RURAL ROAD AND BRIDGE NEEDS 2023

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RURAL ROAD AND BRIDGE NEEDS 2023

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EXECUTIVE SUMMARY

The Indiana General Assembly passed legislation in 2016 and 2017 that expanded the resources available to local governments for local roads and bridges. This report is part of a series of research funded by the Indiana Soybean Alliance and the Indiana Corn Marketing Council to evaluate the condition of Indiana's rural road and bridge infrastructure. This report is the first to reflect three full years of data for the 91 study counties,[1] allowing the research team to evaluate trends in local road and bridge inventories, conditions, spending, and revenue.

This analysis utilizes data from county highway departments, including road inventories and conditions recorded in the 2021–23 local asset management plans, bridge inventories and conditions from the 2021–23 National Bridge Inventory (downloaded in October 2021, December 2022, and October 2023), as well as road and bridge spending and revenue recorded in the 2020–22 Annual Operational Reports for Local Roads and Bridges. The research team also utilized supplemental revenue data available from state agencies, and spending and revenue data from county annual financial reports.

Overall, data shows that road and bridge conditions are stabilizing, and in some cases showing improvement. This suggests that the additional funding that has been made available appears to have made a positive impact on conditions that were reported anecdotally before 2016.

Roads

- In 2023, the 91 study counties reported 63,280 centerline miles of rural roads.[2] The mix of pavements was comprised of 56% asphalt, 25% chip seal, 18% gravel, and 2% other. The mix by pavement type was consistent for 2021–23.
- In 2023, counties reported treating 7,808 miles of pavement, a similar amount to 2021 but less than in 2020. The most common treatments were overlays of varying depths, chip seals, and crack sealing.
- Overall deteriorating pavement conditions across the study counties appear to be stabilizing and in some cases are improving.[3]
    - The number of counties with one or more poor average pavement ratings decreased from 36 in 2021 to 24 in 2023.
    - Average ratings for asphalt pavements varied by county between 2021 and 2023. Forty-nine counties' average ratings improved during the three-year period, while 36 counties' ratings declined, and five counties' ratings were stable. The average weighted rating for asphalt pavements across the 91-county network was stable during the period. In 2023, the average rating for asphalt pavements in PASER[4] counties was 6.1, a slight decline from 6.2 in 2021. The average rating for PCI counties increased from 62 in 2021 to 64 in 2023.
    - The changes in average ratings between 2021 and 2023 for chip seal pavements also varied across counties. During the three-year period, 40 counties reported improved average ratings, 20 counties reported lower average ratings, and four counties reported no change. Among PASER counties with chip seal ratings for 2021 and 2023, the average rating increased from 5.4 in 2021 to 5.7 in 2023. For PCI counties with chip seal ratings, the average rating was stable, changing from 74 in 2021 to 75 in 2023.
    - In 2023, counties using the 5-point PASER scale for gravel pavements had an average rating of 2.8, and counties using the 10-point scale had an average rating of 4.0. During the three-year period, the average ratings for

[1] Marion County was excluded due to its urban character.
[2] This includes the chip seal pavement mileage that Benton County did not report in 2023.
[3] Throughout the report, average pavement ratings reported for individual or groups of counties are normalized—or weighted—using relative mileage. References to average pavement rating, weighted pavement rating, and weighted-average pavement rating should be interpreted to be the same.
[4] Most counties rate pavements using the Pavement Surface Evaluation and Rating (PASER) system. A few counties, however, choose to use the Pavement Condition Index (PCI). PASER ratings are poor (0–4), fair (5–7), and good (8–10). PCI ratings are poor (0–54), fair (55–70), and good (71–100). Additional information can be found in Appendix A: Methodology.

5-point PASER counties stayed the same. The average rating for counties using the 10-point PASER scale decreased from 5.1 in 2021. The one county using PCI ratings—Tippecanoe County—had stable average gravel ratings during the same period.

- Concrete pavements make up less than 1% of the inventory across study counties. The average rating decreased for PASER counties from 5.7 in 2021 to 5.5 in 2023 and decreased for PCI counties from 80 to 76.

Bridges and culverts

- In 2023, the 91 study counties reported an inventory of 11,138 bridges and 1,444 culverts.[5]
- Bridge condition ratings have improved between 2021 and 2023. Bridge data shows the number of poor bridge decks, superstructures, and substructures across the study counties decreased by 5, 24, and 22, respectively. There were fewer failed bridges in 2023 than in the two previous years. The number of bridges in near failure was the same in 2023 as in 2021 but increased from 2022.
- For culverts, condition ratings improved with 38 additional culverts rated as being in good condition in 2023 than in 2021. In 2023, there were no culverts in imminent failure.
- As of this report, there is not a good source of data for the treatment of bridges. Spending from bridge-specific funds provides some limited information in this regard, and is addressed in the section that follows.

Spending and revenue

- Average county road and bridge spending increased year-over-year from 2020–22, from $7.4 million in 2020 to $8.3 million in 2022. Average spending also increased during the three-year period for counties within each of the population categories. For Category A counties, average spending increased from $4.5 million in 2020 to $5 million in 2022. For the same period, average spending for Category B counties increased from $6.4 million to $7.5 million, and average spending for Category C counties increased from $12.4 million to $13.6 million.
- In 2022, study counties reported that 61% of spending went to construction, reconstruction, and preservation activities. They reported about 19% went to winter operations and other maintenance and repair activities. The proportions reported across counties in 2022 were very similar to those reported in 2020 and 2021.
- Winter operations spending does show some variability across years, population categories, and region. Across the three-year period, counties with larger populations generally spent more than counties with smaller populations and northern counties consistently spent 2 to 3 times more on winter operations than central and southern counties.
- Researchers utilized spending from bridge-specific funds as a rough proxy for bridge spending and activity. Average spending across all study counties and for Category B and Category C counties from bridge-specific funds increased modestly from 2020–22. Average spending was stable for Category A counties for the same period. While the proportion of spending by activity varied from year-to-year more than for overall spending, counties reported spending the most on construction, reconstruction, and preservation.
- Average county road and bridge revenue increased year-over-year from 2020–22, from $7.7 million in 2020 to $8.8 million in 2022. Average revenue also increased year-over-year for counties within each of the population categories. For Category A counties, average revenue increased from $4.8 million in 2020 to $5.5 million in 2022. For the same period, average revenue for Category B counties increased from $7 million to $7.8 million, and average revenue for Category C counties increased from $12.4 million to $14.4 million.
- Counties continued to use a variety of funding sources to support road and bridge work in 2022. All or nearly all study counties reported using

[5] The inventory of bridges shown here reflects the bridges for which there were available deck ratings. The inventory excludes bridges with missing deck ratings as well as bridges classified as earth-filled arch deck bridges that have no decks. This excludes about 100 facilities across the state.

Motor Vehicle Highway and Local Road and Street distributions and property taxes. More than half of counties reported using Financial Institutions Tax, Vehicle/Aircraft Excise Tax, and County Wheel Tax and Surtax distributions. Only 13 counties used debt to fund roads and bridges.

- Most counties also received Community Crossing Matching Grants in each of the three years. Eighty-eight study counties received grants for $85.1 million in 2022, the highest number of individual counties and overall award amount during the three-year period. Eighty-four counties received grants for $77.9 million in 2021, and 87 counties received Community Crossing Matching grants totaling $83.3 million in 2020.

Farmer perspectives on local roads and bridges

- Among farmer respondents, 34% indicated that county road and bridge conditions were excellent or good in their area. Forty-three percent rated them as fair, and 22% rated them as poor.
- More than half (52%) of farmers who responded to the survey indicated road conditions improved a lot or somewhat during the past five years, while 26% said they had deteriorated somewhat or a lot.
- Respondents identified a number of specific challenges when using local roads and bridges to make farm-to-farm or farm-to-market trips. Most often (96%) they indicated struggling with road width. More than 70% of respondents indicated that pavement condition, bridge dimensions, bridge weight restrictions, and turning radii at intersections were challenges. Three or more respondents also identified peaked or rough conditions at railroad crossings, roundabout sizing and curbing, utility lines and poles, driver behavior and awareness, and restrictions on roads in cities and towns as problems. Many respondents indicated there are times when they had to detour around an obstacle or cross a bridge, railroad crossing, or intersection with extreme care.

Recommendations

The research team makes several recommendations for strategic improvement of local roads and bridges, and robust data collection for tracking assets and conditions over time. These are summarized below.

- Even in counties reporting generally good road and bridge conditions, many farmers still face challenges during planting and harvest seasons such as road width, bridge dimensions, bridge weight restrictions, and turning radii at intersections. County officials should evaluate these issues strategically when planning for the preservation, reconstruction, and safety improvements of the relevant road and bridge assets.
- As counties make network improvements over time, additional flexibility in the Community Crossings Matching Grant program's administrative requirements may be necessary to ensure that grants can be applied to each county's most critical priorities.
- Counties should ensure robust, consistent local asset inventories and ratings systems for county roads and bridges by (1) reporting complete and consistent asset inventories in asset management plans and operational reports, (2) rating all assets, (3) distinguishing consistently between true chip seal pavement on a gravel base and asphalt pavement with chip seal surface treatment, and (4) rating gravel roads are rate using a 5-point scale.
- Many counties need to add unit prices to their asset management plans and better track winter operations expenses in their operational reports.
- Currently, there is inadequate data to analyze the nature and extent of bridge work completed by counties. This data element should be added to either the asset management plans or operational reports.

INTRODUCTION

Good rural road and bridge infrastructure is critical to efficient farm-to-farm and farm-to-market movement of agricultural products and equipment. The Indiana Soybean Alliance (ISA) and the Indiana Corn Marketing Council (ICMC) have invested in a series of studies to support the improvement of local infrastructure. ISA commissioned this report from the Indiana University Public Policy Institute to track road and bridge conditions with the ongoing infusion of resources provided through state legislation in 2016 and 2017. It is the third effort with data from 91 county highway departments. This document includes a compilation of data benchmarks developed in 2020, an analysis of annual and trend data, an analysis of farmer perceptions, findings, and recommendations.

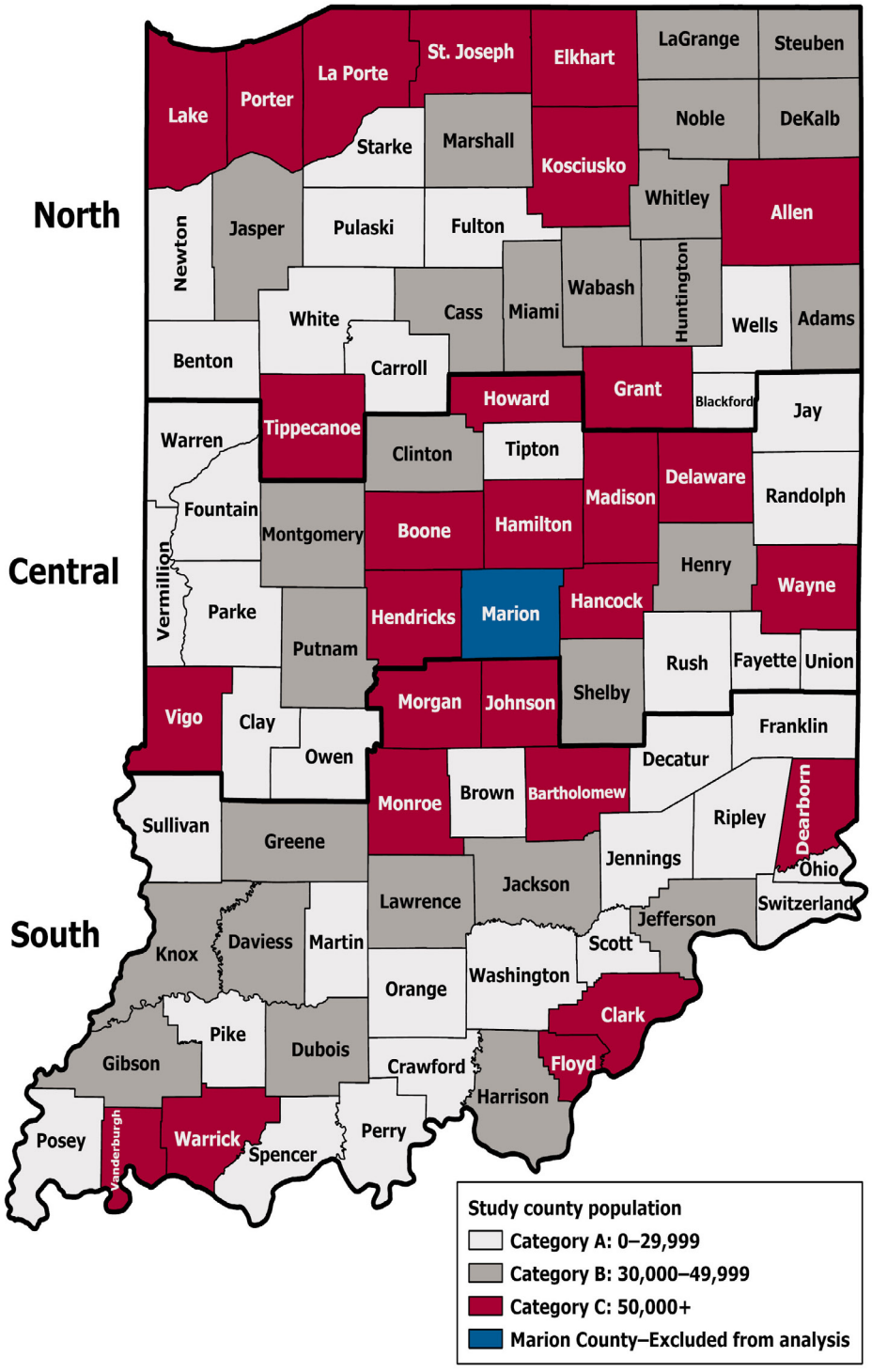
STUDY COUNTIES

Figure 1 and Table 1 show the 91 study counties by population and region. The counties were divided into three population categories, in part, based on the differentiation in the calculation of Local Road and Street distributions for counties with more than or equal to or less than 50,000 population. The research team split the fewer than 50,000 population group into two separate groups because there is a natural break in those populations at 30,000.

Category A includes counties with a population of up to 29,999. Category B includes counties with a population between 30,000 and 49,999. Category C includes counties with a population of 50,000 or more. Thirty-eight counties were classified as Category A, 26 as Category B, and 27 as Category C. All counties have remained in the same population categories for the three-year study period.

For analysis of winter operations expenditures, the counties also were divided into regions based roughly on Indiana Department of Transportation (INDOT) district boundaries. Northern counties generally included those in the INDOT La Porte and Fort Wayne districts. Central counties included those in the Crawfordsville and Greenfield districts, and southern counties included those in the Seymour and Vincennes districts. If counties were split between districts, the research team assigned them to one of the districts. Thirty counties were classified as northern, 26 as central, and 35 as southern.

Figure 1. Study counties by population category and region



Source: U.S. Census Bureau as reported on STATS Indiana.

Notes:

1. No counties have changed population categories during the study period.
2. Counties were divided into regions based roughly on INDOT district boundaries. Northern counties generally included those in the INDOT La Porte and Fort Wayne districts. Central counties included those in the Crawfordsville and Greenfield districts, and southern counties included those in the Seymour and Vincennes districts.

Table 1. Study counties by population category and region

County	Region	2020 population	2021 population estimate	2022 population estimate	2023 population estimate	Population category
Adams	North	35,809	35,991	36,151	36,288	B
Allen	North	385,410	389,163	391,644	394,545	C
Bartholomew	South	82,208	82,729	83,394	84,003	C
Benton	North	8,719	8,686	8,672	8,729	A
Blackford	North	12,112	12,041	11,919	11,893	A
Boone	Central	70,812	73,080	74,309	76,120	C
Brown	South	15,475	15,592	15,587	15,653	A
Carroll	North	20,306	20,525	20,514	20,525	A
Cass	North	37,870	37,558	37,537	37,666	B
Clark	South	121,093	122,895	124,222	125,467	C
Clay	Central	26,466	26,394	26,410	26,460	A
Clinton	Central	33,190	32,983	32,769	32,730	B
Crawford	South	10,526	10,491	10,517	10,438	A
Daviess	South	33,381	33,396	33,496	33,656	B
Dearborn	South	50,679	50,875	50,900	51,215	C
Decatur	South	26,472	26,353	26,454	26,399	A
DeKalb	North	43,265	43,395	43,813	44,198	B
Delaware	Central	111,903	112,057	112,163	112,321	C
Dubois	South	43,637	43,565	43,492	43,546	B
Elkhart	North	207,047	207,054	206,873	206,409	C
Fayette	Central	23,398	23,381	23,389	23,362	A
Floyd	South	80,484	80,595	80,621	80,809	C
Fountain	Central	16,479	16,480	16,620	16,731	A
Franklin	South	22,785	22,889	23,083	23,096	A
Fulton	North	20,480	20,412	20,368	20,358	A
Gibson	South	33,011	32,965	33,002	32,904	B
Grant	North	66,674	66,188	65,993	66,200	C
Greene	South	30,803	30,862	31,071	31,196	B
Hamilton	Central	347,467	357,620	365,463	371,645	C
Hancock	Central	79,840	81,891	83,117	86,166	C
Harrison	South	39,654	39,805	39,790	40,006	B
Hendricks	Central	174,788	179,800	183,119	186,387	C
Henry	Central	48,914	49,024	48,815	48,929	B
Howard	Central	83,658	83,650	83,546	83,831	C
Huntington	North	36,662	36,788	36,800	36,781	B
Jackson	South	46,428	46,224	46,230	46,460	B
Jasper	North	32,918	33,165	33,345	33,535	B
Jay	Central	20,478	20,282	20,118	20,032	A
Jefferson	South	33,147	33,117	32,936	33,056	B
Jennings	South	27,613	27,513	27,484	27,622	A
Johnson	South	161,765	164,394	165,686	167,819	C
Knox	South	36,282	35,976	35,876	36,070	B

Table 1. Study counties by population and region (cont.)

County	Region	2020 population	2021 population estimate	2022 population estimate	2023 population estimate	Population category
Kosciusko	North	80,240	80,237	80,564	80,364	C
LaGrange	North	40,446	40,527	40,854	40,907	B
Lake	North	498,700	499,257	499,657	500,598	C
La Porte	North	112,417	112,513	111,822	111,706	C
Lawrence	South	45,011	45,066	45,231	45,084	B
Madison	Central	130,129	130,841	131,383	132,504	C
Marshall	North	46,095	46,160	46,378	46,352	B
Martin	South	9,812	9,804	9,827	9,897	A
Miami	North	35,962	35,999	35,546	35,402	B
Monroe	South	139,718	140,176	139,621	139,342	C
Montgomery	Central	37,936	38,057	38,319	38,573	B
Morgan	South	71,780	72,275	72,260	73,227	C
Newton	North	13,830	13,820	13,839	13,960	A
Noble	North	47,457	47,392	47,234	47,430	B
Ohio	South	5,940	5,994	6,097	6,004	A
Orange	South	19,867	19,806	19,601	19,638	A
Owen	Central	21,321	21,514	21,487	21,532	A
Parke	Central	16,156	16,486	16,367	16,484	A
Perry	South	19,170	19,334	19,207	19,209	A
Pike	South	12,250	12,170	12,143	12,106	A
Porter	North	173,215	174,551	174,848	175,335	C
Posey	South	25,222	25,165	25,098	25,040	A
Pulaski	North	12,514	12,360	12,449	12,385	A
Putnam	Central	36,726	37,043	37,294	37,567	B
Randolph	Central	24,502	24,409	24,350	24,216	A
Ripley	South	28,995	29,015	29,030	29,227	A
Rush	Central	16,752	16,679	16,672	16,847	A
St. Joseph	North	272,912	272,286	272,282	272,848	C
Scott	South	24,384	24,422	24,500	24,657	A
Shelby	Central	45,055	45,101	45,189	45,231	B
Spencer	South	19,810	19,841	19,849	19,910	A
Starke	North	23,371	23,373	23,203	23,206	A
Steuben	North	34,435	34,702	34,772	34,917	B
Sullivan	South	20,817	20,777	20,671	20,757	A
Switzerland	South	9,737	9,869	10,009	10,019	A
Tippecanoe	North	186,251	187,423	188,237	188,792	C
Tipton	Central	15,359	15,394	15,325	15,256	A
Union	Central	7,087	7,018	6,967	6,973	A
Vanderburgh	South	180,136	180,165	179,563	179,810	C
Vermillion	Central	15,439	15,435	15,433	15,417	A

Table 1. Study counties by population and region (cont.)

County	Region	2020 population	2021 population estimate	2022 population estimate	2023 population estimate	Population category
Vigo	Central	106,153	106,116	106,082	106,153	C
Wabash	North	30,976	30,893	30,842	30,670	B
Warren	Central	8,440	8,449	8,488	8,518	A
Warrick	South	63,898	64,657	65,231	65,867	C
Washington	South	28,182	28,138	28,171	28,205	A
Wayne	Central	66,553	66,435	66,216	66,127	C
Wells	North	28,180	28,154	28,298	28,555	A
White	North	24,688	24,643	24,660	24,917	A
Whitley	North	34,191	34,470	34,577	34,742	B

Source: U.S. Census Bureau as reported on STATS Indiana.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. No counties have changed population categories.
3. Counties were divided into regions based roughly on INDOT district boundaries. Northern counties generally included those in the INDOT La Porte and Fort Wayne districts. Central counties included those in the Crawfordsville and Greenfield districts, and southern counties included those in the Seymour and Vincennes districts.

METHODOLOGY

A complete discussion of methodology is provided in Appendix A. The basis for the analysis that follows is an analytical template developed by the research team in 2020 (Figure 2). The availability of three years of data for the 91 counties allows the inclusion of annual measures as well as trends.

