifies public-use airports that are important to public transportation and contribute to the needs of civil aviation, national defense, and the postal service. The description of eligible grant activities is described in the authorizing legislation and relates to capital items serving to develop and improve the airport in areas of safety, capacity and noise compatibility. In addition to these basic principles, a grantee must be legally, financially and otherwise able to carry out the assurances and obligations contained in the project application and grant agreement.

Eligible projects include those improvements related to enhancing airport safety, capacity, security and environmental concerns. In general, sponsors can use AIP funds on most airfield capital improvements or repairs except those for terminals, hangars, and non-aviation development. Any professional services that are necessary for eligible projects - such as planning, surveying and design - are eligible as is runway, taxiway and apron pavement maintenance. Aviation demand at the airport must justify the projects, which must also meet Federal environmental and procurement requirements. Projects related to airport operations and revenue-generating improvements are typically not eligible for funding. Operational costs - such as salaries, maintenance services, equipment and supplies - are also not eligible for AIP grants.

FAA Airport and Airway Trust Fund (AATF)

The Airport and Airway Trust Fund (AATF), created by the Airport and Airway Revenue Act of 1970, provides funding for the federal commitment to the nation's aviation system through several aviation-related excise taxes. Funding currently comes from collections related to passenger tickets, passenger flight segments, international arrivals/ departures, cargo waybills, aviation fuels and frequent flyer mile awards from non-airline sources like credit cards.

Transportation Alternatives Program (TAP) Funding

The TAP replaces the funding from pre-MAP-21 programs including Transportation Enhancements, Recreational Trails, Safe Routes to School, and Scenic Byways, wrapping them into a single funding source. The FAST Act has continued authorization of this funding for transportation alternatives projects.

Federal TAP funds are provided through the FHWA. Projects using TAP funds are eligible for reimbursement of up to 80% of allowable costs. The LPA is required to match the project with a minimum of 20%. Refer to EPG 136.3.9 Local Match Guidelines for local match guidelines for transportation alternatives projects.

Compensation for expenditures will be authorized on a cost reimbursement basis. Expenditures incurred prior to receiving a formal notice to proceed will not be eligible for reimbursement.

MoDOT distributes TAP funds outside TMA boundaries every two years (even years) through a competitive selection process. The FAST Act provides for TMAs to receive a separate allocation of TAP funding through Surface Transportation Block Grants (STBG). TMAs develop their own TAP guide and selection criteria while still adhering to federal rules outlined in the FAST Act.

Traffic Engineering Assistance Program (TEAP)

The Traffic Engineering Assistance Program (TEAP) allows local public agencies (LPA) to receive engineering assistance for studying traffic engineering problems. Typical traffic engineering related projects include: corridor safety and/or operational analysis, intersection(s) safety and/or operational analysis, speed limit review, sign inventory, pedestrian/bike route analysis, parking issues, and other traffic studies, etc. Local public agencies are reimbursed for eligible project costs at a rate of 80 percent with the local agency providing a 20-percent match. Funds administered by MoDOT, will provide 80 percent of the TEAP project costs, up to $12,000 per project. If the total cost is greater than $15,000, the local agency can pay more than 20 percent to complete the TEAP project, if desired. The program is administered by MoDOT with funds coming from MoDOT and the LPA (see EPG 136.3.8.5.5 Funding).

Federal Lands Access Program (FLAP)

The Federal Lands Access Program (FLAP) provides funds for projects on Federal Lands Access Transportation Facilities that are located on or adjacent to, or that provide access to Federal lands as provided for in the FAST Act. The FLAP, as an adjunct to the Federal-Aid Highway Program, covers highway programs in cooperation with federal-land managing agencies. It provides transportation-engineering services for planning, design, construction and rehabilitation of the highways and bridges providing access to federally owned lands, and requires matching funds of 20% of total estimated project cost. The Federal Highway Administration (FHWA) also provides training, technology, deployment, engineering services and products to other customers. The FHWA administers the Federal Lands Access Program, including survey, design and construction of forest highway system roads, parkways and park roads, Indian reservation roads, defense access roads and other federal-lands roads. The FHWA, through cooperative agreements with federal-land managing agencies such as the National Park Service, Forest Service, Military Traffic Management Command, Fish and Wildlife Service and the Bureau of Indian Affairs, administers a coordinated federal-lands program consisting of forest highways, public-lands highways, park roads and parkways, refuge roads and Indian reservation roads. This program provides support for approximately 30,000 miles of public roads serving Federal and Indian lands to support the economic vitality of adjacent communities and regions.