Figure 2. Elements of county road and bridge data and analysis

Roads
- The size of the road network and change over time
- The mix of pavement types in the road network and change over time
- Pavement conditions by type and change over time
- Miles of pavement treated by type and change over time

Bridges
- Inventory of bridges and culverts and change over time
- Bridge and culvert conditions and change over time
- Total annual spending (serves as a proxy for treatment) and change over time

Revenue and spending
- Total annual spending and comparison over time
- Spending by activity and comparison over time
- Total revenue and change over time
- Types of revenues utilized and change over time
- Spending on winter operations by county size and region and change over time

The research team utilized data compiled by county highway departments, including road inventory and conditions data collected from 2021–23 local asset management plans, bridge inventory and conditions data from the 2021–23 National Bridge Inventory (downloaded in October 2021, December 2022, and October 2023), as well as spending and revenue data from the 2020–22 Annual Operational Reports for Local Roads and Streets and Bridges submitted to the Indiana Local Technical Assistance Program (LTAP) Data Management Portal and the Indiana State Board of Accounts (SBOA)—referred to as annual operational reports, hereafter. In each case, this data was the most recent available at the time this report was created. The 2023 annual operational reports will not be available until June 2024.

The research team also used additional revenue data from the Indiana Department of Transportation Community Crossings Matching Grant awards, the Office of the Indiana State Comptroller Motor Vehicle Highway Account and Local Roads and Streets distributions, and the County Motor Vehicle Excise Surtax and Wheel Tax collected by the Indiana Bureau of Motor Vehicles and published annually by the Indiana Legislative

Agency in the *Indiana Handbook of Taxes, Revenues, and Appropriations*. Tables showing this supplement data are provided in Appendix B. In a few cases, county Annual Financial Reports submitted to the SBOA and available on the Gateway for Governmental Units website were used to confirm spending and revenue data.

To provide additional context to the data and trends reported here, the research team conducted a survey of agricultural stakeholders and interviewed officials from a few county highway departments. The survey of agricultural stakeholders was administered to members of the ISA and the ICMC via an online or paper survey, by phone, or by interview at two member events—the Coffee Talk Chat on March 25, 2024, in Shelbyville and the 2024 Student Soybean Innovation Competition Awards on March 27, 2024, at Purdue University. Responses were collected from March 25–April 30, 2024. The project team also conducted interviews with officials from the Boone County, Clinton County, and Decatur County highway departments in April and May 2024. The farmer survey results are summarized separately near the end of the report. Observations from the county highway departments interviews are referred to within the appropriate sections.

Data differences may exist between the current and previous reports in some cases due to a reinterpretation of data or changes in the calculation methodologies. For example, spending and revenue data in the current report excludes spending and revenue reported for all other financing sources. Other financing sources include the purchase of investments that are not truly new spending or revenue. The size of these investments has the potential to give a skewed view of the funding that county highway departments spend and receive.

ROADS

Asset management is a systemic multiyear approach that considers ratings across an agency's entire road and bridge network to distribute resources for network improvement. This approach utilizes a mix of treatments to optimize pavement conditions and performance while minimizing expenditures. Rather than a commonly practiced "worst first" approach, this strategy minimizes deterioration and maintains pavements before they require rehabilitation or replacement. A network approach has proven to be more effective over time.

This section includes an analysis of available county road data including three-year trends for the road inventory, the mix and condition of pavements by type, and pavement miles treated. The 2021–23 asset management plans were the principal data sources used for the analysis. Treatment data included in these plans is for the previous two years. For example, in the 2023 asset management plans, the treatment data was for 2021 and 2022.

Throughout the report, average pavement ratings reported for individual or groups of counties are normalized—or weighted—using relative mileage. In other words, average pavement rating, weighted pavement rating, and weighted-average pavement rating should be interpreted to be the same.

Road inventory

An inventory of road infrastructure and conditions is a key component in asset management because it describes condition by individual road segment, which is necessary to make network decisions on treatment options and spending. Road inventory and conditions are documented in county asset management plans.

Table 2 shows road miles for each county for 2021–23. The study counties reported 62,938 centerline road miles in 2023, a decrease of 124 miles from 2021. Benton County reported the biggest change in inventory for the three-year period because they did not submit data for their chip seal pavements in 2023.

The size of the road inventory varies widely across counties in the three population categories (Table 3). Overall, in 2023, Allen County reported the most centerline miles at 1,327, while Ohio County reported the fewest at 143. For Category A counties, White County reported the most at 923 miles, and Ohio County reported the fewest. For Category B counties, Jasper County reported the most at 933 miles, and Jefferson County reported the fewest at 530 miles. For Category

C counties, Allen County reported the most miles, while Floyd County reported the fewest at 367 miles.

Comparing the road inventories for the three-year period shows relatively large differences in some counties that cannot be attributed to typical reasons for inventory adjustment, such as municipal annexations, the dedication of private roads, roads in new subdivisions, agency transfers, assets taken out of service, new assets added, and inventory corrections. A complete local inventory is critical as an input for decision making. The discrepancies in these numbers should be resolved by these counties and consistent numbers reported in their asset management plans and operational reports.

Mix of pavements

In 2023, counties reported the overall mix of pavements as 56% asphalt, 25% chip seal, and 18% gravel/stone. They also reported having about 0.5% of concrete, less than 0.5% of composite pavements, and approximately 1% of unimproved roads. Composite pavements consist of a combination of asphalt and chip seal surfaces, while unimproved pavements include assets such as farm lane roads that are not paved and are used to access farm fields. Figures 3–5 show the mix of pavements by type for the 91-county network was consistent from 2021 to 2023, with only minimal variations in percentages. In 2023, Category A and C counties reported a majority of their inventories were asphalt, 52% and 75%, respectively. Category B counties reported having 42% asphalt and 37% chip seal (Table 4 and Figure 3).

The classification of chip seal pavements remains a challenge. More clarity is needed statewide between true chip seal pavements on a gravel base and asphalt pavements treated with chip seal as a preservation strategy. Only the chip seal pavements on a gravel base should be inventoried as chip seal.

Table 2. County road inventories—2021–23

County	Population category	2023 mileage	2022 mileage	2021 mileage	Inventory change 2021–23
Adams	B	669	669	663	6
Allen	C	1,327	1,322	1,324	3
Bartholomew	C	686	686	686	0
Benton	A	320	662	666	-346
Blackford	A	321	321	320	1
Boone	C	735	733	737	-2
Brown	A	390	406	392	-2
Carroll	A	762	762	763	-1
Cass	B	864	864	864	0
Clark	C	513	513	471	42
Clay	A	686	686	681	5
Clinton	B	778	778	779	-1
Crawford	A	462	462	460	2
Daviess	B	779	781	781	-2
Dearborn	C	503	503	504	-1
Decatur	A	636	645	674	-38
DeKalb	B	704	704	704	0
Delaware	C	802	802	801	1
Dubois	B	662	662	662	0

Table 2. County road inventories—2021–23 (cont.)

County	Population category	2023 mileage	2022 mileage	2021 mileage	Inventory change 2021–23
Elkhart	C	1,127	1,124	1,120	7
Fayette	A	406	406	406	0
Floyd	C	367	351	362	5
Fountain	A	636	636	635	1
Franklin	A	633	633	632	1
Fulton	A	778	778	779	-1
Gibson	B	914	914	912	2
Grant	C	798	798	797	1
Greene	B	916	916	857	59
Hamilton	C	556	555	556	0
Hancock	C	653	653	654	-1
Harrison	B	856	856	856	0
Hendricks	C	753	754	760	-7
Henry	B	792	792	791	1
Howard	C	584	584	583	1
Huntington	B	611	617	617	-6
Jackson	B	723	729	729	-6
Jasper	B	933	932	932	1
Jay	A	717	732	716	1
Jefferson	B	530	530	530	0
Jennings	A	684	667	667	17
Johnson	C	586	586	586	0
Knox	B	855	855	856	-1
Kosciusko	C	1,168	1,169	1,170	-2
LaGrange	B	785	785	768	17
Lake	C	524	522	521	3
La Porte	C	1,072	1,058	1,058	14
Lawrence	B	625	625	626	-1
Madison	C	870	867	871	-1
Marshall	B	822	824	824	-2
Martin	A	361	361	361	0
Miami	B	780	780	779	1
Monroe	C	708	716	719	-11
Montgomery	B	817	817	818	-1
Morgan	C	676	667	667	9
Newton	A	650	650	651	-1
Noble	B	813	813	813	0
Ohio	A	143	143	139	4
Orange	A	589	587	584	5
Owen	A	627	639	611	16
Parke	A	877	883	877	0
Perry	A	492	476	476	16

Table 2. County road inventories—2021–23 (cont.)

County	Population category	2023 mileage	2022 mileage	2021 mileage	Inventory change 2021–23
Pike	A	543	543	544	-1
Porter	C	782	782	782	0
Posey	A	693	691	693	0
Pulaski	A	883	884	884	-1
Putnam	B	752	752	752	0
Randolph	A	850	850	850	0
Ripley	A	715	713	711	4
Rush	A	747	747	747	0
St. Joseph	C	1,040	1,040	1,028	12
Scott	A	302	306	311	-9
Shelby	B	818	808	808	10
Spencer	A	740	774	745	-5
Starke	A	664	671	641	23
Steuben	B	616	645	645	-29
Sullivan	A	867	867	868	-1
Switzerland	A	379	320	326	53
Tippecanoe	C	844	844	838	6
Tipton	A	554	552	553	1
Union	A	264	264	264	0
Vanderburgh	C	520	518	514	6
Vermillion	A	395	395	394	1
Vigo	C	828	828	826	2
Wabash	B	723	723	722	1
Warren	A	512	512	530	-18
Warrick	C	791	791	768	23
Washington	A	804	797	797	7
Wayne	C	685	685	682	3
Wells	A	709	709	709	0
White	A	923	923	920	3
Whitley	B	586	587	612	-26
Total	**N/A**	**62,938**	**63,262**	**63,062**	**-124**

Sources: 2021–23 asset management plans; U.S. Census Bureau.

Note: Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.

Table 3. Summary of county road inventory mileage by population category—2023

Counties	# of counties	Total	High	Low	Average
All study counties	91	62,938	1,327	143	692
Category A counties	38	22,717	923	143	598
Category B counties	26	19,723	933	530	759
Category C counties	27	20,498	1,327	367	759

Sources: 2023 asset management plans; U.S. Census Bureau.

Table 4. Percent road mileage by pavement type—2023

County	Population category	Mileage	Asphalt	Chip seal	Gravel	Concrete	Composite	Unimproved
Adams	B	669	17%	69%	14%	0%	0%	1%
Allen	C	1,327	46%	47%	5%	2%	0%	0%
Bartholomew	C	686	93%	6%	1%	0%	0%	0%
Benton	A	320	0%	0%	100%	0%	0%	0%
Blackford	A	321	32%	60%	7%	0%	0%	0%
Boone	C	735	57%	<0.5%	42%	<0.5%	0%	0%
Brown	A	390	64%	0%	36%	0%	0%	0%
Carroll	A	762	14%	63%	24%	0%	0%	0%
Cass	B	864	13%	76%	11%	<0.5%	0%	0%
Clark	C	513	99%	0%	1%	<0.5%	<0.5%	0%
Clay	A	686	45%	16%	39%	0%	0%	<0.5%
Clinton	B	778	11%	57%	32%	<0.5%	0%	0%
Crawford	A	462	47%	13%	40%	0%	0%	<0.5%
Daviess	B	779	36%	8%	49%	2%	<0.5%	5%
Dearborn	C	503	93%	1%	6%	<0.5%	0%	0%
Decatur	A	636	88%	0%	12%	<0.5%	0%	0%
DeKalb	B	704	18%	42%	39%	<0.5%	0%	0%
Delaware	C	802	99%	0%	0%	1%	0%	0%
Dubois	B	662	58%	23%	17%	0%	0%	2%
Elkhart	C	1,127	94%	0%	5%	1%	0%	0%
Fayette	A	406	24%	67%	9%	0%	0%	0%
Floyd	C	367	100%	0%	0%	0%	0%	0%
Fountain	A	636	40%	8%	52%	0%	0%	0%
Franklin	A	633	95%	0%	5%	<0.5%	0%	0%
Fulton	A	778	29%	62%	9%	<0.5%	0%	0%
Gibson	B	914	23%	36%	38%	0%	0%	2%
Grant	C	798	17%	83%	0%	0%	0%	0%
Greene	B	916	59%	0%	41%	<0.5%	0%	0%
Hamilton	C	556	61%	39%	0%	0%	<0.5%	0%
Hancock	C	653	55%	30%	3%	<0.5%	11%	0%
Harrison	B	856	95%	2%	3%	0%	0%	0%
Hendricks	C	753	80%	19%	<0.5%	<0.5%	0%	0%
Henry	B	792	58%	36%	6%	<0.5%	0%	0%
Howard	C	584	100%	0%	0%	<0.5%	0%	0%
Huntington	B	611	99%	0%	<0.5%	<0.5%	0%	0%
Jackson	B	723	86%	0%	13%	0%	0%	0%
Jasper	B	933	21%	52%	27%	0%	0%	0%
Jay	A	717	13%	54%	33%	<0.5%	0%	0%
Jefferson	B	530	59%	13%	27%	0%	0%	0%
Jennings	A	684	77%	10%	13%	0%	0%	0%
Johnson	C	586	45%	50%	0%	4%	1%	0%
Knox	B	855	71%	0%	28%	1%	0%	0%

Table 4. Percent road mileage by pavement type—2023 (cont.)

County	Population category	Mileage	Asphalt	Chip seal	Gravel	Concrete	Composite	Unimproved
Kosciusko	C	1,168	91%	0%	9%	<0.5%	0%	0%
LaGrange	B	785	23%	53%	24%	0%	0%	0%
Lake	C	524	84%	13%	3%	0%	0%	0%
La Porte	C	1,072	94%	0%	4%	<0.5%	0%	1%
Lawrence	B	625	91%	1%	8%	<0.5%	0%	0%
Madison	C	870	57%	35%	0%	8%	0%	0%
Marshall	B	822	21%	79%	<0.5%	<0.5%	0%	0%
Martin	A	361	41%	5%	54%	0%	0%	0%
Miami	B	780	21%	65%	14%	0%	0%	0%
Monroe	C	708	93%	0%	7%	0%	0%	0%
Montgomery	B	817	16%	48%	37%	0%	0%	0%
Morgan	C	676	77%	22%	1%	0%	0%	0%
Newton	A	650	26%	48%	0%	0%	0%	26%
Noble	B	813	29%	62%	9%	<0.5%	0%	0%
Ohio	A	143	96%	0%	4%	0%	0%	0%
Orange	A	589	81%	5%	14%	0%	0%	0%
Owen	A	627	58%	6%	36%	0%	0%	0%
Parke	A	877	47%	7%	45%	0%	0%	1%
Perry	A	492	42%	11%	47%	0%	0%	0%
Pike	A	543	44%	2%	54%	<0.5%	0%	0%
Porter	C	782	60%	36%	1%	<0.5%	3%	<0.5%
Posey	A	693	52%	17%	0%	<0.5%	0%	31%
Pulaski	A	883	10%	53%	37%	0%	0%	0%
Putnam	B	752	21%	47%	31%	<0.5%	0%	0%
Randolph	A	850	98%	0%	2%	0%	0%	0%
Ripley	A	715	94%	0%	6%	0%	0%	0%
Rush	A	747	97%	<0.5%	2%	0%	0%	0%
St. Joseph	C	1,040	78%	16%	5%	1%	0%	0%
Scott	A	302	99%	0%	1%	0%	0%	0%
Shelby	B	818	96%	4%	0%	<0.5%	0%	0%
Spencer	A	740	46%	12%	42%	0%	0%	0%
Starke	A	664	82%	5%	13%	<0.5%	0%	0%
Steuben	B	616	64%	6%	30%	0%	0%	0%
Sullivan	A	867	34%	9%	57%	<0.5%	0%	0%
Switzerland	A	379	84%	0%	16%	0%	0%	0%
Tippecanoe	C	844	71%	4%	20%	4%	<0.5%	0%
Tipton	A	554	23%	76%	1%	<0.5%	0%	0%
Union	A	264	42%	43%	15%	0%	0%	0%
Vanderburgh	C	520	91%	0%	0%	9%	0%	0%
Vermillion	A	395	66%	0%	34%	0%	0%	0%
Vigo	C	828	49%	35%	15%	1%	0%	0%
Wabash	B	723	4%	93%	3%	<0.5%	0%	0%

Table 4. Percent road mileage by pavement type—2023 (cont.)

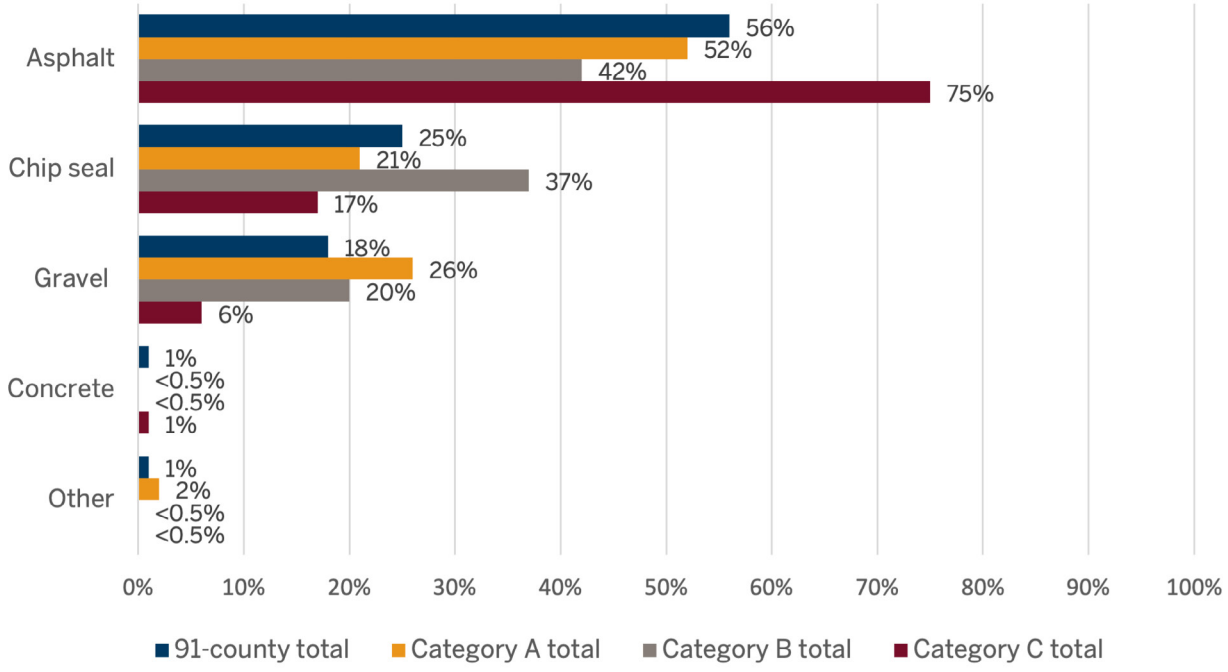
County	Population category	Mileage	Asphalt	Chip seal	Gravel	Concrete	Composite	Unimproved
Warren	A	512	7%	27%	66%	0%	0%	0%
Warrick	C	791	72%	4%	20%	5%	0%	0%
Washington	A	804	90%	0%	10%	0%	0%	0%
Wayne	C	685	99%	0%	1%	0%	0%	0%
Wells	A	709	2%	68%	30%	0%	0%	0%
White	A	923	53%	15%	32%	0%	0%	0%
Whitley	B	586	13%	71%	13%	0%	3%	0%
91-county total	**N/A**	**62,935**	**56%**	**25%**	**18%**	**1%**	**<0.5%**	**1%**
Category A total	**N/A**	**22,714**	**52%**	**21%**	**26%**	**<0.5%**	**0%**	**2%**
Category B total	**N/A**	**19,723**	**42%**	**37%**	**20%**	**<0.5%**	**<0.5%**	**<0.5%**
Category C total	**N/A**	**20,498**	**75%**	**17%**	**6%**	**1%**	**1%**	**<0.5%**

Sources: 2023 asset management plans; U.S. Census Bureau.

Notes:

1. Percents may not add to 100% due to rounding.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.

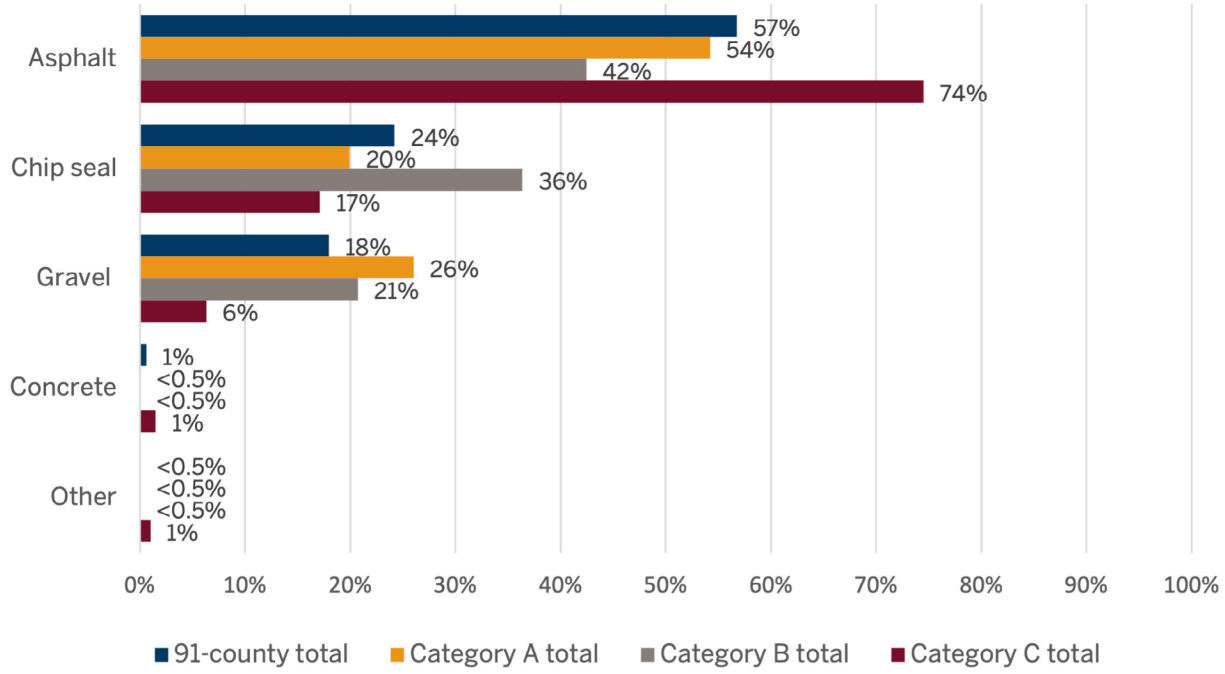
Figure 3. Road inventory by pavement type—2023



Sources: 2023 asset management plans; U.S. Census Bureau.