Cost Share Program Guidelines

The purpose of the Cost Share Program is to build partnerships with local entities to pool efforts and resources to deliver state highway and bridge projects. The Missouri Department of Transportation (MoDOT) allocates Cost Share funds based on the Missouri Highways and Transportation Commission's (MHTC) approved funding distribution formula.

Projects are selected by the Cost Share Committee, which consists of the Deputy Director/Chief Engineer, Chief Financial Officer, Assistant Chief Engineer, and two members selected by the Director. They are then recommended for approval by the MHTC via a Statewide Transportation Improvement Program (STIP) amendment.

For fiscal years 2021 through 2023, ten percent (10%) is set-aside for projects that demonstrate economic development. Beginning in fiscal year 2024, twenty percent (20%) is set-aside for projects that demonstrate economic development. When project sponsors are willing to partner with MoDOT, MoDOT matches their investment up to fifty percent (50%) of the project cost. The Missouri Department of Economic Development (DED) may recommend projects for the set-aside funds. The projects must demonstrate economic development through job creation. MoDOT works in cooperation with the DED and project sponsors to determine when targeted investments can be made to create jobs and may provide up to one-hundred percent (100%) of the total project cost. Retail development projects do not qualify as economic development projects that create jobs.

Governor's Transportation Cost-Share Program

The purpose of the Governor's Transportation Cost Share Program is to build partnerships with local communities to pool efforts and resources to deliver road and bridge projects. This program is funded with a $75 million General Revenue appropriation from the General Assembly. Twenty percent (20%) is set-aside for projects that demonstrate economic development. The Cost Share Committee works cooperatively with the Missouri Department of Economic Development (DED) to select projects with the greatest economic benefit to the State. The Committee consists of the Chief Engineer, Chief Financial Officer, Assistant Chief Engineer, and two members selected by the Director. The projects are then recommended for approval by the Missouri Highways and Transportation Commission (MHTC).