Note: Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.

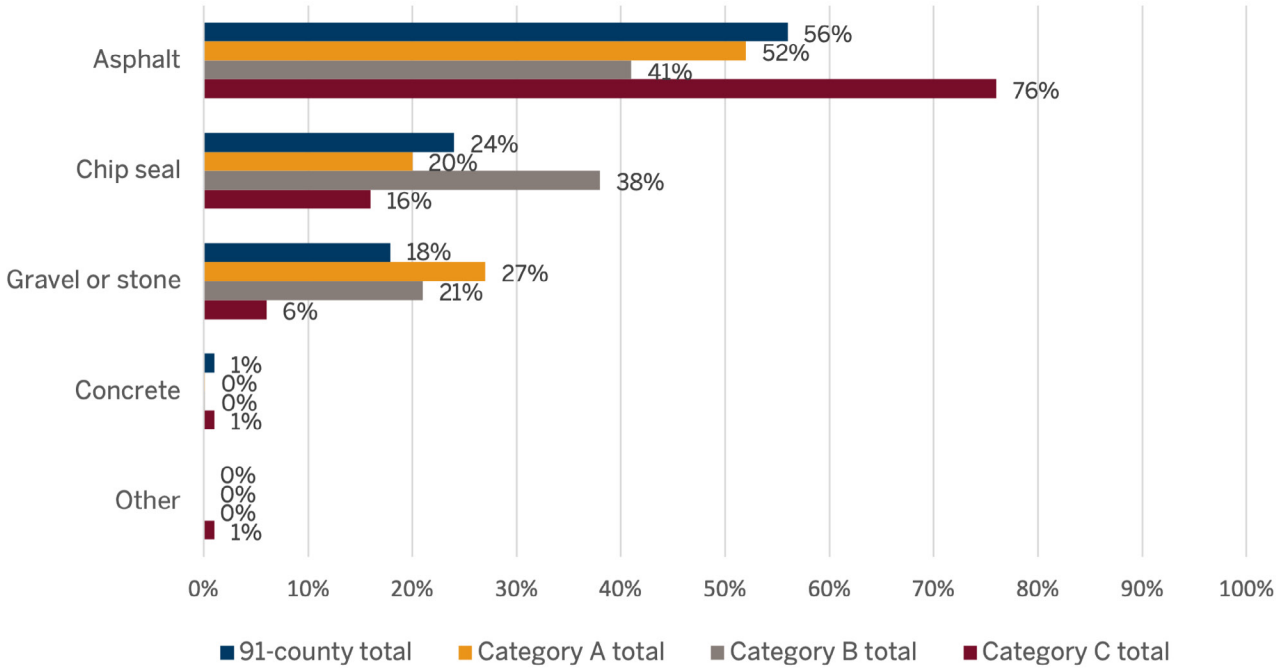
Figure 4. Road inventory by pavement type—2022



Sources: 2022 asset management plans; U.S. Census Bureau.

Note: Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.

Figure 5. Road inventory by pavement type—2021



Sources: 2021 asset management plans; U.S. Census Bureau.

Note: Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.

Road conditions

When sufficient investments are made consistently using an asset management network approach, weighted-average ratings should stabilize or increase over time. Eighty-six counties rate pavements using a Pavement Surface Evaluation and Rating system (PASER). Five counties—Delaware, Gibson, Tippecanoe, Vanderburgh, and Warrick—use the Pavement Conditions Index (PCI) method to rate pavements. Warrick County changed its rating system from PASER in 2021 to PCI in 2022 and 2023.

Tables 5–8 and Figures 6–8 show condition ratings for 2021–23 by county and aggregated by population category for asphalt, chip seal, and concrete pavements. For the three-year period, asphalt pavement ratings were stable; chip seal pavements ratings improved slightly; and the ratings for concrete pavements declined minimally. Gravel pavements are rated using PASER 5-point and 10-point scales, and the PCI scale. Pavements rated using the 5-point PASER scale and PCI were stable for the three-year period in the aggregate, while pavements rated using the 10-point PASER scale decreased from 5.1 in 2021 to 4.4 in 2023 or by 23%.

Some counties report inventory in particular pavement types, but do not rate all segments. In some cases, counties did not appear to be rating all concrete roads. Sixteen counties rated all gravel roads with the same score. In some cases, counties rated only a small portion of their gravel road inventory. For example, three counties rated 0.25 of 17 miles, 0.3 of 75 miles, and 1.5 of 295 miles. Accurate and complete ratings are important for managing these assets over time.

Asphalt pavements

Eighty-five counties rated asphalt pavements using the PASER method, and five counties used the PCI method. Benton County has no asphalt pavement inventory.

Average ratings for asphalt pavements varied by county between 2021 and 2023. Forty-nine counties' average ratings improved during the period, while 36 counties' ratings declined, and five counties' ratings were stable. Among counties using the PASER method, Tipton County showed the biggest improvement at +69% from 2021 to 2023, while Shelby County had biggest decrease at -20% (Table 5). Among the five counties using the PCI method, Warrick County showed the biggest improvement at +28% (2022–23), and Vanderburgh County had the biggest decrease at -16%

Overall, the change in average ratings for the PASER counties were stable, only changing from 6.2 in 2021 to 6.1 in 2023. Average ratings for Category A and Category B PASER counties increased during the period, while average ratings for Category C counties stayed the same. For the five PCI counties, average conditions were stable, only changing from 62 in 2021 to 64 in 2023.

Chip seal pavements

Sixty-seven counties rated chip seal pavements in 2023 while 23 counties reported having no chip seal pavements (Table 6). Sixty-three study counties rated chip seal pavements consistently during the three-year period. Benton County rated these pavements in 2021 and 2022 but did not report ratings for 2023. Ripley, Jay, and Harrison counties reported ratings for chip seal pavements in 2023 but had not in the previous years. Kosciusko County reported ratings only in 2021, and Johnson County reported ratings for only 2022 and 2023.

The change in the average ratings for chip seal between 2021 and 2023 varied across counties. During the period, 40 counties reported improved average ratings, four counties reported no change, and 20 counties reported lower average ratings.

Among PASER counties with chip seal ratings for 2021 and 2023, average ratings increased 6% from 5.4 in 2021 to 5.7 in 2023. Several counties reported substantial improvements—Fountain County improved 91%, Posey County improved 88%, Tipton County improved 74%, and Newton County improved 64%. Steuben County reported a 49% decrease, the largest among counties.

For PCI counties with chip seal ratings, the average rating was stable, only changing from 74 in 2021 to 75 in 2023. Gibson County reported an improved average rating for the three-year period, while Tippecanoe

County reported a lower average rating. Warrick County switched from PASER to PCI in 2022 precluding a calculation of a three-year rating. However, the county reported a lower average rating in 2023 than in 2022.

Gravel pavements

Counties continue to use different PASER rating scales for gravel pavements. In 2023, 66 counties reported gravel pavement ratings (Table 7). Thirty-two counties used the 5-point PASER scale, 33 counties used the 10-point PASER scale, and one county used the PCI rating system. Of the remaining counties, 11 reported not having any gravel pavement inventory, and 14 reported having gravel pavements but did not provide ratings.

The average conditions varied across study counties. Among counties with ratings for the three-year period, 17 counties showed improved ratings, 14 counties showed declining ratings, and 27 counties reported no change.

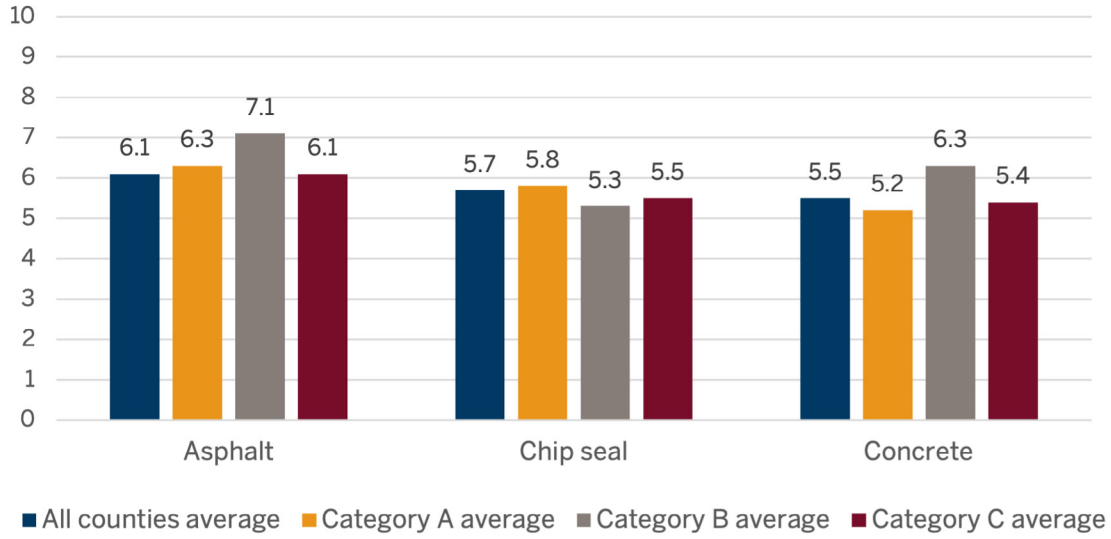
In 2023, counties using the 5-point PASER scale had an average rating of 2.8, and counties using the 10-point scale had an average weighted rating of 4.0. During the three-year period, the average rating for 5-point PASER counties stayed the same. The average ratings for counties using the 10-point PASER scale decreased 22%, from 5.1 in 2021. The one county using the PCI method—Tippecanoe County—had stable average gravel ratings across the period.

Concrete pavements

Concrete pavements account for a very small portion of the overall county road inventory, just 342 of 62,938 miles or approximately 0.5%. Madison County had the most concrete pavement inventory at 68.7 miles, while many counties reported one mile or less. Forty-seven counties reported no concrete pavement (Table 8).

Forty-four counties reported having concrete pavement inventory, including 40 PASER counties and four PCI counties. Among counties that reported ratings for the three-year period, 10 reported improved ratings, 21 reported declining ratings, and seven reported no change. The change in the average ratings from 2021 to 2023 was -4% for PASER counties and -5% for PCI counties.

Figure 6. Weighted-average PASER ratings for asphalt, chip seal, and concrete pavements—2023

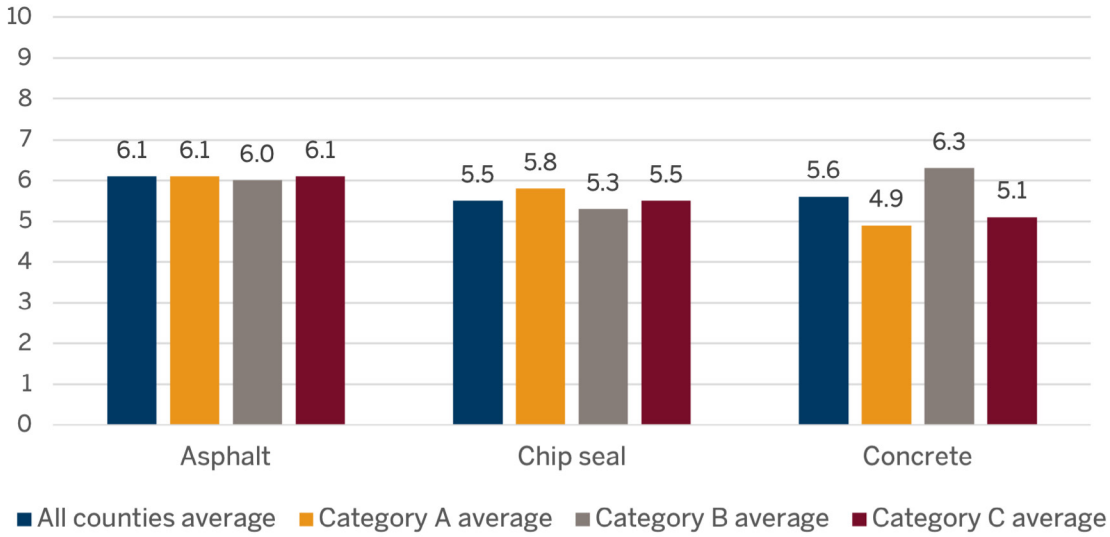


Sources: 2023 asset management plans; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Five counties used the PCI method to rate pavements. These counties are excluded.

Figure 7. Weighted-average PASER ratings for asphalt, chip seal, and concrete pavements—2022

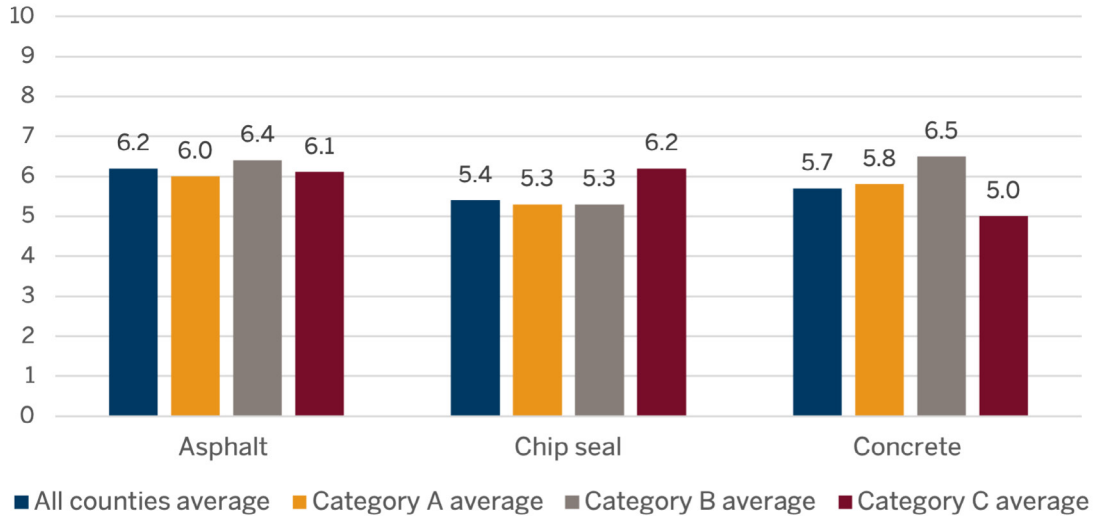


Sources: 2022 asset management plans; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Five counties used the PCI method to rate pavements. These counties are excluded.

Figure 8. Weighted-average PASER ratings for asphalt, chip seal, and concrete pavements—2021



Sources: 2021 asset management plans; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Five counties used the PCI method to rate pavements. These counties are excluded.

Table 5. Asphalt pavement conditions–2021–23

County	Population category	2023					2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Poor	Fair	Good	Weighted rating			
PASER counties									
Adams	B	111	63%	24%	13%	4.6	4.6	5.0	-7%
Allen	C	606	56%	18%	26%	5.3	5.8	5.8	-9%
Bartholomew	C	637	1%	41%	58%	7.7	7.5	7.2	7%
Benton	A	0	0%	0%	0%	N/R	N/R	N/R	N/A
Blackford	A	104	10%	47%	43%	7.1	6.9	6.4	11%
Boone	C	422	12%	52%	36%	6.8	6.8	6.2	10%
Brown	A	249	6%	38%	56%	7.1	7.1	6.6	7%
Carroll	A	105	1%	47%	52%	7.5	7.4	7.6	-1%
Cass	B	110	1%	55%	45%	7.4	7.7	7.6	-3%
Clark	C	508	31%	46%	24%	5.8	5.8	6.2	-6%
Clay	A	307	26%	32%	42%	6.5	6.4	6.6	-1%
Clinton	B	85	18%	33%	49%	6.8	7.0	6.7	2%
Crawford	A	217	7%	87%	5%	5.6	5.6	5.5	2%
Daviess	B	279	2%	68%	29%	6.9	7.4	7.2	-5%
Dearborn	C	468	70%	17%	13%	4.1	4.1	3.8	9%
Decatur	A	559	33%	37%	30%	5.9	5.7	5.8	1%
DeKalb	B	128	6%	58%	36%	6.8	8.2	7.1	-4%
Dubois	B	384	5%	45%	50%	7.3	7.2	7.1	2%
Elkhart	C	1,059	9%	59%	31%	6.7	7.2	7.3	-8%
Fayette	A	96	16%	7%	78%	7.7	7.6	7.8	-2%
Floyd	C	367	26%	36%	38%	6.3	6.9	6.9	-9%
Fountain	A	254	84%	8%	8%	3.6	4.0	3.4	6%
Franklin	A	600	17%	72%	11%	5.9	5.5	5.3	11%
Fulton	A	226	31%	61%	9%	5.4	5.8	5.8	-7%
Grant	C	136	29%	43%	28%	6.2	6.2	6.2	0%
Greene	B	544	40%	43%	17%	5.2	5.6	5.9	-12%
Hamilton	C	339	1%	58%	41%	7.1	7.3	7.2	-2%
Hancock	C	362	1%	85%	15%	7.1	7.0	6.8	4%
Harrison	B	815	1%	64%	35%	7.1	6.9	6.8	4%
Hendricks	C	605	35%	36%	29%	5.9	5.6	5.6	4%
Henry	B	458	61%	20%	18%	4.5	4.0	4.6	-3%
Howard	C	582	5%	62%	33%	6.7	7.8	7.8	-14%
Huntington	B	607	4%	93%	3%	6.3	5.3	5.3	18%
Jackson	B	625	62%	28%	9%	4.3	4.7	4.6	-6%
Jasper	B	192	12%	15%	73%	7.7	7.5	7.4	5%
Jay	A	95	0%	30%	70%	8.3	7.4	7.4	11%
Jefferson	B	315	18%	38%	44%	6.6	6.2	6.3	4%
Jennings	A	529	5%	70%	25%	6.5	6.7	6.3	3%
Johnson	C	264	2%	63%	35%	7.1	6.6	5.8	22%
Knox	B	607	31%	44%	25%	5.9	5.7	5.4	8%

Table 5. Asphalt pavement conditions—2021–23 (cont.)

County	Population category	2023					2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Poor	Fair	Good	Weighted rating			
Kosciusko	C	1,065	18%	61%	21%	6.3	5.9	5.6	12%
LaGrange	B	179	32%	43%	24%	5.9	5.3	6.6	-10%
Lake	C	440	24%	31%	45%	6.5	6.5	6.7	-3%
La Porte	C	1,013	42%	29%	29%	5.4	4.9	5.0	8%
Lawrence	B	572	17%	46%	37%	6.5	6.3	6.5	0%
Madison	C	494	55%	32%	13%	4.8	4.6	5.1	-5%
Marshall	B	174	13%	41%	46%	7.0	6.9	6.9	1%
Martin	A	148	73%	11%	16%	3.8	3.4	3.2	18%
Miami	B	163	35%	38%	27%	5.4	5.1	5.3	2%
Monroe	C	656	40%	41%	20%	5.3	5.3	5.6	-5%
Montgomery	B	129	50%	37%	13%	5.1	5.1	5.2	-2%
Morgan	C	519	6%	42%	53%	7.4	7.1	7.0	5%
Newton	A	170	4%	79%	16%	6.8	6.8	6.4	6%
Noble	B	234	0%	78%	22%	6.9	6.7	6.7	3%
Ohio	A	137	48%	23%	30%	5.8	5.2	4.7	23%
Orange	A	478	19%	61%	20%	5.9	6.2	6.6	-10%
Owen	A	362	44%	31%	25%	5.1	4.5	5.1	0%
Parke	A	413	7%	54%	39%	7.4	7.2	7.0	5%
Perry	A	206	22%	18%	61%	7.3	7.2	6.5	13%
Pike	A	236	8%	24%	67%	7.8	7.2	7.0	11%
Porter	C	473	59%	22%	19%	4.5	4.7	4.5	0%
Posey	A	362	0%	22%	78%	8.4	8.3	7.4	13%
Pulaski	A	91	10%	52%	38%	6.8	6.7	6.1	11%
Putnam	B	157	14%	49%	37%	6.7	6.7	7.2	-7%
Randolph	A	837	5%	74%	21%	6.9	5.2	4.8	43%
Ripley	A	674	3%	86%	11%	6.6	7.2	7.0	-6%
Rush	A	728	24%	19%	57%	6.9	6.3	6.4	8%
St. Joseph	C	807	37%	42%	20%	5.3	6.7	6.5	-19%
Scott	A	297	32%	49%	19%	5.8	5.4	6.6	-12%
Shelby	B	783	29%	37%	34%	6.0	7.5	7.5	-20%
Spencer	A	338	4%	72%	24%	6.7	5.0	4.8	40%
Starke	A	541	33%	48%	19%	5.6	5.3	5.7	-2%
Steuben	B	394	20%	28%	52%	6.6	6.5	7.0	-6%
Sullivan	A	293	17%	37%	46%	6.8	6.8	6.5	5%
Switzerland	A	320	32%	55%	13%	5.4	5.4	5.4	-1%
Tipton	A	126	33%	45%	22%	5.6	3.2	3.3	69%
Union	A	112	0%	31%	69%	7.5	7.8	7.6	-1%
Vermillion	A	262	17%	40%	43%	6.7	6.1	6.0	11%
Vigo	C	406	19%	42%	39%	6.4	6.4	6.4	0%
Wabash	B	27	33%	6%	60%	7.1	6.9	6.8	4%
Warren	A	38	0%	52%	48%	7.5	7.4	8.9	-16%

Table 5. Asphalt pavement conditions—2021–23 (cont.)

County	Population category	2023					2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Poor	Fair	Good	Weighted rating			
Washington	A	719	43%	25%	32%	5.5	5.5	5.2	7%
Wayne	C	681	0%	74%	26%	6.3	6.0	6.1	3%
Wells	A	17	3%	84%	13%	6.8	7.2	6.5	5%
White	A	490	48%	35%	17%	5.1	5.0	4.9	4%
Whitley	B	75	0%	57%	43%	7.1	6.8	7.0	1%
PCI counties									
Delaware	C	792	53%	17%	31%	51	49	54	-5%
Gibson	B	214	7%	10%	83%	79	76	78	2%
Tippecanoe	C	604	18%	49%	33%	65	62	66	-1%
Vanderburgh	C	475	48%	22%	30%	53	63	63	-16%
Warrick	C	566	6%	2%	93%	87	68	6.5 (PASER)	28% (2022–23)
Summary									
90-county total	**N/A**	**35,438**	**26%**	**44%**	**30%**	**N/A**	**N/A**	**N/A**	**N/A**
85-county PASER total	**N/A**	**32,786**	**26%**	**44%**	**30%**	**6.1**	**6.1**	**6.2**	**-2%**
PASER Category A total	**N/A**	**11,734**	**22%**	**47%**	**31%**	**6.3**	**6.1**	**6.0**	**5%**
PASER Category B total	**N/A**	**8,145**	**24%**	**46%**	**30%**	**7.1**	**6.0**	**6.4**	**11%**
PASER Category C total	**N/A**	**12,907**	**26%**	**25%**	**29%**	**6.1**	**6.1**	**6.1**	**0%**
5-county PCI total	**N/A**	**2,651**	**30%**	**21%**	**48%**	**64**	**61**	**62**	**3%**

Sources: 2021–23 asset management plans; U.S. Census Bureau.

Notes:

1. The percentage of mileage by pavement type may equal slightly more or less than 100% due to rounding.
2. The 2021–23 changes in pavement ratings were calculated using full (unrounded) numeric values. Calculations with the round ratings, therefore, may not match.
3. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
4. Eighty-five counties used the PASER method to rate asphalt pavements. Benton County generally used the PASER rating system but did not report any asphalt pavements. The PASER ratings are poor (0–4), fair (5–7), and good (8–10).
5. Five counties used the PCI method to rate asphalt pavements. The PCI ratings are poor (0–54), fair (55–70), and good (71–100). Warrick County used the PASER system for rating asphalt in 2021.

Table 6. Chip seal pavement conditions—2021–23

County	Population category	2023		2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Weighted rating			
PASER counties						
Adams	B	459	4.0	4.6	4.6	-13%
Allen	C	626	6.5	5.8	6.5	0%
Bartholomew	C	44	5.7	5.4	4.7	21%
Benton	A	0	N/R	6.7	6.8	N/A
Blackford	A	193	7.1	6.7	6.4	11%
Boone	C	3	8.3	6.5	5.2	60%
Brown	A	0	N/A	N/A	N/A	N/A
Carroll	A	477	6.5	6.5	6.8	-4%
Cass	B	656	6.7	6.7	6.5	3%
Clark	C	0	N/A	N/A	N/A	N/A
Clay	A	108	6.6	6.2	6.6	0%
Clinton	B	445	5.3	5.1	4.6	15%
Crawford	A	59	5.4	4.3	4.2	29%
Daviess	B	60	7.3	7.5	7.6	-4%
Dearborn	C	4	5.1	3.0	3.0	70%
Decatur	A	0	N/A	N/A	N/A	N/A
DeKalb	B	296	5.9	6.4	5.3	11%
Dubois	B	150	5.8	5.9	6.0	-3%
Elkhart	C	0	N/A	N/A	N/A	N/A
Fayette	A	273	5.4	5.2	5.9	-8%
Floyd	C	0	N/A	N/A	N/A	N/A
Fountain	A	49	4.4	4.4	2.3	91%
Franklin	A	0	N/A	N/A	N/A	N/A
Fulton	A	483	5.1	5.3	5.3	-4%
Grant	C	662	4.3	4.2	4.2	2%
Greene	B	0	N/A	N/A	N/A	0%
Hamilton	C	214	6.9	7.6	8.2	-16%
Hancock	C	198	7.0	6.9	6.9	1%
Harrison	B	15	6.0	N/R	N/R	N/A
Hendricks	C	145	6.5	6.8	6.4	2%
Henry	B	284	3.9	3.4	3.7	5%
Howard	C	0	N/A	N/A	N/A	N/A
Huntington	B	0	N/A	N/A	5.0	N/A
Jackson	B	0	N/A	N/A	N/A	N/A
Jasper	B	488	7.2	6.5	6.5	11%
Jay	A	384	7.3	N/R	N/R	N/A
Jefferson	B	70	4.8	4.0	6.3	-24%
Jennings	A	65	4.0	3.8	3.6	11%
Johnson	C	292	6.4	6.3	N/R	N/A
Knox	B	0	N/A	N/A	N/A	N/A

Table 6. Chip seal pavement conditions—2021–23 (cont.)

County	Population category	2023		2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Weighted rating			
Kosciusko	C	0	N/A	N/A	6.7	N/A
LaGrange	B	415	5.5	5.1	5.4	2%
Lake	C	67	8.2	7.7	8.1	1%
La Porte	C	0	N/A	N/A	N/A	N/A
Lawrence	B	4	7.2	6.6	5.2	38%
Madison	C	307	5.9	4.8	4.7	26%
Marshall	B	646	5.6	4.5	4.5	24%
Martin	A	18	2.7	3.3	3.3	-18%
Miami	B	506	3.5	3.3	3.3	6%
Monroe	C	0	N/A	N/A	N/A	N/A
Montgomery	B	390	4.6	4.2	3.1	48%
Morgan	C	147	6.4	6.2	5.9	8%
Newton	A	313	6.4	7.5	3.9	64%
Noble	B	504	6.8	6.8	6.7	1%
Ohio	A	0	N/A	N/A	N/A	N/A
Orange	A	30	5.3	5.3	4.7	13%
Owen	A	37	2.2	2.1	2.6	-15%
Parke	A	61	7.0	6.6	6.6	6%
Perry	A	53	6.7	6	6.2	8%
Pike	A	12	4.4	4.0	3.9	13%
Porter	C	283	5.5	5.7	6.4	-14%
Posey	A	118	6.4	6.3	3.4	88%
Pulaski	A	465	6.7	6.6	6.3	6%
Putnam	B	356	5.9	5.9	5.9	0%
Randolph	A	0	N/A	N/A	N/A	N/A
Ripley	A	<1	3.0	N/R	N/R	N/A
Rush	A	2	6.1	6.1	6.9	-12%
St. Joseph	C	171	3.6	3.4	3.3	9%
Scott	A	0	N/A	N/A	N/A	N/A
Shelby	B	34	6.3	5.8	7.2	-13%
Spencer	A	89	4.9	5.7	5.7	-14%
Starke	A	33	6.0	5.8	5.7	5%
Steuben	B	37	3.3	6.1	6.5	-49%
Sullivan	A	75	4.7	4.7	4.6	2%
Switzerland	A	0	N/A	N/A	N/A	N/A
Tipton	A	423	4.0	2.3	2.3	74%
Union	A	114	5.7	5.7	4.5	27%
Vermillion	A	0	N/A	N/A	N/A	N/A
Vigo	C	289	4.5	4.5	5.0	-10%
Wabash	B	674	5.9	5.3	5.0	18%
Warren	A	139	6.9	6.7	7.2	-4%

Table 6. Chip seal pavement conditions—2021–23 (cont.)

County	Population category	2023		2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Weighted rating			
Washington	A	0	N/A	N/A	N/A	N/A
Wayne	C	0	N/A	N/A	N/A	N/A
Wells	A	483	6.0	6.4	6.4	-6%
White	A	142	7.0	7.0	6.4	9%
Whitley	B	418	5.5	5.5	3.1	77%
PCI counties						
Delaware	C	0	N/A	N/A	N/A	N/A
Gibson	B	333	76	71	73	4%
Tippecanoe	C	34	68	64	75	-9%
Vanderburgh	C	0	N/A	N/A	N/A	N/A
Warrick	C	32	78	86	10 (PASER)	-9% (2022–23)
Summary						
67-county total	**N/A**	**15,485**	**N/A**	**N/A**	**N/A**	**N/A**
64-county total (PASER)	**N/A**	**15,086**	**5.7**	**5.5**	**5.4**	**6%**
Category A total (PASER)	**N/A**	**4,695**	**5.9**	**5.8**	**5.3**	**11%**
Category B total (PASER)	**N/A**	**6,908**	**5.5**	**5.3**	**5.3**	**4%**
Category C total (PASER)	**N/A**	**3,483**	**4.0**	**5.5**	**6.2**	**-35%**
3-county PCI total	**N/A**	**399**	**75**	**72**	**74**	**1.5%**

Sources: 2021–23 asset management reports; U.S. Census Bureau.

Notes:

1. N/R=Not rated; N/A=Not applicable.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
3. PASER ratings are poor (0–4), fair (5–7), and good (8–10).
4. PCI ratings are poor (0–54), fair (55–70), and good (71–100).

Table 7. Gravel pavement conditions—2021–23

County	Population category	2023		2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Weighted rating			
PASER—5-point scale						
Adams	B	94	2.0	4.0	2.0	0%
Bartholomew	C	5	3.5	3.2	3.4	3%
Blackford	A	24	4.0	4.0	4.0	0%
Boone	C	309	3.4	4.1	4.0	-15%
Clark	C	3	2.7	2.7	3.0	-10%
Clinton	B	247	4.0	4.0	4.0	0%
Dearborn	C	31	2.5	2.5	2.5	0%
DeKalb	B	278	4.0	4.0	4.0	0%
Elkhart	C	53	4.0	4.0	2.0	100%
Fayette	A	37	4.0	4.0	4.0	0%
Greene	B	372	2.0	5.0	1.0	100%
Hendricks	C	0	2.0	2.0	2.0	0%
Henry	B	50	2.6	2.9	3.2	-19%
Jasper	B	253	4.0	4.0	4.0	0%
Jay	A	238	2.0	2.0	2.0	0%
Jefferson	B	145	2.4	2.2	2.0	20%
Jennings	A	90	3.3	3.2	3.2	3%
Knox	B	242	3.0	3.0	3.0	0%
LaGrange	B	191	4.0	3.0	1.0	300%
Lawrence	B	49	N/R	N/R	N/R	N/A
Martin	A	196	2.3	2.0	2.0	15%
Miami	B	110	4.0	4.0	4.0	0%
Morgan	C	10	3.8	N/R	N/R	N/A
Ohio	A	6	1.9	2.1	2.1	-10%
Orange	A	81	1.0	1.0	1.0	0%
Putnam	B	235	1.1	1.0	N/R	N/A
Rush	A	18	4.0	4.0	4.0	0%
Spencer	A	313	1.0	3.8	2.8	-64%
Steuben	B	185	3.6	3.5	3.5	3%
Tipton	A	5	1.9	2.3	2.3	-17%
Wabash	B	19	4.0	4.0	4.0	0%
Washington	A	84	3.0	3.3	3.3	-9%
PASER 10-point scale						
Allen	C	64	7.1	7.2	5.7	25%
Benton	A	320	6.2	6.2	6.2	0%
Carroll	A	180	6.4	6.4	3.4	88%
Cass	B	96	7.0	7.0	7.0	0%
Crawford	A	184	3.6	3.5	3	20%
Decatur	A	76	2.7	N/R	N/R	N/A
Dubois	B	111	6.1	5.9	6.1	0%

Table 7. Gravel pavement conditions—2021–23 (cont.)

County	Population category	2023		2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Weighted rating			
Franklin	A	32	4.4	4.3	4.4	0%
Fulton	A	69	5	5.1	5.1	-2%
Hancock	C	19	6.8	6.6	6.8	0%
Harrison	B	25	6.0	6.0	6.0	0%
Huntington	B	3	6.0	6.4	N/R	N/A
Kosciusko	C	102	6.9	6.9	6.8	1%
La Porte	C	48	6.5	5.6	5.2	25%
Marshall	B	1	3.0	8.6	8.6	-65%
Monroe	C	52	3.8	4.0	6.2	-39%
Noble	B	75	N/R	6.0	6.1	N/A
Parke	A	393	5.7	5.5	5.4	6%
Pike	A	295	9.0	N/R	N/R	N/A
Porter	C	5	4.6	N/R	4.6	0%
Randolph	A	13	5.1	2.3	2.3	122%
St. Joseph	C	49	3.8	4.1	4.0	-5%
Scott	A	4	3.6	N/R	3.6	0%
Starke	A	89	5.0	4.9	N/R	N/A
Sullivan	A	496	3.0	3.0	3.0	0%
Union	A	38	8.1	8.0	8.0	1%
Vermillion	A	133	4.8	5.0	N/R	N/A
Vigo	C	121	2.9	3.0	3.4	-15%
Warren	A	336	6.0	6.0	6.0	0%
Wayne	C	4	5.9	6.5	6.0	-2%
Wells	A	209	5.8	5.8	5.8	0%
White	A	292	2.6	2.6	2.6	0%
Whitley	B	75	3.1	4.5	3.0	3%
PASER counties—No inventory or ratings (2023)						
Brown	A	141	N/R	N/R	N/R	N/A
Clay	A	268	N/R	N/R	N/R	N/A
Daviess	B	380	N/R	N/R	N/R	N/A
Floyd	C	0	N/A	N/A	N/A	N/A
Fountain	A	332	N/R	N/R	N/R	N/A
Grant	C	0	N/A	N/A	N/A	N/A
Hamilton	C	0	N/A	3.8	8.0	N/A
Howard	C	0	N/A	N/A	N/A	N/A
Jackson	B	98	N/A	N/A	N/A	N/A
Johnson	C	0	N/A	N/A	N/A	N/A
Lake	C	17	N/R	N/R	N/R	N/A
Madison	C	0	N/A	N/A	2.8	N/A
Montgomery	B	299	N/R	N/R	3	N/A
Newton	A	0	N/A	N/A	N/A	N/A

Table 7. Gravel pavement conditions—2021–23 (cont.)

County	Population category	2023		2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Weighted rating			
Owen	A	229	N/R	N/R	N/R	N/A
Perry	A	233	N/R	3	3	N/A
Posey	A	0	N/A	N/A	N/A	N/A
Pulaski	A	328	N/R	N/R	N/R	N/A
Ripley	A	41	N/R	N/R	N/R	N/A
Shelby	B	0	N/R	1	N/R	N/A
Switzerland	A	59	N/R	N/R	4.7	N/A
PCI counties						
Delaware	C	0	N/A	N/A	N/A	N/A
Gibson	B	348	N/R	N/R	N/R	N/A
Tippecanoe	C	166	72	73	73	0%
Vanderburgh	C	0	N/A	N/A	N/A	N/A
Warrick	C	158	N/R	N/R	N/R	N/A
Summary						
66-county total	**N/A**	**11,079**	**N/A**	**N/A**	**N/A**	**N/A**
33-county total—10-point	**N/A**	**4,010**	**4.0**	**4.9**	**5.1**	**-22%**
Category A—10 point	**N/A**	**3,162**	**4.3**	**4.8**	**5.3**	**-19%**
Category B—10 point	**N/A**	**385**	**3.2**	**4.4**	**4.6**	**-30%**
Category C—10 point	**N/A**	**463**	**5.0**	**5.3**	**5.2**	**-4%**
32-county total—5-point	**N/A**	**3,972**	**2.8**	**3.3**	**2.8**	**0%**
Category A—5 point	**N/A**	**1,090**	**2.0**	**2.8**	**2.8**	**-29%**
Category B—5 point	**N/A**	**2,470**	**3.0**	**3.8**	**2.6**	**15%**
Category C—5 point	**N/A**	**411**	**3.4**	**4.0**	**3.6**	**5%**
PCI rated (1 county)	**N/A**	**166**	**72**	**73**	**73**	**<.5%**

Sources: 2021–23 asset management plans; U.S. Census Bureau.

Notes:

1. N/R=Not rated; N/A=Not applicable.
2. The 2021–23 changes in pavement ratings were calculated using full (unrounded) numeric values. Calculations with the round ratings, therefore, may not match.
3. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.

Table 8. Concrete pavement conditions—2021–23

County	Population category	2023		2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Weighted rating			
PASER counties						
Adams	B	0.0	N/A	N/A	N/A	N/A
Allen	C	31.3	6.7	6.5	7.2	-6%
Bartholomew	C	0.6	5.0	5.0	5.0	0%
Benton	A	0.0	N/A	N/A	N/A	N/A
Blackford	A	0.0	N/A	N/A	N/A	N/A
Boone	C	0.1	4.0	4	N/R	N/A
Brown	A	0.0	N/A	N/A	N/A	N/A
Carroll	A	0.0	N/A	N/A	N/A	N/A
Cass	B	2.3	7.4	7.8	7.5	-2%
Clark	C	1.3	7.8	7.8	5.6	39%
Clay	A	0.0	N/A	N/A	N/A	N/A
Clinton	B	0.5	6.0	6	6	0%
Crawford	A	0.0	N/A	N/A	N/A	N/A
Daviess	B	18.5	8.4	8.2	8.2	2%
Dearborn	C	0.1	1.0	1.0	1.0	0%
Decatur	A	0.5	N/R	8.0	8.0	N/A
DeKalb	B	2.3	7.7	7.9	7.8	-2%
Dubois	B	0.0	N/A	N/A	N/A	N/A
Elkhart	C	15.1	6.2	6.5	6.6	-6%
Fayette	A	0.0	N/A	N/A	N/A	N/A
Floyd	C	0.0	N/A	N/A	7.0	N/A
Fountain	A	0.0	N/A	N/A	N/A	N/A
Franklin	A	1.2	8.0	5.7	9.0	-11%
Fulton	A	0.5	6.0	7.2	7.2	-17%
Grant	C	0.0	N/A	N/A	N/A	N/A
Greene	B	0.1	7.0	7	N/R	N/A
Hamilton	C	0.0	N/A	7.1	7.3	N/A
Hancock	C	0.3	6.0	6.0	8.8	-25%
Harrison	B	0.0	N/A	N/A	N/A	N/A
Hendricks	C	3.1	5.8	5.8	5.9	-1%
Henry	B	0.9	4.1	3.4	3.4	19%
Howard	C	0.8	7.7	7.4	7.4	5%
Huntington	B	1.4	5.7	7.1	7	-19%
Jackson	B	0.0	N/A	N/A	N/A	N/A
Jasper	B	0.0	N/A	N/A	N/A	N/A
Jay	A	0.3	8.0	8.0	8.0	0%
Jefferson	B	0.0	N/A	N/A	N/A	N/A
Jennings	A	0.0	N/A	N/A	N/A	N/A
Johnson	C	21.7	7.5	5.3	3.9	92%
Knox	B	6.6	3.6	3.6	4.3	-17%

Table 8. Concrete pavement conditions—2021–23 (cont.)

County	Population category	2023		2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Weighted rating			
Kosciusko	C	1.2	5.9	6.2	6.7	-13%
LaGrange	B	0.0	N/A	N/A	N/A	N/A
Lake	C	0.0	N/A	N/A	N/A	N/A
La Porte	C	0.1	4.0	3.0	N/R	N/A
Lawrence	B	0.3	6.0	6.0	7.0	-14%
Madison	C	68.7	3.8	3.8	3.7	3%
Marshall	B	0.6	5.3	5.3	5.3	-1%
Martin	A	0.0	N/A	N/A	N/A	N/A
Miami	B	0.0	N/A	N/A	N/A	N/A
Monroe	C	0.0	N/A	N/A	N/A	N/A
Montgomery	B	0.0	N/A	N/A	N/A	N/A
Morgan	C	0.0	N/A	N/A	N/A	N/A
Newton	A	0.0	N/A	N/A	N/A	N/A
Noble	B	0.4	6.1	6.5	5.0	22%
Ohio	A	0.0	N/A	N/A	N/A	N/A
Orange	A	0.0	N/A	N/A	N/A	N/A
Owen	A	0.0	N/A	N/A	N/A	N/A
Parke	A	0.0	N/A	N/A	N/A	N/A
Perry	A	0.0	N/A	N/A	N/A	N/A
Pike	A	0.2	6.0	6.0	6.0	0%
Porter	C	0.1	2.8	2.8	3.2	-12%
Posey	A	0.5	7.0	6.9	7.7	-9%
Pulaski	A	0.0	N/A	N/A	N/A	N/A
Putnam	B	2.6	2.2	2.2	3.8	-41%
Randolph	A	0.0	N/A	N/A	N/A	N/A
Ripley	A	0.0	N/A	N/A	N/A	N/A
Rush	A	0.0	N/A	N/A	N/A	N/A
St. Joseph	C	12.3	5.8	5.8	6.2	-6%
Scott	A	0.0	N/A	N/A	N/A	N/A
Shelby	B	0.7	4.4	4.4	4.8	-8%
Spencer	A	0.0	N/A	N/A	N/A	N/A
Starke	A	0.1	3.0	3.0	N/R	N/A
Steuben	B	0.0	N/A	N/A	N/A	N/A
Sullivan	A	0.5	4.0	4.0	4.0	0%
Switzerland	A	0.0	N/A	N/A	N/A	N/A
Tipton	A	1.2	3.7	4.5	4.5	-19%
Union	A	0.0	N/A	N/A	N/A	N/A
Vermillion	A	0.0	N/A	N/A	N/A	N/A
Vigo	C	12.2	5.8	5.8	5.4	7%
Wabash	B	2.2	2.0	2.0	2.0	0%
Warren	A	0.0	N/A	N/A	4.0	N/A

Table 8. Concrete pavement conditions—2021–23 (cont.)