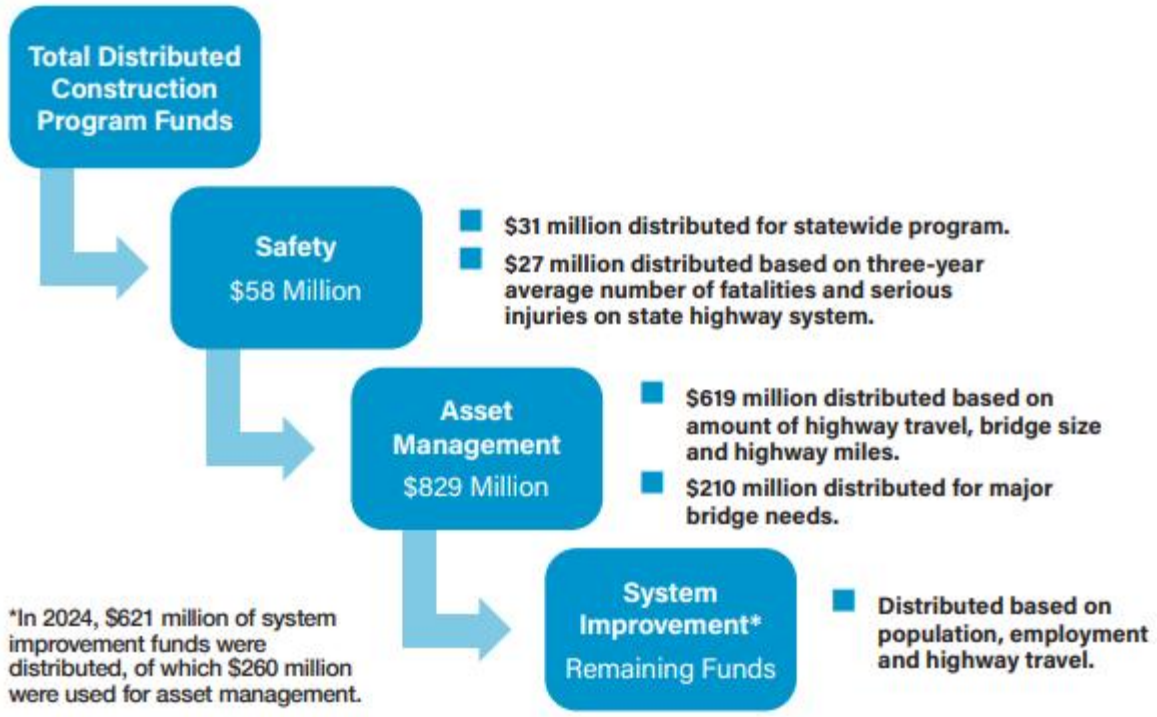
Funding Distribution

On Jan. 10, 2003, the Missouri Highways and Transportation Commission adopted an objective method to distribute transportation funds using factors reflecting system size and usage and where people live and work. The distribution of funds has been the subject of debate for over a decade. The method for determining where and on what to spend limited transportation dollars has changed several times. Changes have been a result of both long-term project plans and political pressure centered on dividing funds between the urban and rural areas of the state. This method goes beyond the narrow discussions of geography and allows for allocation of funding based on objective, transportation-related factors that are representative indicators of physical system needs.

Since 2003, the Missouri Highways and Transportation Commission has used a formula to distribute construction program funds for road and bridge improvements to each of its districts.

This is the largest area of MoDOT's budget that provides funding for safety improvements, taking care of the system and flexible funds that districts can use to take care of the system or invest in major projects that relieve congestion and spur economic growth. In many districts, taking care of the system funds are not sufficient to maintain current system conditions. Districts use flexible funds to make up the difference, but often times still fall short. Figure 7.1 identifies how construction program funds are allocated annually to districts using the following formula:

Figure 7.1 MoDOT Funding Distribution for Construction Funds



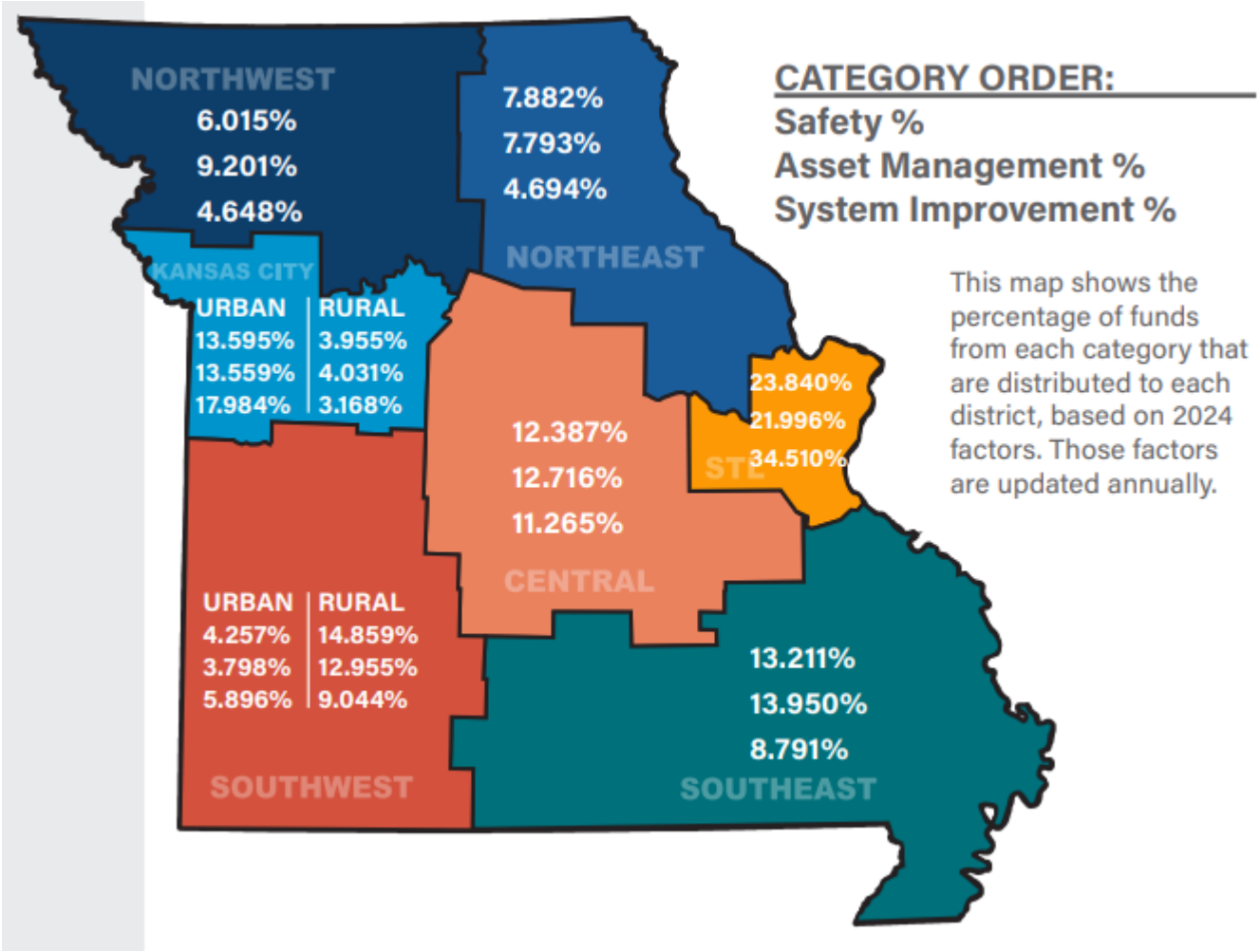
Source: MoDOT's Citizen's Guide to Transportation Funding in Missouri, 2024

Funding Distribution Overview

Once construction program funds are distributed to districts, MoDOT collaborates with regional planning groups to identify local priorities based on projected available funding. The regional transportation improvement plans are brought together to form the department's Statewide Transportation Improvement Program, which outlines five years of transportation improvements.

As one year of the plan is accomplished, another year is added.

Figure 7.2 MoDOT Funding Distribution by District



Source: MoDOT's Citizen's Guide to Transportation Funding in Missouri, 2024

When adding the construction program, operations, administration and highway safety programs together, the following amounts were spent in districts based on the five-year average from fiscal years 2020 through 2024:

Table 7.1 MoDOT Funding Distribution – Total by District ($ Millions)

District	Construction Program	Operations	Admin	HWY Safety Programs	Total
Northwest	$111	$71	$2	0	$184
Northeast	$90	$60	$2	0	$152
Kansas City	$225	$63	$3	$4	$299
Central	$166	$73	$2	1	$242
St. Louis	$323	$70	$3	$4	$400
Southwest	$197	$87	$2	$1	$287
Southeast	$160	$87	$2	0	$249
Statewide	$43	$85	$37	$12	$177
Total	$1,315	$596	$53	$22	$1,986

Source: MoDOT's Citizen's Guide to Transportation Funding in Missouri, 2024

CHAPTER 8 — PLAN IMPLEMENTATION

PLAN IMPLEMENTATION

The Regional Transportation Plan was developed with the input of the Pioneer Trails Transportation Advisory Council and the Pioneer Trails Board of Directors. Input was solicited, encouraged and given as the Regional Transportation Plan was developed, reviewed and completed.

The Pioneer Trails plan includes a prioritization of projects that will promote safe and well-maintained roads, economic development, access for all residents and efficient flow of goods and people throughout the region. The Pioneer Trails Transportation Advisory Council continues to identify local and regional transportation needs.