County	Population category	2023		2022 weighted rating	2021 weighted rating	% change 2021–23
		Mileage	Weighted rating			
Washington	A	0.0	N/A	N/A	N/A	N/A
Wayne	C	0.0	N/A	N/A	N/A	N/A
Wells	A	0.0	N/A	N/A	N/A	N/A
White	A	0.0	N/A	N/A	N/A	N/A
Whitley	B	1.0	6.6	6.1	5.7	16%
PCI Counties						
Delaware	C	9	66	65	N/R	1%
Gibson	B	0	N/A	N/A	N/A	N/A
Tippecanoe	C	38	88	89	N/R	-2%
Vanderburgh	C	45	66	79	N/R	-16%
Warrick	C	36	85	70	6.4 (PASER)	21% (2022–23)
Summary						
Study county total (44)	**N/A**	**342**	**N/A**	**N/A**	**N/A**	**N/A**
PASER county total (40)	**N/A**	**214**	**5.5**	**5.6**	**5.7**	**-4%**
PASER Category A total	**N/A**	**5**	**5.2**	**4.9**	**5.8**	**-10%**
PASER Category B total	**N/A**	**40**	**6.3**	**6.3**	**6.5**	**-3%**
PASER Category C total	**N/A**	**169**	**5.4**	**5.1**	**5.0**	**8%**
PCI total (4)	**N/A**	**128**	**76**	**78**	**80**	**-5%**

Sources: 2021–23 asset management plans; U.S. Census Bureau.

Notes:

1. N/R=Not rated; N/A=Not applicable.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
3. Because the inventory of concrete pavements is less than one mile for many counties, the inventory is reported to the tenth of a mile.

Poor pavements

In addition to analyzing changes in weighted-average ratings over time, the project team also identified the number of counties that reported having pavements rated, on average, as poor for 2021–23. The overall number of counties reporting one or more poor average ratings decreased during the three-year period from 36 in 2021 to 26 in 2022 to 24 in 2023.

For asphalt pavements, there were four counties reporting poor average ratings in 2023 and 2021. The numbers of Category B counties also were the same in 2021 and 2023. One additional Category C county reported a poor average rating in 2023 than in 2021. One fewer Category A county reported a poor average rating for the same period.

Counties reporting poor average ratings for chip seal pavements declined from 13 counties in 2021 to 8 in 2023. The numbers declined in each of the population categories for the same period.

Counties reporting poor average ratings for gravel pavements declined from 20 in 2021 to 9 in 2023. The number of counties reporting poor average ratings also declined in each of the population categories. Counties reporting poor average concrete ratings decreased by five from 2021 to 2023. The number of counties in Category B was the same in 2021 and 2023. The number of Category A and Category C counties, however, declined.

Table 9. Counties with poor average ratings by pavement type—2021–23

	Asphalt			Chip seal			Gravel			Concrete		
	2023	2022	2021	2023	2022	2021	2023	2022	2021	2023	2022	2021
91-county total	4	5	4	8	10	13	9	18	20	5	9	10
Category A total	2	3	3	4	5	6	5	9	7	1	1	3
Category B total	0	1	0	3	3	5	3	4	8	3	4	3
Category C total	2	1	1	1	2	2	1	5	5	1	4	4

Sources: 2021–23 asset management plans; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Poor ratings include PASER ratings using a 10-point scale that are less than 4, PASER ratings using a 5-point scale that are less than 2, and PCI ratings less than 54.
3. Gravel pavements include all ratings system. In previous reports, the research team included only counties using the PASER 5-point scale and PCI.
4. Counties that reported having or rating less than one mile of concrete were excluded from this analysis.

Roads treated

The expanded resources available to local governments during the past several years through expanded Motor Vehicle Highway (MVH) and Local Roads and Streets (LRS) distributions—as well as Community Crossing Matching Grants—should allow local governments generally to treat more lane miles. However, two of three counties interviewed reported anecdotally that the cost of contractors and construction materials had risen during the past several years as a result of inflation. As mentioned previously, adopting an asset-management network approach also can contribute to the effective use of local resources in improving and maintaining the local road network.

Local governments use a variety of treatment options to preserve and to address the deterioration of pavements. These treatments range from full reconstruction to a variety of maintenance activities. A full list of treatment options appears in Appendix A: Methodology. Treatment data is recorded in asset management plans. The analysis below covers treatments for 2020–22 because treatments are documented for the two previous years.

Table 10 shows miles treated by pavement type. Data indicates that counties treated fewer miles of pavement in 2022 than in 2020 (Table 11). Miles treated also declined for Category A and Category C counties during this period. Category B counties, however, showed a substantial increase of 1,183 miles.

During the analysis, the research team also identified some differences in how counties report treatment. Some counties reported treating large percentages of their entire inventories. For example, Decatur County reported treating all of their roads; Jackson County reported 430 miles of patching and pothole filling; Knox County reported more than 800 miles of patching and pothole filling; Monroe County reported more than 350 miles of patching and pothole filling; Owen County reported approximately 390 miles of patching and pothole filling; and Wayne County reported treating 465 miles of pavement. Grant, Huntington, Lake, Lawrence, Marshall, Martin, Parke, Starke, and Vanderburgh counties reported no treatments for 2022.

The mix of treatments used varied within and across counties. Table 12 is a summary of the most common treatments reported in 2022. The two most common were overlays of varying thickness and chip seals.

The mix of treatments affects cost. Full reconstruction typically is more expensive than resurfacing. It is difficult, however, to assess the relative value of work completed from existing data because it is influenced by many factors. Eight counties submitted unit prices for various treatment types with their asset management plans. These indicate a wide range of unit costs for similar treatments. For example, chip seal treatment unit prices varied from $11,000/mile to $30,000/mile.

Table 10. Pavement treated by type—2022

County	Pop. category	Total			Asphalt		Chip seal		Gravel		Concrete	
		Rated miles	Total miles treated	% treated	Rated miles	% treated	Rated miles	% treated	Rated miles	% treated	Rated miles	% treated
Adams	B	669	96	14%	111	8%	459	15%	94	21%	0.0	0%
Allen	C	1,327	139	10%	606	9%	626	13%	64	0%	31.3	4%
Bartholomew	C	686	105	15%	637	15%	44	16%	5	21%	0.6	0%
Benton	A	661	341	52%	0	0%	341	100%	320	0%	0.0	0%
Blackford	A	321	37	12%	104	12%	193	13%	24	0%	0.0	0%
Boone	C	735	47	6%	422	11%	3	58%	309	0%	0.1	0%
Brown	A	390	14	4%	249	6%	0	0%	141	0%	0.0	0%
Carroll	A	762	65	9%	105	19%	477	9%	180	0%	0.0	0%
Cass	B	864	65	8%	110	13%	656	8%	96	0%	2.3	0%
Clark	C	513	36	7%	508	7%	0	0%	3	0%	1.3	0%
Clay	A	686	38	6%	307	9%	108	6%	268	1%	0.0	0%
Clinton	B	778	33	4%	85	9%	445	6%	247	0%	0.5	0%
Crawford	A	462	9	2%	217	3%	59	0%	184	1%	0.0	0%
Daviess	B	779	100	13%	279	29%	60	18%	380	0%	18.5	49%
Dearborn	C	503	44	9%	468	9%	4	0%	31	0%	0.1	0%
Decatur	A	636	636	100%	559	100%	0	0%	76	100%	0.5	93%
DeKalb	B	704	100	14%	128	11%	296	15%	278	15%	2.3	44%
Delaware	C	802	62	8%	792	8%	0	0%	0	0%	9.3	1%
Dubois	B	662	79	12%	384	16%	150	13%	111	0%	0.0	0%
Elkhart	C	1,127	128	11%	1,059	12%	0	0%	53	0%	15.1	0%
Fayette	A	406	9	2%	96	3%	273	2%	37	0%	0.0	0%
Floyd	C	367	25	7%	367	7%	0	0%	0	0%	0.0	0%
Fountain	A	636	35	6%	254	9%	49	27%	332	0%	0.0	0%
Franklin	A	633	69	11%	600	11%	0	0%	32	8%	1.2	0%
Fulton	A	778	62	8%	226	9%	483	8%	69	1%	0.5	0%
Gibson	B	914	88	10%	214	17%	333	15%	347	0%	0.0	0%
Grant	C	798	0	0%	136	0%	662	0%	0	0%	0.0	0%
Greene	B	916	24	3%	544	4%	0	0%	372	0%	0.1	0%
Hamilton	C	556	145	26%	339	19%	214	38%	0	0%	0.0	0%
Hancock	C	653	37	6%	362	4%	198	9%	19	16%	0.3	0%
Harrison	B	856	53	6%	815	6%	15	3%	25	4%	0.0	0%
Hendricks	C	753	67	9%	605	11%	145	1%	0	0%	3.1	0%
Henry	B	792	58	7%	458	7%	284	9%	50	6%	0.9	0%
Howard	C	584	24	4%	582	4%	0	0%	0	0%	0.8	0%
Huntington	B	611	0	0%	607	0%	0	0%	3	0%	1.4	0%
Jackson	B	723	710	98%	625	98%	0	0%	98	101%	0.0	0%
Jasper	B	933	69	7%	192	7%	488	11%	253	0%	0.0	0%
Jay	A	717	75	11%	95	2%	384	16%	238	5%	0.3	0%
Jefferson	B	530	76	14%	315	23%	70	4%	145	0%	0.0	0%
Jennings	A	684	35	5%	529	6%	65	8%	90	0%	0.0	0%

Table 10. Pavement treated by type—2022 (cont.)

County	Pop. category	Total			Asphalt		Chip seal		Gravel		Concrete	
		Rated miles	Total miles treated	% treated	Rated miles	% treated	Rated miles	% treated	Rated miles	% treated	Rated miles	% treated
Johnson	C	586	47	8%	264	12%	292	5%	0	0%	21.7	0%
Knox	B	855	856	100%	607	100%	0	0%	242	100%	6.6	0%
Kosciusko	C	1,168	137	12%	1,065	13%	0	0%	102	3%	1.2	0%
LaGrange	B	785	53	7%	179	13%	415	7%	191	0%	0.0	0%
Lake	C	524	0	0%	440	0%	67	0%	17	0%	0.0	0%
La Porte	C	1072	80	7%	1,013	8%	0	0%	48	0%	0.1	0%
Lawrence	B	625	0	0%	572	0%	4	0%	49	0%	0.3	0%
Madison	C	870	53	6%	494	2%	307	14%	0	0%	68.7	0%
Marshall	B	822	0	0%	174	0%	646	0%	1	0%	0.6	0%
Martin	A	361	0	0%	148	0%	18	0%	196	0%	0.0	0%
Miami	B	780	27	4%	163	5%	506	4%	0	0%	0.0	0%
Monroe	C	708	447	63%	656	67%	0	0%	52	15%	0.0	0%
Montgomery	B	817	31	4%	129	0%	390	7%	299	1%	0.0	0%
Morgan	C	676	24	4%	519	3%	147	7%	10	0%	0.0	0%
Newton	A	650	38	6%	170	2%	313	11%	0	0%	0.0	0%
Noble	B	813	122	15%	234	27%	504	12%	75	0%	0.4	0%
Ohio	A	143	2	1%	137	1%	0	0%	6	0%	0.0	0%
Orange	A	589	29	5%	478	5%	30	16%	81	0%	0.0	0%
Owen	A	630	425	67%	362	74%	39	67%	229	57%	0.0	0%
Parke	A	877	0	0%	413	0%	61	0%	393	0%	0.0	0%
Perry	A	492	21	4%	206	7%	53	11%	233	0%	0.0	0%
Pike	A	543	14	3%	236	6%	12	0%	295	0%	0.2	0%
Porter	C	782	48	6%	473	7%	283	6%	5	0%	0.1	0%
Posey	A	693	32	5%	362	7%	118	6%	0	0%	0.5	0%
Pulaski	A	883	24	3%	91	4%	465	4%	328	0%	0.0	0%
Putnam	B	752	68	9%	157	10%	356	15%	235	1%	2.6	0%
Randolph	A	850	48	6%	837	6%	0	0%	13	4%	0.0	0%
Ripley	A	715	8	1%	674	1%	0	0%	41	0%	0.0	0%
Rush	A	747	67	9%	728	9%	2	0%	18	0%	0.0	0%
St. Joseph	C	1,040	70	7%	807	7%	171	6%	49	0%	12.3	0%
Scott	A	302	21	7%	297	7%	0	0%	4	0%	0.0	0%
Shelby	B	818	39	5%	783	5%	34	3%	0	0%	0.7	0%
Spencer	A	740	35	5%	338	10%	89	1%	313	0%	0.0	0%
Starke	A	664	0	0%	541	0%	33	0%	89	0%	0.1	0%
Steuben	B	616	6	1%	394	2%	37	0%	185	0%	0.0	0%
Sullivan	A	867	1	0%	293	0%	75	0%	496	0%	0.5	0%
Switzerland	A	379	39	10%	320	12%	0	0%	59	0%	0.0	0%
Tippecanoe	C	844	37	4%	604	6%	34	9%	166	0%	37.8	0%
Tipton	A	554	79	14%	126	26%	423	11%	5	0%	1.2	0%
Union	A	264	33	12%	112	4%	114	23%	38	5%	0.0	0%

Table 10. Pavement treated by type—2022 (cont.)

County	Pop. category	Total			Asphalt		Chip seal		Gravel		Concrete	
		Rated miles	Total miles treated	% treated	Rated miles	% treated	Rated miles	% treated	Rated miles	% treated	Rated miles	% treated
Vanderburgh	C	520	0	0%	475	0%	0	0%	0	0%	45.4	0%
Vermillion	A	395	86	22%	262	32%	0	0%	133	1%	0.0	0%
Vigo	C	828	74	9%	406	17%	289	1%	121	0%	12.2	1%
Wabash	B	722	90	12%	27	22%	674	12%	19	0%	2.2	0%
Warren	A	512	13	3%	38	29%	139	1%	336	0%	0.0	0%
Warrick	C	791	39	5%	566	7%	32	2%	158	0%	35.7	1%
Washington	A	804	24	3%	719	3%	0	0%	84	0%	0.0	0%
Wayne	C	685	466	68%	681	68%	0	0%	4	77%	0.0	0%
Wells	A	709	66	9%	17	12%	483	13%	209	0%	0.0	0%
White	A	923	9	1%	490	2%	142	0%	292	0%	0.0	0%
Whitley	B	586	50	9%	75	8%	418	11%	75	0%	1.0	0%
91-county total	**N/A**	**63,278**	**7,808**	**12%**	**35,438**	**15%**	**15,797**	**11%**	**10,967**	**6%**	**342**	**5%**
Category A total	**N/A**	**23,060**	**2,538**	**11%**	**11,734**	**13%**	**5,039**	**15%**	**5,884**	**4%**	**5**	**10%**
Category B total	**N/A**	**19,722**	**2,888**	**15%**	**8,359**	**22%**	**7,241**	**9%**	**3,869**	**11%**	**40**	**41%**
Category C total	**N/A**	**20,498**	**2,381**	**12%**	**15,345**	**13%**	**3,517**	**8%**	**1,214**	**1%**	**297**	**1%**

Sources: 2023 asset management plans; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Current-year asset management plans include treatment data for the previous two years. Previous reports identified the year of treatment as the plan year.
3. Total rated mileage includes additional types of pavement—brick, composite, and unimproved—that are not reported here.

Table 11. Summary of pavement treated by type—2020–22

	2022	2021	2020	Difference 2020–22	% change
91-county total	7,808	7,610	8,172	-385	-5%
Category A total	2,538	3,077	3,259	-745	-23%
Category B total	2,888	2,168	1,709	1,183	+69%
Category C total	2,381	2,365	3,204	-823	-26%

Source: 2021–23 asset management plans; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Current-year asset management plans include treatment data for the previous two years. Previous reports identified the year of treatment as the plan year.

Table 12. Miles of pavement treated—2021 and 2022

Treatment type	Miles treated
Various overlays including milling	1,181
Various chip seals including fog and microsurfacing	2,637
Crack sealing including patching	924
Strip seal and patch	406
Patching and pothole filling	2,127
Other treatments	533
Total	7,808

Sources: 2023 asset management plans.

Note: Current-year asset management plans include treatment data for the previous two years. Previous reports identified the year of treatment as the plan year.

BRIDGES

This section is a discussion of local bridge data, including the inventory of bridges and culverts, condition, and bridge-specific spending as a proxy for treatment. The 2020–22 annual operational reports and the 2021–23 National Bridge Inventory (NBI) databases (downloaded in October 2021, December 2022, and October 2023) are the principal data sources used for the analysis.

Bridge inventory

Table 13 shows the inventory of bridges and culverts by county for 2021–23. In 2023, the study counties reported 11,138 bridges and 1,444 culverts with an average of 122 bridges and 16 culverts per county. Counties reported 14 fewer bridges and 26 more culverts in 2023 than in 2021.

Fifty-five counties show differences in their bridge inventories and 32 counties in their culvert inventories between 2021 and 2023. While it is possible some of these changes reflect either the addition or retirement of an asset, it also may reflect an incomplete inventory in one or more years. A complete and stable inventory is important to assessing and managing these assets over time.

Table 13. Inventory of bridges and culverts—2021–23

County	Population category	Bridges				Culverts			
		2023	2022	2021	Change 2021–23	2023	2022	2021	Change 2021–23
Adams	B	154	153	154	0	9	9	9	0
Allen	C	347	346	344	3	56	53	51	5
Bartholomew	C	175	176	177	-2	24	24	24	0
Benton	A	104	104	103	1	13	13	13	0
Blackford	A	40	41	41	-1	18	18	18	0
Boone	C	159	158	159	0	36	32	30	6
Brown	A	78	78	78	0	6	6	5	1
Carroll	A	104	105	105	-1	9	9	9	0
Cass	B	56	57	57	-1	69	73	73	-4
Clark	C	128	128	129	-1	19	19	18	1
Clay	A	128	126	128	0	6	6	5	1
Clinton	B	127	126	126	1	34	35	35	-1
Crawford	A	74	74	75	-1	2	2	2	0
Daviess	B	113	114	114	-1	12	11	11	1

Table 13. Inventory of bridges and culverts—2021–23 (cont.)

County	Population category	Bridges				Culverts			
		2023	2022	2021	Change 2021–23	2023	2022	2021	Change 2021–23
Dearborn	C	81	82	82	-1	18	18	18	0
Decatur	A	141	142	141	0	21	21	21	0
DeKalb	B	102	101	100	2	1	1	1	0
Delaware	C	175	175	175	0	21	20	20	1
Dubois	B	157	157	157	0	9	9	9	0
Elkhart	C	152	152	152	0	16	16	16	0
Fayette	A	67	68	68	-1	19	19	19	0
Floyd	C	77	78	79	-2	10	9	9	1
Fountain	A	137	137	138	-1	3	3	3	0
Franklin	A	91	91	89	2	31	31	31	0
Fulton	A	43	43	43	0	18	18	18	0
Gibson	B	227	227	227	0	27	27	27	0
Grant	C	180	180	180	0	12	12	9	3
Greene	B	157	157	157	0	1	1	1	0
Hamilton	C	252	252	251	1	87	87	82	5
Hancock	C	153	153	153	0	5	5	5	0
Harrison	B	80	84	84	-4	6	4	3	3
Hendricks	C	195	195	195	0	41	62	60	-19
Henry	B	99	99	99	0	45	45	45	0
Howard	C	132	132	132	0	7	7	7	0
Huntington	B	116	115	114	2	2	2	1	1
Jackson	B	153	154	152	1	31	30	31	0
Jasper	B	124	124	124	0	2	2	2	0
Jay	A	157	157	157	0	4	4	4	0
Jefferson	B	91	89	88	3	15	14	14	1
Jennings	A	107	107	105	2	26	26	26	0
Johnson	C	133	133	132	1	32	30	30	2
Knox	B	192	190	185	7	6	5	5	1
Kosciusko	C	85	85	85	0	25	25	25	0
LaGrange	B	55	55	55	0	3	3	3	0
Lake	C	163	163	164	-1	23	23	21	2
La Porte	C	96	94	94	2	24	24	24	0
Lawrence	B	106	108	110	-4	17	17	16	1
Madison	C	209	209	209	0	9	9	9	0
Marshall	B	116	115	116	0	1	1	1	0
Martin	A	42	42	42	0	2	2	2	0
Miami	B	113	114	115	-2	11	11	11	0
Monroe	C	111	111	110	1	46	46	46	0
Montgomery	B	143	143	143	0	28	28	28	0
Morgan	C	126	128	124	2	27	27	21	6
Newton	A	119	119	119	0	9	9	9	0

Table 13. Inventory of bridges and culverts—2021–23 (cont.)

County	Population category	Bridges				Culverts			
		2023	2022	2021	Change 2021–23	2023	2022	2021	Change 2021–23
Noble	B	57	57	57	0	5	5	5	0
Ohio	A	29	29	29	0	4	4	4	0
Orange	A	97	97	97	0	11	11	11	0
Owen	A	94	97	98	-4	11	9	9	2
Parke	A	155	156	157	-2	12	12	11	1
Perry	A	93	93	93	0	6	6	6	0
Pike	A	107	108	108	-1	1	0	0	1
Porter	C	106	107	107	-1	25	25	25	0
Posey	A	127	129	129	-2	16	15	15	1
Pulaski	A	66	68	68	-2	6	6	6	0
Putnam	B	203	205	205	-2	17	17	17	0
Randolph	A	206	208	208	-2	8	8	8	0
Ripley	A	115	117	117	-2	18	17	17	1
Rush	A	189	191	192	-3	3	3	3	0
St. Joseph	C	86	87	87	-1	15	15	15	0
Scott	A	54	55	55	-1	18	18	18	0
Shelby	B	185	185	185	0	6	8	8	-2
Spencer	A	148	153	153	-5	8	8	8	0
Starke	A	48	50	50	-2	7	7	7	0
Steuben	B	44	44	44	0	5	5	5	0
Sullivan	A	158	158	155	3	4	4	4	0
Switzerland	A	37	36	37	0	4	4	4	0
Tippecanoe	C	181	181	181	0	35	33	33	2
Tipton	A	78	77	77	1	10	9	9	1
Union	A	38	38	38	0	6	6	6	0
Vanderburgh	C	143	143	142	1	12	13	12	0
Vermillion	A	73	74	74	-1	1	1	1	0
Vigo	C	175	176	170	5	20	20	20	0
Wabash	B	151	153	153	-2	5	5	5	0
Warren	A	84	84	83	1	13	13	13	0
Warrick	C	100	99	101	-1	12	12	11	1
Washington	A	121	123	122	-1	2	2	2	0
Wayne	C	191	189	190	1	37	37	36	1
Wells	A	120	120	118	2	14	14	15	-1
White	A	152	152	152	0	11	11	11	0
Whitley	B	85	85	85	0	2	2	2	0
91-county total	**N/A**	**11,138**	**11,170**	**11,152**	**-14**	**1,444**	**1,448**	**1,418**	**26**
Category A total	**N/A**	**3,890**	**3,847**	**3,842**	**48**	**376**	**375**	**373**	**3**
Category B total	**N/A**	**3,169**	**3,211**	**3,206**	**-37**	**371**	**370**	**368**	**3**
Category C total	**N/A**	**4,079**	**4,112**	**4,104**	**-25**	**697**	**703**	**677**	**20**

Table 13. Inventory of bridges and culverts—2021–23 (cont.)