ENVIRONMENTAL JUSTICE

This plan has the potential to improve quality of life for those who are at a disadvantage by supporting strategies to provide access to education and employment as well as access to health and community services. According to Small Area Income and Poverty Estimates in 2016 for the Pioneer Trails area, about 15.12 percent of Pioneer Trails' residents are living in poverty.

Social and Economic Impacts

The Pioneer Trails recommendations support MoDOT's initiative to provide a smoother, safer transportation system. Many of the projects included in the plan will help reduce traffic-related fatalities and serious injuries.

It is important to address the needs of persons who are challenged with old age, low income and/or disabilities. The needs of rural residents include safely travelling on well-maintained roads and bridges, and infrastructures which allow persons to enter or leave the major arterials without worrying about speeds, sight distances, etc.

Conclusion

The Pioneer Trails Regional Planning Commission and its Transportation Advisory Council have developed this Regional Transportation Plan to document the transportation priorities within the Pioneer Trails region for MoDOT. The people of the region believe in working together to make our communities, our region and our state a great place to live and work. The members of the local governments of the region understand the financial constraints of MoDOT and the limited funding to address a seemingly endless list of needs. Due to these constraints, it is important that every dollar invested in transportation systems has a positive impact on the system and addresses the most critical needs while considering the long-term development and maintenance of the transportation system. This report will help guide the Missouri Department of Transportation in selecting projects for implementation that will respond to the most pressing needs of the Pioneer Trails region.

Bibliography

Following are references used in the preparation of Regional Transportation Plan for the Pioneer Trails Regional Planning Commission, 2023:

Missouri Department of Transportation *2023 – 2027 STIP: Missouri Statewide Transportation Improvement Program*. https://www.modot.org/sites/default/files/documents/Sec0403KansasCityRural_6.pdf.

Missouri Department of Transportation *Missouri's Long Range Transportation Plan – Appendix J: The planning framework for transportation decision making.* February 2014. http://www2.modot.org/LRTP/

Missouri Department of Transportation *Missouri's Long Range Transportation Plan.* February 2014. http://www2.modot.org/LRTP/.

U.S. Department of Transportation *2019 – 2023 National Plan of Integrated Airport Systems (NPIAS).* 2018. https://www.faa.gov/airports/planning_capacity/npias/reports/

U.S. Census Bureau. N.d. http://www.census.gov/

ACRONYM AND ABBREVIATION LIST

ASCE – American Society of Civil Engineers

BRO – Off System Bridge Replacement and Rehabilitation Program

CART – County Aid Road Trust (CART) Funding: CART Funds are apportioned to counties on the basis of two factors: 1) one-half of the funds are credited to the county based on the ratio that its road mileage bears to the total county road mileage in the unincorporated areas of the state, and 2) one-half is credited to the county based on the ratio that its rural land valuation bears to the rural land valuation of the entire state.

CDBG – Community Development Block Grant

CID – Community Improvement District

EDA – Economic Development Administration

FHWA – Federal Highway Administration

LPA – Local Public Agency

LRS – Location/Referencing System

LRTP – Long-Range Transportation Plan

LTAP – Missouri's Local Technical Assistance Program

MAP – Missouri Advance Planning

MAP 21 – Moving Ahead for Progress in the 21st Century

MODESA – Missouri Downtown and Rural Economic Stimulus Act

MoDOT – Missouri Department of Transportation

MSHP – Missouri State Highway Patrol

MTFC - Missouri Transportation Finance Corporation

NID – Neighborhood Improvement District

NPIAS – National Plan of Integrated Airport Systems

Pioneer Trails – Pioneer Trails Regional Planning Commission

SAFETEA-LU – Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

SRTS – Safe Routes to School program

STAR Fund - State Transportation Assistance Revolving Fund

STIP – Statewide Transportation Improvement Program

STP – Surface Transportation Program

TAC – Transportation Advisory Council

TAP – Transportation Alternatives Program

TCOS – Taking Care of System

TDD – Transportation Development District

TIF – Tax Increment Financing

TMA – Transportation Management Area

TMS – Transportation Management System

TRADAS – Traffic Data Acquisition System

UBAWS – Ultrathin bonded wearing surface – very slim (0.5”) asphalt