County	Population category	Bridges				Culverts			
		2023	2022	2021	Change 2021–23	2023	2022	2021	Change 2021–23
91-county average	N/A	122	123	123	N/A	16	16	16	N/A
Category A average	N/A	102	101	101	N/A	10	10	10	N/A
Category B average	N/A	122	124	123	N/A	14	14	14	N/A
Category C average	N/A	151	152	152	N/A	26	26	25	N/A

Sources: 2021–23 National Bridge Inventory; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. The inventory of bridges shown here reflects the bridges for which there were available deck ratings. The inventory excludes bridges with missing deck ratings as well as bridges classified as earth-filled arch deck bridges that have no decks. This excludes about 100 facilities across the state.

Bridge and culvert conditions

Table 14 shows the current condition ratings for bridge decks, superstructures, and substructures by county. Table 15 compares bridge ratings for 2021–23. Generally, bridge conditions have improved. Across the study counties, poor bridge decks, superstructures, and substructures decreased by 5, 24, and 22, respectively, during the period. Also, the number of failed and nearly failed bridge components either was the same or decreased.

Tables 16 and 17 provide additional details about the location of bridges in 2023 that failed or were in imminent failure by county. Twenty-three bridges had components rated as failed, and 12 bridges were in imminent failure (Figure 9). Gibson County had four failed bridges, Randolph County had three, and Owen and Putnam counties each had two. The 12 remaining counties had one failed bridge each. Putnam and Shelby counties had two bridges each rated for imminent failure, while eight other counties each had one bridge that was near failure.

There were fewer bridges with one or more failed components in 2023 than in 2021 and 2022. The number of bridges in imminent failure was the same as in 2021 and more than in 2022.

Table 14. Bridge conditions by component type—2023

County	Population category	Decks						Superstructures					Substructures				
		Total	Poor	Fair	Good	Failed	Imminent failure	Poor	Fair	Good	Failed	Imminent failure	Poor	Fair	Good	Failed	Imminent failure
Adams	B	154	0	71	83	0	0	1	69	84	0	0	1	28	125	0	0
Allen	C	347	25	206	116	0	0	34	185	128	0	0	8	177	162	0	0
Bartholomew	C	175	3	50	122	0	0	7	55	115	0	0	5	57	115	0	0
Benton	A	104	3	38	63	0	0	3	35	66	0	0	1	15	88	0	0
Blackford	A	40	1	20	19	0	0	1	22	17	0	0	2	18	20	0	0
Boone	C	159	3	78	78	0	0	5	78	77	0	0	8	63	88	0	0
Brown	A	78	4	36	37	1	0	1	10	47	0	0	8	47	22	1	0
Carroll	A	104	0	39	65	0	0	4	43	59	0	0	0	43	63	0	0
Cass	B	56	0	12	44	0	0	0	11	45	0	0	0	12	44	0	0
Clark	C	128	1	70	57	0	0	2	66	60	0	0	2	56	70	0	0
Clay	A	128	5	77	46	0	1	10	56	63	0	1	14	52	63	0	0
Clinton	B	127	2	64	61	0	0	5	64	58	0	0	2	70	55	0	0
Crawford	A	74	4	37	33	0	0	11	36	29	0	0	13	35	28	0	0
Daviess	B	113	0	48	65	0	0	0	54	59	0	0	0	54	59	0	0
Dearborn	C	81	5	38	38	0	0	9	32	40	0	0	10	43	28	0	0
Decatur	A	141	2	69	70	0	0	8	82	71	0	0	14	75	72	0	0
DeKalb	B	102	0	62	40	0	0	0	54	48	0	0	1	39	62	0	0
Delaware	C	175	4	89	81	1	0	5	81	88	1	0	6	85	84	0	0
Dubois	B	157	2	43	112	0	0	4	57	96	0	0	3	46	108	0	0
Elkhart	C	152	13	80	59	0	0	15	84	57	0	0	1	95	60	0	0
Fayette	A	67	3	35	29	0	0	3	33	31	0	0	6	20	41	0	0
Floyd	C	77	4	30	43	0	0	1	40	38	0	0	3	32	44	0	0
Fountain	A	137	5	93	39	0	0	14	82	41	0	0	3	70	64	0	0
Franklin	A	91	3	40	48	0	0	3	47	41	0	0	7	39	45	0	0
Fulton	A	43	2	26	15	0	0	2	22	19	0	0	0	17	26	0	0
Gibson	B	227	4	131	92	0	0	1	131	91	4	0	11	143	72	1	0
Grant	C	180	1	93	86	0	0	1	95	84	0	0	1	75	104	0	0
Greene	B	157	14	77	66	0	0	19	72	66	0	0	5	69	83	0	0
Hamilton	C	252	5	64	183	0	0	6	61	187	0	0	3	52	199	0	0
Hancock	C	153	0	41	112	0	0	1	38	114	0	0	0	45	108	0	0
Harrison	B	80	2	32	46	0	0	3	23	54	0	0	0	22	58	0	0
Hendricks	C	195	2	100	93	0	0	5	111	100	0	0	2	109	105	0	0
Henry	B	99	1	57	41	0	0	2	52	45	0	0	2	39	58	0	0
Howard	C	132	1	68	63	0	0	5	79	48	0	0	4	72	56	0	0
Huntington	B	116	1	63	52	0	0	1	63	52	0	0	4	56	56	0	0
Jackson	B	153	2	74	77	0	0	4	70	79	0	0	1	58	94	0	0
Jasper	B	124	0	76	48	0	0	0	65	59	0	0	0	54	70	0	0
Jay	A	157	3	56	98	0	0	4	69	84	0	0	2	53	102	0	0
Jefferson	B	91	0	38	53	0	0	0	36	55	0	0	1	28	62	0	0
Jennings	A	107	4	54	47	1	1	5	48	53	1	0	8	37	61	1	0
Johnson	C	133	18	64	51	0	0	18	63	52	0	0	2	74	57	0	0

Table 14. Bridge conditions by component type—2023 (cont.)

County	Population category	Decks						Superstructures					Substructures				
		Total	Poor	Fair	Good	Failed	Imminent failure	Poor	Fair	Good	Failed	Imminent failure	Poor	Fair	Good	Failed	Imminent failure
Knox	B	192	2	90	100	0	0	4	94	94	0	0	2	87	103	0	0
Kosciusko	C	85	4	47	34	0	0	4	34	47	0	0	1	44	40	0	0
LaGrange	B	55	0	20	35	0	0	0	19	36	0	0	0	21	34	0	0
Lake	C	163	12	55	95	1	0	15	40	107	1	0	11	51	101	0	0
La Porte	C	96	8	47	41	0	0	7	43	46	0	0	4	58	34	0	0
Lawrence	B	106	12	53	40	1	0	13	51	42	0	1	4	47	55	0	0
Madison	C	209	1	82	125	1	0	1	87	122	1	0	3	70	138	0	0
Marshall	B	116	5	46	65	0	0	6	46	64	0	0	7	46	63	0	0
Martin	A	42	0	16	26	0	0	6	13	23	0	0	4	22	16	0	0
Miami	B	113	8	53	52	0	0	9	51	53	0	0	9	60	44	0	0
Monroe	C	111	4	36	71	0	0	4	41	67	0	0	2	34	76	0	0
Montgomery	B	143	2	63	78	0	0	0	53	91	0	0	0	27	117	0	0
Morgan	C	126	3	53	70	0	0	5	56	65	0	0	5	50	71	0	0
Newton	A	119	2	57	60	0	0	2	65	52	0	0	1	50	68	0	0
Noble	B	57	1	30	26	0	0	4	30	23	0	0	7	26	24	0	0
Ohio	A	29	0	8	21	0	0	0	9	20	0	0	0	11	18	0	0
Orange	A	97	4	41	52	0	0	11	40	46	0	0	7	44	46	0	0
Owen	A	94	6	34	54	0	0	4	42	50	2	0	7	46	45	0	0
Parke	A	155	8	111	36	0	0	17	104	36	0	1	19	83	55	0	0
Perry	A	93	0	50	43	0	0	1	52	40	0	0	1	51	41	0	0
Pike	A	107	9	33	65	0	0	14	38	55	0	0	2	49	56	0	0
Porter	C	106	7	61	38	0	0	7	61	38	0	0	9	58	39	0	0
Posey	A	127	2	56	68	1	0	5	51	70	1	0	5	42	79	1	0
Pulaski	A	66	1	43	22	0	0	2	43	21	0	0	1	37	28	0	0
Putnam	B	203	24	106	71	2	0	31	98	72	2	1	33	88	80	2	1
Randolph	A	206	10	86	107	3	0	12	87	104	3	1	12	72	121	1	0
Ripley	A	115	1	55	58	1	0	1	59	54	1	0	0	57	57	1	0
Rush	A	189	2	127	59	1	0	2	127	59	1	0	4	119	65	1	0
St. Joseph	C	86	7	43	36	0	0	8	42	36	0	0	1	49	36	0	1
Scott	A	54	3	23	28	0	0	2	23	29	0	0	3	24	27	0	0
Shelby	B	185	9	96	80	0	0	10	95	79	1	0	13	77	95	0	0
Spencer	A	148	0	52	96	0	0	1	48	105	0	2	1	56	97	0	0
Starke	A	48	0	20	28	0	0	0	20	28	0	0	3	13	32	0	0
Steuben	B	44	0	15	29	0	0	0	20	24	0	0	1	12	31	0	0
Sullivan	A	158	3	87	67	1	0	5	102	63	1	0	6	103	61	1	0
Switzerland	A	37	1	8	28	0	0	1	17	19	0	0	2	13	22	0	0
Tippecanoe	C	181	10	51	120	0	0	10	52	119	0	0	2	22	157	0	0
Tipton	A	78	0	33	45	0	0	0	30	48	0	0	1	22	55	0	0
Union	A	38	3	20	15	0	0	1	18	19	0	0	1	16	21	0	0
Vanderburgh	C	143	4	50	89	0	0	5	56	85	0	0	6	57	83	0	0
Vermillion	A	73	4	36	33	0	1	4	39	31	0	0	5	37	32	0	0

Table 14. Bridge conditions by component type—2023 (cont.)

County	Population category	Decks						Superstructures					Substructures				
		Total	Poor	Fair	Good	Failed	Imminent failure	Poor	Fair	Good	Failed	Imminent failure	Poor	Fair	Good	Failed	Imminent failure
Vigo	C	175	3	87	85	0	0	4	83	88	0	0	7	87	81	0	0
Wabash	B	151	4	94	53	0	0	6	97	48	0	1	6	82	63	0	0
Warren	A	84	1	46	37	0	0	3	30	51	0	0	6	31	47	0	0
Warrick	C	100	1	39	59	1	0	2	45	53	1	0	1	36	63	1	0
Washington	A	121	0	43	78	0	0	2	56	72	0	0	1	33	96	0	0
Wayne	C	191	5	84	102	0	0	6	80	109	0	0	2	48	145	0	0
Wells	A	120	1	55	64	0	0	1	59	60	0	0	3	53	64	0	0
White	A	152	7	78	67	0	0	7	80	65	0	0	2	53	97	0	0
Whitley	B	85	0	41	44	0	0	0	27	58	0	0	0	32	53	0	0
91-county total	**N/A**	**11,138**	**356**	**5,199**	**5,566**	**16**	**3**	**488**	**5,127**	**5,586**	**22**	**8**	**397**	**4,680**	**6,153**	**11**	**2**
Category A total	**N/A**	**3,821**	**107**	**1,838**	**1,866**	**9**	**3**	**173**	**1,837**	**1,841**	**10**	**5**	**175**	**1,658**	**2,041**	**7**	**0**
Category B total	**N/A**	**3,206**	**95**	**1,555**	**1,553**	**3**	**0**	**123**	**1,502**	**1,575**	**7**	**3**	**113**	**1,323**	**1,768**	**3**	**1**
Category C total	**N/A**	**4,111**	**154**	**1,806**	**2,147**	**4**	**0**	**192**	**1,788**	**2,170**	**4**	**0**	**109**	**1,699**	**2,344**	**1**	**1**
91-county %	**N/A**	**N/A**	**3%**	**47%**	**50%**	**<.5%**	**<.5%**	**4%**	**46%**	**50%**	**<.5%**	**<.5%**	**4%**	**42%**	**55%**	**<.5%**	**<.5%**
Category A %	**N/A**	**N/A**	**3%**	**48%**	**49%**	**<.5%**	**<.5%**	**4%**	**48%**	**48%**	**<.5%**	**<.5%**	**5%**	**43%**	**53%**	**<.5%**	**0%**
Category B %	**N/A**	**N/A**	**3%**	**49%**	**48%**	**<.5%**	**0%**	**4%**	**47%**	**49%**	**<.5%**	**<.5%**	**4%**	**41%**	**55%**	**<.5%**	**<.5%**
Category C %	**N/A**	**N/A**	**4%**	**44%**	**52%**	**<.5%**	**0%**	**5%**	**43%**	**52%**	**<.5%**	**0%**	**3%**	**41%**	**56%**	**<.5%**	**<.5%**

Sources: 2023 National Bridge Inventory (October 2023); U.S. Census Bureau.

Note: Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.

Table 15. Comparison of bridge ratings—2021–23

Year	Bridges	Decks					Superstructures					Substructures				
		Poor	Fair	Good	Failed	Imminent failure	Poor	Fair	Good	Failed	Imminent failure	Poor	Fair	Good	Failed	Imminent failure
2023	11,138	365	5,199	5,566	16	3	488	5,127	5,586	22	8	397	4,680	6,153	11	2
2022	11,170	378	5,175	5,617	16	2	536	5,135	5,582	20	5	417	4,662	6,175	11	2
2021	11,152	361	5,231	5,548	16	4	512	5,122	5,584	23	8	419	4,673	6,160	13	4
Difference 2021–23	N/A	-5	-32	18	0	-1	-24	5	2	-1	0	-22	7	-7	-2	-2

Sources: 2021–23 National Bridge Inventory (October 2021, December 2022, October 2023); U.S. Census Bureau.

Note: Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.

Table 16. Failed bridges and components—2023

County	Population category	Decks	Superstructures	Substructures	Bridges
Brown	A	1	1	1	1
Delaware	C	1	1	0	1
Gibson	B	0	4	1	4
Jennings	A	1	1	1	1
Lake	C	1	1	0	1
Lawrence	B	1	0	0	1
Madison	C	1	1	0	1
Owen	A	0	2	0	2
Posey	A	1	1	1	1
Putnam	B	2	2	2	2
Randolph	A	3	3	1	3
Ripley	A	1	1	1	1
Rush	A	1	1	1	1
Shelby	B	0	1	0	1
Sullivan	A	1	1	1	1
Warrick	C	1	1	1	1
Total	**N/A**	**16**	**22**	**11**	**23**

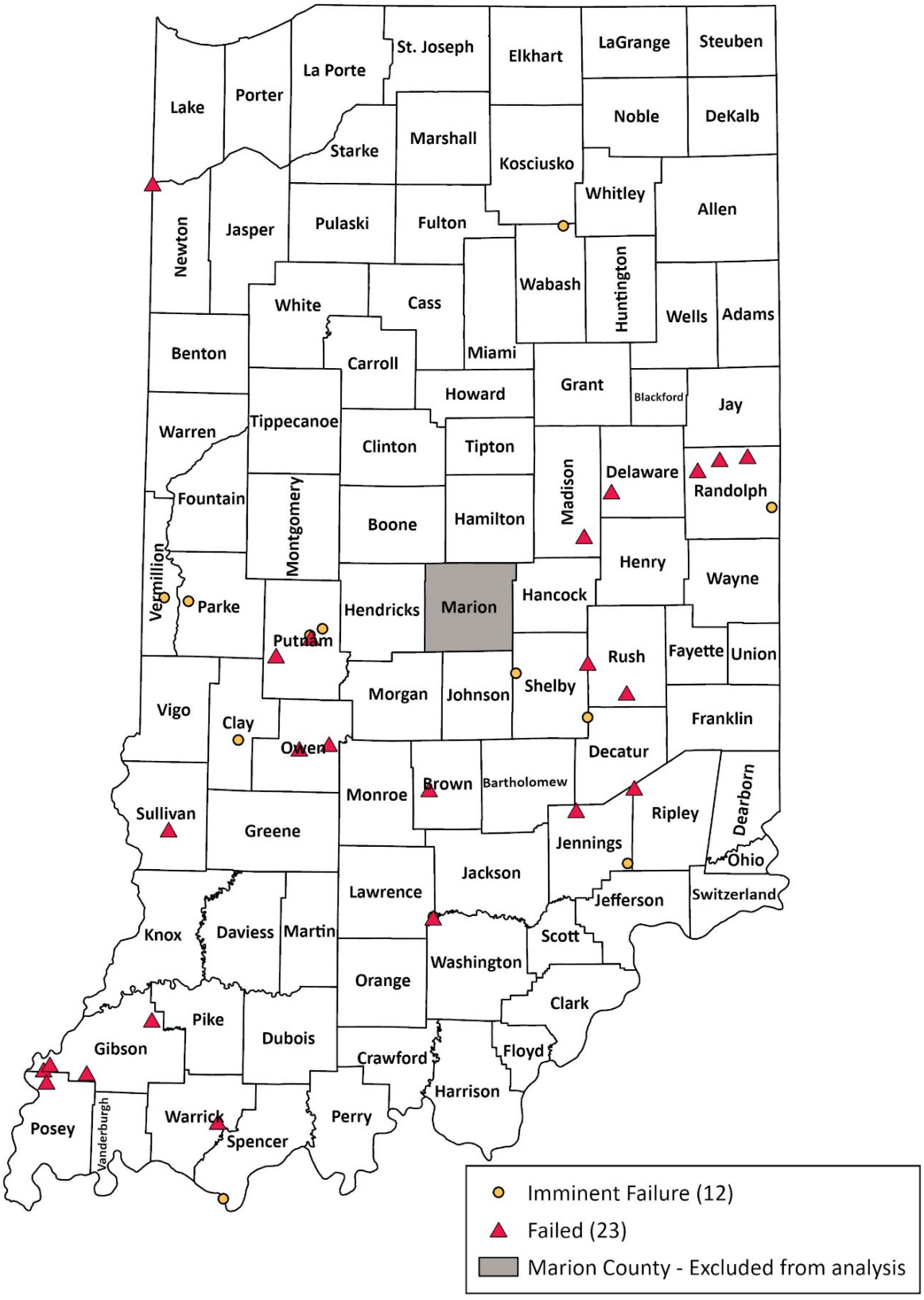
Sources: 2023 National Bridge Inventory (October 2023); U.S. Census Bureau.

Table 17. Bridges and components in imminent failure—2023

County	Population category	Decks	Superstructures	Substructures	Bridges
Clay	A	1	1	0	1
Jennings	A	1	0	0	1
Lawrence	B	0	1	0	1
Parke	A	0	1	0	1
Putnam	B	0	1	1	2
Randolph	A	0	1	0	1
Shelby	B	0	2	0	2
Spencer	A	0	0	1	1
Vermillion	A	1	0	0	1
Wabash	B	0	1	0	1
Total	**N/A**	**3**	**8**	**2**	**12**

Sources: 2023 National Bridge Inventory (October 2023); U.S. Census Bureau.

Figure 9. Bridges in or near failure—2023



Source: 2023 National Bridge Inventory (October 2023).

Table 18 summarizes culvert conditions in 2023 for each of the study counties. Sixty-three culverts were rated poor. Category B counties had the most culverts rated as poor at 24 culverts or 7%. Category A and Category C counties had 21 (6%) and 18 (3%) culverts rated as poor, respectively.

Table 19 is a comparison of culvert conditions between 2021 and 2023. The data indicates generally improving conditions with one additional culvert in poor condition in 2023 than in 2021, 12 fewer in fair condition, and 38 more in good condition. There were no culverts in 2023 in imminent failure among the study counties.

Table 18. Culvert conditions—2023

County	Population category	Culverts	Poor	Fair	Good	Imminent failure
Adams	B	9	0	6	3	0
Allen	C	56	2	34	20	0
Bartholomew	C	24	0	7	17	0
Benton	A	13	0	8	5	0
Blackford	A	18	1	15	2	0
Boone	C	36	2	13	21	0
Brown	A	6	0	4	2	0
Carroll	A	9	0	4	5	0
Cass	B	69	3	50	16	0
Clark	C	19	0	10	9	0
Clay	A	6	0	1	5	0
Clinton	B	34	6	19	9	0
Crawford	A	2	0	1	1	0
Daviess	B	12	0	6	6	0
Dearborn	C	18	3	7	8	0
Decatur	A	21	0	10	11	0
DeKalb	B	1	0	1	0	0
Delaware	C	21	1	8	12	0
Dubois	B	9	1	5	3	0
Elkhart	C	16	0	9	7	0
Fayette	A	19	3	12	4	0
Floyd	C	10	0	1	9	0
Fountain	A	3	0	2	1	0
Franklin	A	31	5	14	12	0
Fulton	A	18	1	16	1	0
Gibson	B	27	0	6	21	0
Grant	C	12	0	8	4	0
Greene	B	1	0	0	1	0
Hamilton	C	87	0	18	69	0
Hancock	C	5	0	2	3	0
Harrison	B	6	0	2	4	0
Hendricks	C	41	0	11	30	0
Henry	B	45	5	30	10	0
Howard	C	7	0	5	2	0
Huntington	B	2	0	1	1	0

Table 18. Culvert conditions—2023 (cont.)

County	Population category	Culverts	Poor	Fair	Good	Imminent failure
Jackson	B	31	1	18	12	0
Jasper	B	2	1	1	0	0
Jay	A	4	0	0	4	0
Jefferson	B	15	0	3	12	0
Jennings	A	26	5	16	5	0
Johnson	C	32	1	15	16	0
Knox	B	6	0	1	5	0
Kosciusko	C	25	4	15	6	0
LaGrange	B	3	0	1	2	0
Lake	C	23	0	2	21	0
La Porte	C	24	0	19	5	0
Lawrence	B	17	1	12	4	0
Madison	C	9	0	7	2	0
Marshall	B	1	0	1	0	0
Martin	A	2	0	1	1	0
Miami	B	11	1	8	2	0
Monroe	C	46	1	14	31	0
Montgomery	B	28	1	9	18	0
Morgan	C	27	1	9	17	0
Newton	A	9	0	7	2	0
Noble	B	5	0	1	4	0
Ohio	A	4	0	3	1	0
Orange	A	11	0	6	5	0
Owen	A	11	0	5	6	0
Parke	A	12	1	2	9	0
Perry	A	6	0	1	5	0
Pike	A	1	0	0	1	0
Porter	C	25	0	8	17	0
Posey	A	16	0	7	9	0
Pulaski	A	6	0	0	6	0
Putnam	B	17	4	4	9	0
Randolph	A	8	0	6	2	0
Ripley	A	18	1	12	5	0
Rush	A	3	0	2	1	0
St. Joseph	C	15	0	2	13	0
Scott	A	18	0	4	14	0
Shelby	B	6	0	4	2	0
Spencer	A	8	0	4	4	0
Starke	A	7	1	4	2	0
Steuben	B	5	0	3	2	0
Sullivan	A	4	0	3	1	0
Switzerland	A	4	1	2	1	0

Table 18. Culvert conditions—2023 (cont.)

County	Population category	Culverts	Poor	Fair	Good	Imminent failure
Tippecanoe	C	35	1	6	28	0
Tipton	A	10	0	6	4	0
Union	A	6	0	6	0	0
Vanderburgh	C	12	0	4	8	0
Vermillion	A	1	0	1	0	0
Vigo	C	20	0	8	12	0
Wabash	B	5	0	3	2	0
Warren	A	13	1	6	6	0
Warrick	C	12	2	4	6	0
Washington	A	2	0	1	1	0
Wayne	C	37	0	15	22	0
Wells	A	14	1	5	8	0
White	A	11	0	5	6	0
Whitley	B	2	0	2	0	0
91-county total	**N/A**	**1,444**	**63**	**660**	**721**	**0**
Category A totals	**N/A**	**381**	**21**	**202**	**158**	**0**
Category B totals	**N/A**	**369**	**24**	**197**	**148**	**0**
Category C totals	**N/A**	**694**	**18**	**261**	**415**	**0**
91-county %	**N/A**	**N/A**	**4%**	**46%**	**50%**	**0%**
Category A %	**N/A**	**N/A**	**6%**	**53%**	**41%**	**0%**
Category B %	**N/A**	**N/A**	**7%**	**53%**	**40%**	**0%**
Category C %	**N/A**	**N/A**	**3%**	**38%**	**60%**	**0%**

Sources: 2023 National Bridge Inventory (October 2023); U.S. Census Bureau.

Note: Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.

Table 19. Comparison of culvert ratings—2021–23

	Culverts	Poor	Fair	Good	Imminent failure
2023	1,444	63	660	721	0
2022	1,448	63	680	704	1
2021	1,418	62	672	683	1
Difference 2021–23	26	1	-12	38	-1

Sources: 2021–23 National Bridge Inventory (October 2021, December 2022, and October 2023).

Bridge treatments

There is no secondary data available specifically documenting construction, reconstruction, and preservation activities for bridges. The treatments listed in the NBI are prospective rather than completed.

The research team has provided bridge-specific spending as a rough proxy measure. This data is summarized in the Spending and Revenue section below. Readers should interpret the analysis of spending from bridge-specific funds below with caution due to the difficulties in identifying all spending on bridges.

This measure is inadequate to judge the amount of treatment completed on bridges, and the research team recommends adding this data to county reporting requirements. Two options to address the data deficit include adding bridge treatments to asset management plans or restoring some of the detail about road and bridge treatment activities that previously was available in Section 3 of the annual operations reports.

SPENDING AND REVENUE

The analysis of road and bridge spending and revenue comes primarily from annual operational reports from 2020–22. The 2023 annual operational reports will not be available until the second half of 2024. The research team also used additional revenue data for Community Crossings Matching Grant awards, Motor Vehicle Highway Account and Local Roads and Streets distributions, and the County Motor Vehicle Excise Surtax and Wheel Tax distributions. Tables showing this data are provided in Appendix B. In a few cases, the research team used county Annual Financial Reports to confirm spending and revenue data.

Revenue and spending data in the current report excludes spending and revenue reported for all other financing sources except for debt repayment—principal and interest. Other financing sources include the purchase of investments that are not truly new revenue or spending. The size of these investments has the potential to give a skewed view of the funding that county highway departments receive and spend.

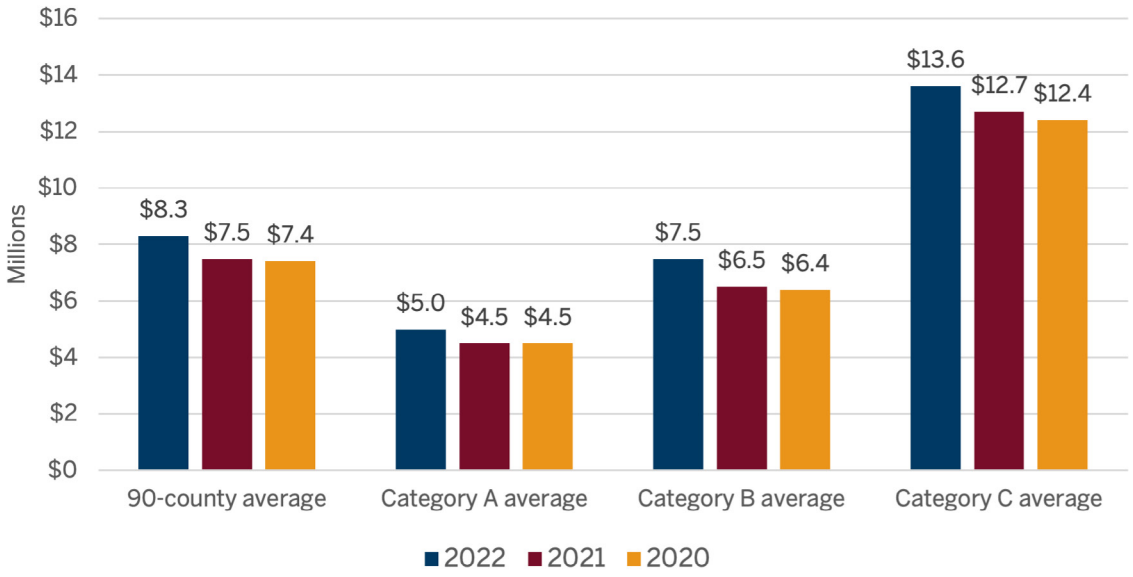
Spending

For all study counties, average spending was similar in 2020 ($7.4 million) and 2021 ($7.5 million) but increased in 2022 ($8.3 million) (Figure 10). Category B and Category C counties spent more year-over-year on average, increasing from $6.4 million to $7.5 million and from $12.4 million and $13.6 million, respectively. Category A counties spent $4.5 million on average in 2020 and 2021, less in than in 2022 ($5 million).

Table 20 shows the total 2022 operational spending and spending by activity for counties. The proportion of spending for each activity and population category is generally similar, varying only slightly during the three-year period (Figures 11–13).

In 2022, the average proportion of operational spending for construction, reconstruction, and preservation increased with population. Category C counties reported spending an average of 63% of all operational spending on construction, reconstruction, and preservation. Category A counties reported 54% and Category B counties reported 62%. Category A counties reported spending a greater percentage on other maintenance activities than Category B and C counties. This may be, in part, due to variation in the activities that are defined as maintenance.

Figure 10. Average county road and bridge operational spending by population category—2020–22



Sources: 2020–22 annual operational reports; U.S. Census Bureau.

Notes:

1. The sum of the spending categories may not equal to totals due to rounding.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
3. Spending excludes other financing uses including debt repayment—principal and interest interfund loan payments, interfund loans, investments purchased, transfers out, and other.

Table 20. Percent of road and bridge spending by activity—2022

County	Population category	Total operational spending	Administration and unallocated	Construction, reconstruction, and preservation	Winter operations	Maintenance and repair
Adams	B	$5,409,123	19%	61%	1%	18%
Allen	C	$29,981,695	25%	44%	3%	28%
Bartholomew	C	$10,002,796	20%	69%	3%	9%
Benton	A	$3,073,462	4%	43%	0%	52%
Blackford	A	$2,162,068	4%	68%	9%	19%
Boone	C	$8,958,533	17%	79%	3%	2%
Brown	A	$6,735,433	3%	81%	4%	12%
Carroll	A	$6,747,381	16%	54%	6%	24%
Cass	B	$8,374,148	16%	64%	4%	16%
Clark	C	$7,757,229	24%	60%	2%	14%
Clay	A	$6,399,363	4%	62%	0%	34%
Clinton	B	$6,588,745	63%	21%	16%	0%
Crawford	A	$3,265,830	0%	0%	0%	0%
Daviess	B	$8,271,485	15%	68%	1%	17%
Dearborn	C	$11,301,838	16%	82%	3%	0%
Decatur	A	$5,291,584	20%	44%	0%	36%
DeKalb	B	$6,586,090	12%	40%	23%	25%
Delaware	C	$9,762,890	7%	60%	9%	24%
Dubois	B	$8,471,083	4%	76%	1%	20%

Table 20. Percent of road and bridge spending by activity—2022 (cont.)

County	Population category	Total operational spending	Administration and unallocated	Construction, reconstruction, and preservation	Winter operations	Maintenance and repair
Elkhart	C	$21,288,745	22%	30%	7%	41%
Fayette	A	$4,063,071	3%	83%	1%	13%
Floyd	C	$4,838,178	2%	23%	0%	76%
Fountain	A	$4,897,60	46%	32%	0%	22%
Franklin	A	$5,341,731	7%	70%	8%	15%
Fulton	A	$4,134,387	6%	64%	2%	29%
Gibson	B	$6,443,705	17%	31%	0%	52%
Grant	C	$7,693,318	27%	71%	1%	0%
Greene	B	$6,444,156	12%	75%	2%	12%
Hamilton	C	$20,310,456	22%	73%	4%	1%
Hancock	C	$10,437,882	20%	78%	2%	1%
Harrison	B	$10,994,437	35%	58%	3%	4%
Hendricks	C	$4,027,911	29%	68%	2%	1%
Henry	B	$7,866,232	2%	75%	2%	21%
Howard	C	$3,825,828	13%	56%	19%	12%
Huntington	B	$7,509,955	3%	57%	2%	38%
Jackson	B	$6,713,718	16%	79%	3%	2%
Jasper	B	$9,050,488	1%	80%	4%	15%
Jay	A	$4,603,891	4%	41%	0%	55%
Jefferson	B	$7,457,455	28%	68%	1%	4%
Jennings	A	$5,575,694	44%	51%	3%	2%
Johnson	C	$12,589,742	11%	79%	2%	7%
Knox	B	$9,117,230	12%	76%	0%	11%
Kosciusko	C	$13,284,912	2%	79%	5%	14%
LaGrange	B	$6,884,796	5%	52%	0%	42%
Lake	C	$20,420,525	19%	57%	6%	18%
La Porte	C	$18,201,128	39%	59%	2%	0%
Lawrence	B	$7,220,422	26%	69%	3%	2%
Madison	C	$9,448,826	16%	68%	1%	14%
Marshall	B	$8,219,273	12%	39%	28%	21%
Martin	A	$2,291,828	34%	25%	28%	13%
Miami	B	$6,424,184	12%	70%	4%	13%
Monroe	C	$23,875,350	9%	75%	1%	15%
Montgomery	B	$9,519,429	27%	70%	0%	2%
Morgan	C	$10,562,457	39%	53%	1%	7%
Newton	A	$3,663,796	3%	47%	16%	34%
Noble	B	$7,742,496	6%	65%	6%	22%
Ohio	A	$1,886,888	6%	84%	10%	0%
Orange	A	$5,180,434	22%	64%	0%	14%
Owen	A	$4,664,192	33%	37%	20%	10%
Parke	A	$5,083,994	10%	45%	12%	33%
Perry	A	$4,606,088	7%	69%	1%	23%

Table 20. Percent of road and bridge spending by activity—2022 (cont.)

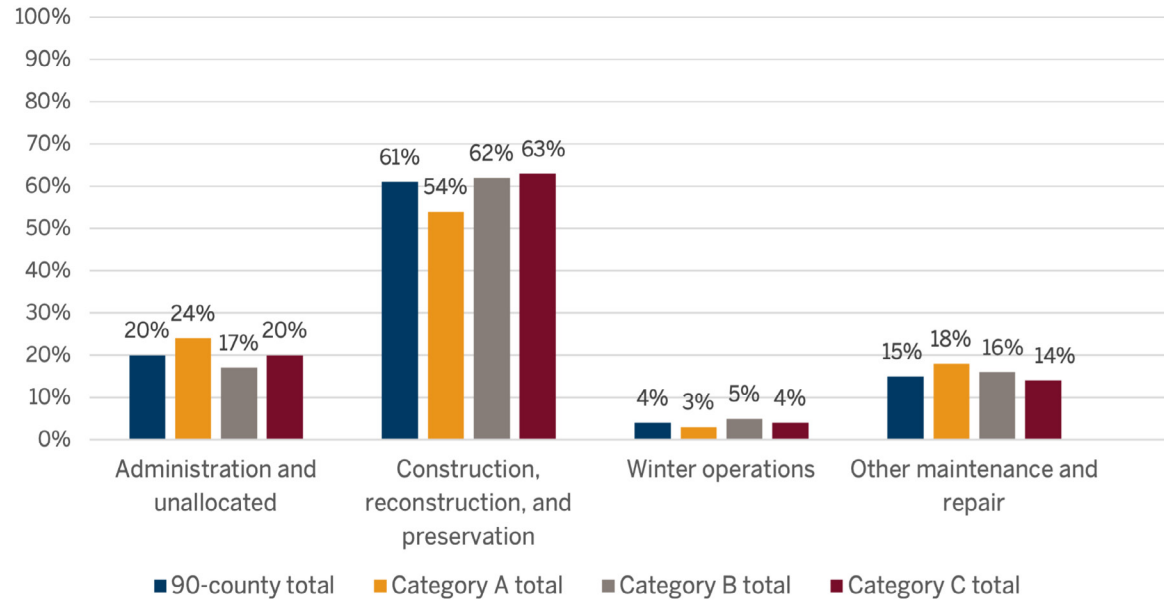
County	Population category	Total operational spending	Administration and unallocated	Construction, reconstruction, and preservation	Winter operations	Maintenance and repair
Pike	A	$4,184,821	37%	62%	0%	0%
Porter	C	$12,036,035	28%	56%	5%	11%
Posey	A	$9,774,803	87%	13%	1%	0%
Pulaski	A	$3,471,147	42%	51%	2%	6%
Putnam	B	$8,083,755	39%	55%	2%	4%
Randolph	A	$4,771,108	7%	65%	1%	27%
Ripley	A	$4,715,275	16%	75%	1%	9%
Rush	A	$5,058,722	24%	75%	0%	1%
St. Joseph	C	$17,765,696	8%	47%	13%	31%
Scott	A	$2,131,224	5%	54%	12%	28%
Shelby	B	$6,573,759	14%	71%	5%	10%
Spencer	A	$9,052,373	12%	81%	1%	5%
Starke	A	$5,260,455	51%	28%	4%	18%
Steuben	B	$5,920,826	5%	39%	7%	48%
Sullivan	A	$8,426,632	57%	43%	0%	0%
Switzerland	A	$3,879,490	22%	61%	2%	14%
Tippecanoe	C	$19,553,603	20%	69%	1%	9%
Tipton	A	$3,564,541	37%	49%	1%	14%
Union	A	$2,378,331	10%	80%	1%	9%
Vanderburgh	C	$20,004,504	26%	69%	1%	4%
Vermillion	A	$3,300,009	54%	27%	0%	19%
Vigo	C	$10,917,546	13%	68%	2%	16%
Wabash	B	$6,148,873	12%	65%	4%	19%
Warren	A	$3,794,567	14%	53%	1%	33%
Warrick	C	$11,215,831	5%	94%	1%	0%
Washington	A	$6,465,150	20%	76%	1%	3%
Wayne	C	$7,858,791	29%	57%	2%	11%
Wells	A	$4,820,999	47%	52%	1%	0%
White	A	$12,047,774	6%	45%	3%	46%
Whitley	B	$5,982,042	34%	53%	5%	8%
90-county average	**N/A**	**$8,227,542**	**20%**	**61%**	**4%**	**15%**
Category A average	**N/A**	**$4,914,898**	**24%**	**54%**	**3%**	**18%**
Category B average	**N/A**	**$7,462,227**	**17%**	**62%**	**5%**	**16%**
Category C average	**N/A**	**$13,626,750**	**20%**	**63%**	**4%**	**14%**

Sources: 2022 annual operational reports; U.S. Census Bureau.

Notes:

1. Percentages may not total to 100% due to rounding.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
3. Crawford County reported total operational spending but not spending by category. For this reason, Crawford County is not included in the county averages by spending category.
4. Spending excludes other financing uses including debt repayment—principal and interest, interfund loan payments, interfund loans, investments purchased, transfers out, and other.

Figure 11. Percent of county road and bridge spending by activity and population category—2022

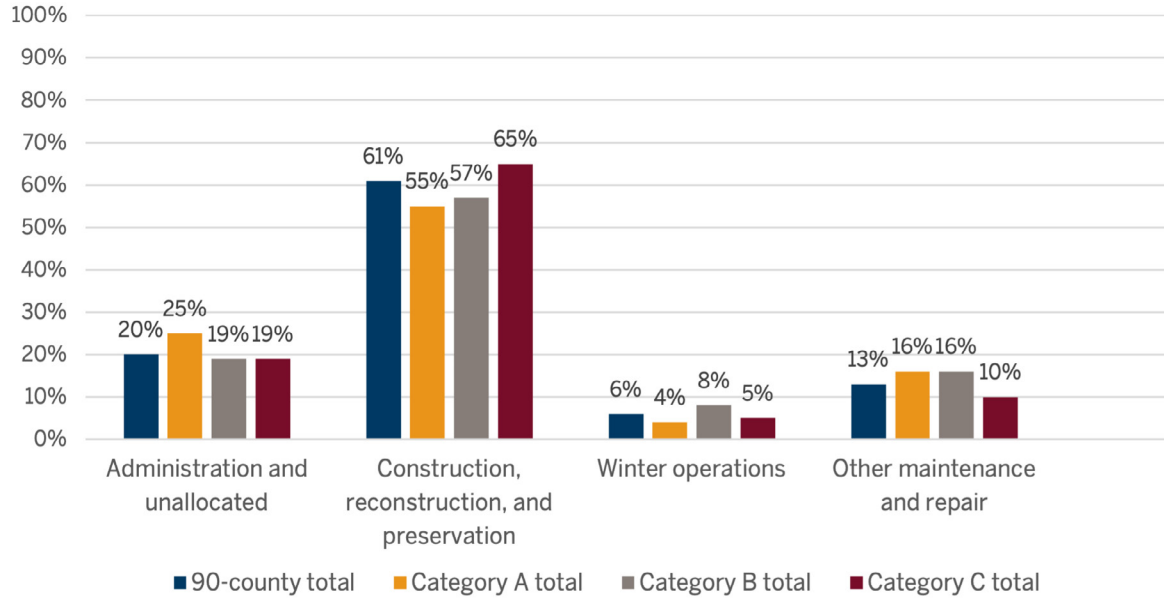


Source: 2022 annual operational reports; U.S. Census Bureau.

Notes:

1. Percentages may not add to 100% due to rounding.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
3. Crawford County did not report detailed spending for 2021 and 2022.
4. Spending excludes other financing uses including debt repayment—principal and interest, interfund loan payments, interfund loans, investments purchased, transfers out, and other.

Figure 12. Percent of county road and bridge spending by activity and population category—2021

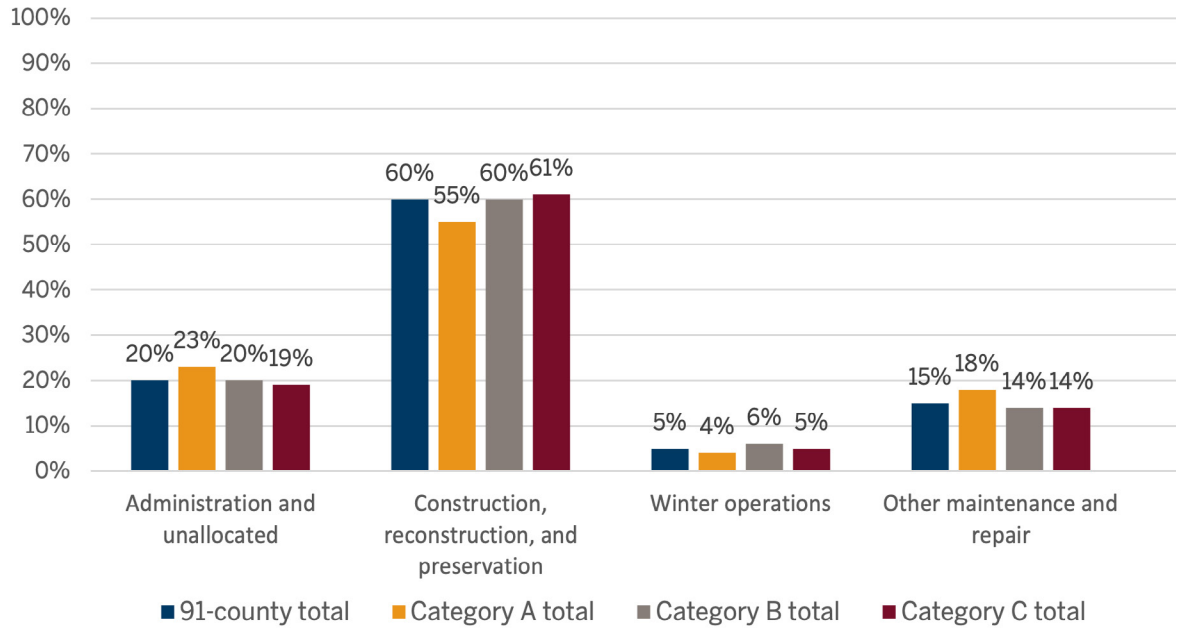


Sources: 2021 annual operational reports; U.S. Census Bureau.

Notes:

1. Percentages may not add to 100% due to rounding.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
3. Crawford County did not report detailed spending for 2021 and 2022.
4. Spending excludes other financing uses including debt repayment—principal and interest, interfund loan payments, interfund loans, investments purchased, transfers out, and other.

Figure 13. Percent of county road and bridge spending by activity and population category—2020



Sources: 2020 annual operational reports; U.S. Census Bureau.

Notes:

1. Percentages may not add to 100% due to rounding.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
3. Spending excludes other financing uses including debt repayment—principal and interest, interfund loan payments, interfund loans, investments purchased, transfers out, and other.

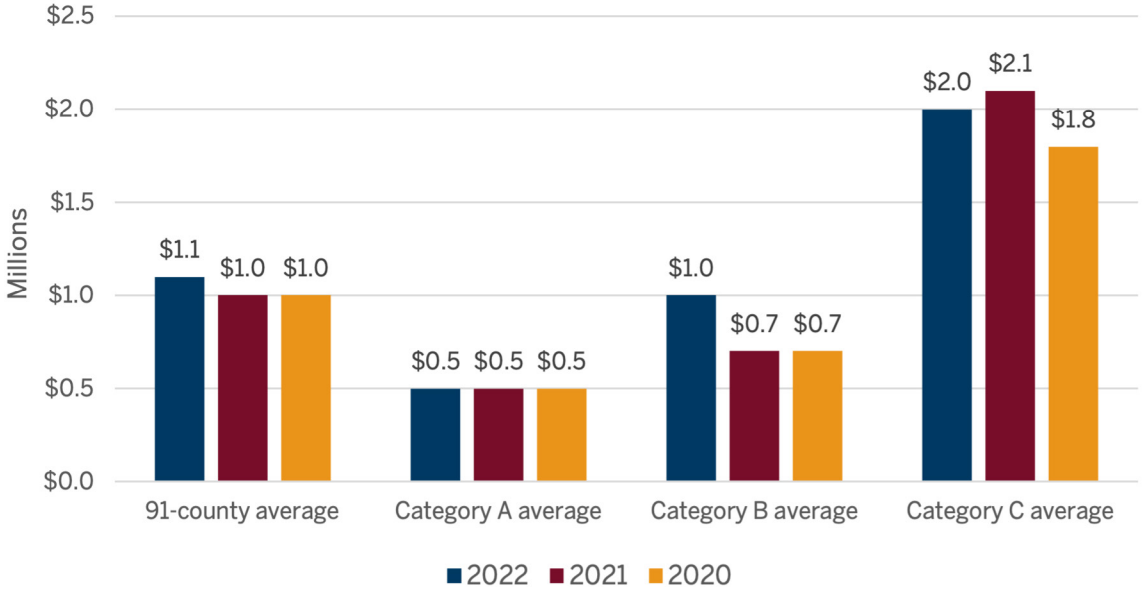
Bridge-specific spending

Table 21 and Figure 14 summarizes county spending from bridge-specific funds in 2022. Counties also may use resources from funds that are not bridge-specific, including MVH and LRS funds. However, annual operational reports do not parse these expenditures for roads and bridges. Community Crossings Matching Grant and other grant spending is included only if the fund name indicated specifically that it was used to address a bridge. Because of these limitations, the data reported here may underestimate bridge spending and activity.

In 2022, the average bridge-specific spending per county was $1.1 million. Category C counties spent the most on average at $2.0 million. Category A counties spent $500,000 on average, and Category B counties spent $1 million on average. From 2020–22, average county spending increased modestly overall and for Category B and Category C counties (Figure 14). Average spending for Category A counties was similar across the three years.

Figures 15–17 show that the percentages of spending for bridges across typical activities varied more by county size and by year than spending overall. This is not surprising since spending on bridges is not as consistent or smooth as overall spending and road spending. Even given the variation, counties spend substantially more from bridge-specific funds on construction, reconstruction, and preservation than on the other categories. Generally, the next most common spending categories were administration and other maintenance and repair.

Figure 14. Average county bridge-specific spending—2020–22



Sources: 2020–22 annual operational reports; U.S. Census Bureau.

Notes:

1. The sum of the spending categories may not equal totals due to rounding.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
3. Spending data includes only spending from bridge-specific funds. Counties may use MVH, LRS, and other funds for some bridge construction and maintenance.
4. Spending excludes other financing uses including debt repayment—principal and interest, interfund loan payments, interfund loans, investments purchased, transfers out, and other.

Table 21. County spending from bridge-specific funds—2022

County	Population category	Cumulative Bridge Fund	Major Bridge Fund	Covered Bridge Fund	Other funds	Total
Adams	B	$766,312	N/A	$249	$579,835	$1,346,396
Allen	C	$0	$1,608,155	N/A	$0	$1,608,155
Bartholomew	C	$2,236,999	N/A	N/A	$0	$2,236,999
Benton	A	$547,724	N/A	N/A	$0	$547,724
Blackford	A	$164,327	N/A	N/A	$0	$164,327
Boone	C	$732,284	N/A	N/A	$0	$732,284
Brown	A	$110,110	N/A	$0	$0	$110,110
Carroll	A	$586,900	N/A	N/A	$0	$586,900
Cass	B	$610,022	N/A	N/A	$0	$610,022
Clark	C	$2,108,052	N/A	N/A	$0	$2,108,052
Clay	A	$466,909	N/A	N/A	$0	$466,909
Clinton	B	$951,118	N/A	N/A	$0	$951,118
Crawford	A	$96,285	N/A	N/A	$0	$96,285
Daviess	B	$1,443,190	N/A	N/A	$0	$1,443,190
Dearborn	C	$1,002,731	N/A	$3,215	$0	$1,005,945
Decatur	A	$1,254,370	N/A	N/A	$0	$1,254,370
DeKalb	B	$759,946	N/A	$580	$0	$760,526
Delaware	C	$2,713,714	N/A	N/A	$627,681	$3,341,394
Dubois	B	$1,400,157	N/A	N/A	$0	$1,400,157

Table 21. County spending from bridge-specific funds—2022 (cont.)

County	Population category	Cumulative Bridge Fund	Major Bridge Fund	Covered Bridge Fund	Other funds	Total
Elkhart	C	$734,918	$1,528,133	N/A	$0	$2,263,051
Fayette	A	$807,335	N/A	N/A	$0	$807,335
Floyd	C	$943,331	N/A	N/A	$0	$943,331
Fountain	A	$630,646	N/A	N/A	$0	$630,646
Franklin	A	$240,546	N/A	$0	$0	$240,546
Fulton	A	$257,461	N/A	N/A	$0	$257,461
Gibson	B	$1,320,867	N/A	N/A	$0	$1,320,867
Grant	C	$1,511,744	N/A	N/A	$0	$1,511,744
Greene	B	$387,147	N/A	N/A	$0	$387,147
Hamilton	C	$0	$5,535,887	N/A	$1,657,107	$7,192,993
Hancock	C	$1,765,324	N/A	N/A	$0	$1,765,324
Harrison	B	$448,442	N/A	N/A	$0	$448,442
Hendricks	C	$2,715,605	$98,565	N/A	$0	$2,814,170
Henry	B	$633,582	N/A	N/A	$0	$633,582
Howard	C	$509,602	N/A	N/A	$0	$509,602
Huntington	B	$647,544	N/A	N/A	$0	$647,544
Jackson	B	$470,757	N/A	$206	$0	$470,963
Jasper	B	$277,426	N/A	N/A	$0	$277,426
Jay	A	$134,310	N/A	N/A	$0	$134,310
Jefferson	B	$1,453,440	N/A	N/A	$0	$1,453,440
Jennings	A	$34,361	N/A	$0	$325,639	$359,999
Johnson	C	$614,327	N/A	N/A	$1,154,698	$1,769,026
Knox	B	$897,017	N/A	N/A	$0	$897,017
Kosciusko	C	$681,699	N/A	N/A	$0	$681,699
LaGrange	B	$378,447	N/A	N/A	$0	$378,447
Lake	C	$1,118,534	N/A	N/A	$67,572	$1,186,106
La Porte	C	$1,799,496	$539,870	N/A	$0	$2,339,366
Lawrence	B	$1,092,360	N/A	N/A	$200,752	$1,293,112
Madison	C	$1,124,189	N/A	N/A	$0	$1,124,189
Marshall	B	$2,314,803	N/A	N/A	$0	$2,314,803
Martin	A	$212,700	N/A	N/A	$0	$212,700
Miami	B	$206,942	N/A	N/A	$0	$206,942
Monroe	C	$2,397,325	$407,621	N/A	$127,117	$2,932,062
Montgomery	B	$1,567,923	N/A	N/A	$0	$1,567,923
Morgan	C	$279,222	N/A	N/A	$0	$279,222
Newton	A	$94,043	N/A	N/A	$0	$94,043
Noble	B	$1,281,842	N/A	N/A	$0	$1,281,842
Ohio	A	$59,000	N/A	N/A	$27,187	$86,187
Orange	A	$530,780	N/A	N/A	$0	$530,780
Owen	A	$394,051	N/A	N/A	$0	$394,051
Parke	A	$495,651	N/A	$42,499	$0	$538,150
Perry	A	$379,054	N/A	N/A	$0	$379,054

Table 21. County spending from bridge-specific funds—2022 (cont.)

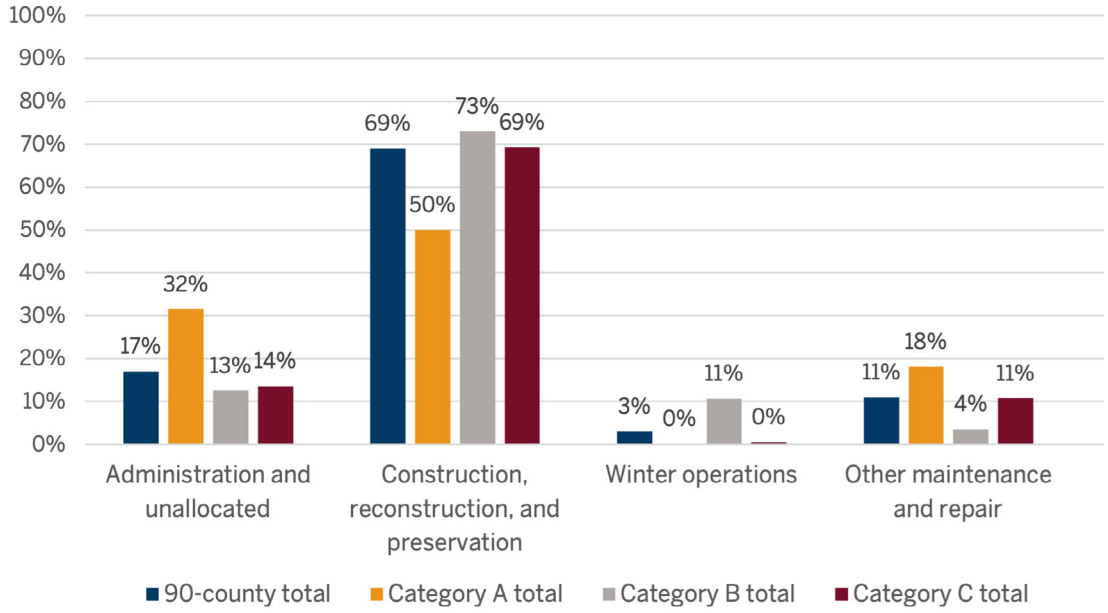
County	Population category	Cumulative Bridge Fund	Major Bridge Fund	Covered Bridge Fund	Other funds	Total
Pike	A	$322,472	N/A	N/A	$157,315	$479,787
Porter	C	$4,124,440	N/A	N/A	$0	$4,124,440
Posey	A	$2,476,277	N/A	N/A	$0	$2,476,277
Pulaski	A	$153,107	N/A	N/A	$0	$153,107
Putnam	B	$890,668	N/A	$6,703	$0	$897,370
Randolph	A	$736,899	N/A	N/A	$0	$736,899
Ripley	A	$516,150	N/A	N/A	$0	$516,150
Rush	A	$238,516	N/A	$80,815	$0	$319,331
St. Joseph	C	$85,052	$1,225,911	N/A	$0	$1,310,963
Scott	A	$113,919	N/A	N/A	$0	$113,919
Shelby	B	$1,260,260	N/A	N/A	$0	$1,260,260
Spencer	A	$639,065	N/A	N/A	$0	$639,065
Starke	A	$81,589	N/A	N/A	$0	$81,589
Steuben	B	$515,503	N/A	N/A	$0	$515,503
Sullivan	A	$286,499	N/A	N/A	$116,562	$403,061
Switzerland	A	$173,706	N/A	N/A	$507,124	$680,830
Tippecanoe	C	$3,226,025	$115,385	N/A	$0	$3,341,410
Tipton	A	$55,230	N/A	N/A	$0	$55,230
Union	A	$282,584	N/A	N/A	$0	$282,584
Vanderburgh	C	$1,940,676	N/A	N/A	$0	$1,940,676
Vermillion	A	$516,987	N/A	$8,120	$0	$525,107
Vigo	C	$1,614,263	N/A	N/A	$0	$1,614,263
Wabash	B	$1,268,571	N/A	$3,203	$240,093	$1,511,866
Warren	A	$379,964	N/A	N/A	$0	$379,964
Warrick	C	$252,344	N/A	N/A	$0	$252,344
Washington	A	$517,983	N/A	N/A	$0	$517,983
Wayne	C	$2,076,290	$372,074	N/A	$0	$2,448,364
Wells	A	$270,012	N/A	N/A	$104,388	$374,400
White	A	$1,168,105	N/A	N/A	$0	$1,168,105
Whitley	B	$832,333	N/A	N/A	$0	$832,333
91-county total	**N/A**	**$78,711,636**	**$11,431,599**	**$145,589**	**$5,893,068**	**$96,030,423**
91-county average	**N/A**	**$864,963**	-	-	-	**$1,055,279**
Category A average	**N/A**	**$429,654**	-	-	-	**$461,711**
Category B average	**N/A**	**$926,024**	-	-	-	**$965,702**
Category C average	**N/A**	**$1,418,822**	-	-	-	**$1,976,932**

Sources: 2020–22 annual operational reports; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Spending data includes only spending from bridge-specific funds. Counties may use MVH, LRS, and other funds for some bridge construction and maintenance.
3. Spending excludes other financing uses including debt repayment—principal and interest, interfund loans, investments purchased, transfers out, and other.
4. Twelve counties reported having covered bridge funds in 2022. Three of these counties, however, did not report any spending from these funds.
5. County averages in 2022 for Covered Bridge Funds and other funds were not calculated due to the small numbers of counties reporting these funds. These cells are denoted by a dash.

Figure 15. Percent of county spending from bridge-specific funds by activity and population category—2022

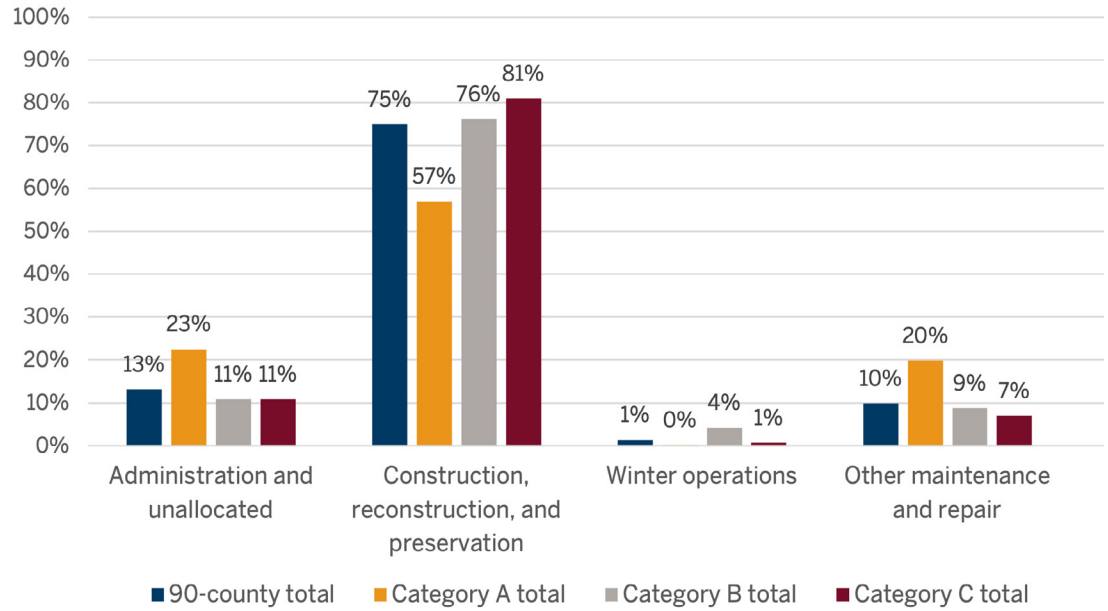


Sources: 2020–22 annual operational reports; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Spending data includes only spending from bridge-specific funds. Counties may use MVH, LRS, and other funds for some bridge construction and maintenance.
3. Crawford County did not report spending by activity in 2021 and 2022 and is excluded in this figure.
4. Spending excludes other financing uses including debt repayment—principal and interest, interfund loan payments, interfund loans, investments purchased, transfers out, and other.

Figure 16. Percent of county spending from bridge-specific funds by activity and population category—2021

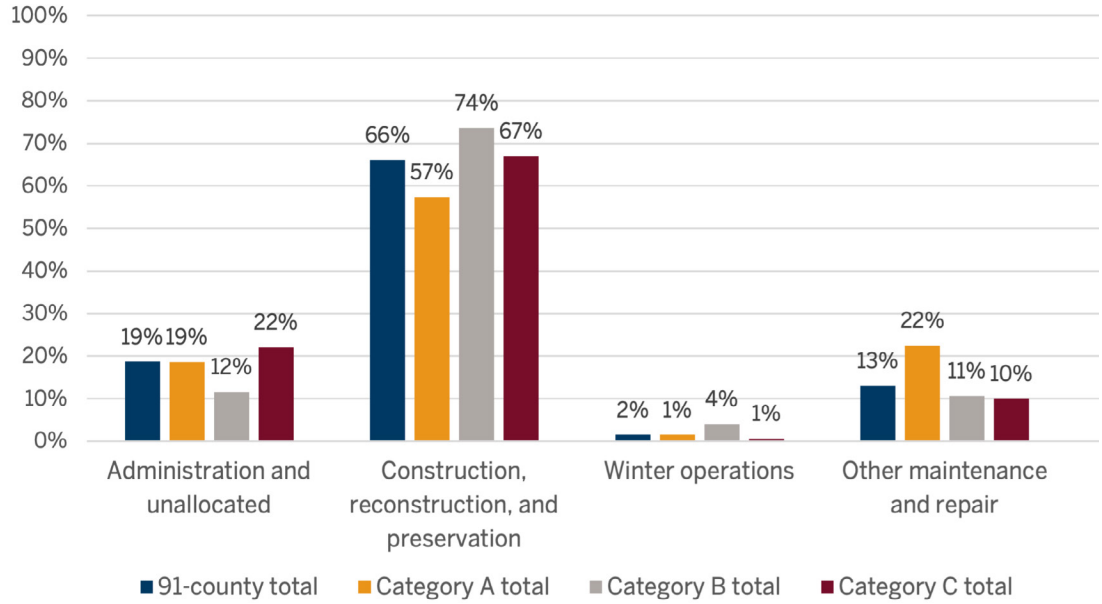


Sources: 2020–22 annual operational reports; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Spending data includes only spending from bridge-specific funds. Counties may use MVH, LRS, and other funds for some bridge construction and maintenance.
3. Crawford County did not report spending by activity in 2021 and 2022 and is excluded in this figure.
4. Spending excludes other financing uses including debt repayment—principal and interest, interfund loan payments, interfund loans, investments purchased, transfers out, and other.

Figure 17. Percent of county spending from bridge-specific funds by activity and population category—2020



Sources: 2020–22 annual operational reports; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Spending data includes only spending from bridge-specific funds. Counties may use MVH, LRS, and other funds for some bridge construction and maintenance.
3. Spending excludes other financing uses including debt repayment—principal and interest, interfund loan payments, interfund loans, investments purchased, transfers out, and other.

Winter operations

Winter operations typically include expenses associated with pretreating and treating roads and bridges for slick conditions and snow removal. These expenses include contractors, labor, equipment, sand, salt, and other treatment products. It is of special interest because annual spending is somewhat unpredictable and can vary widely depending on weather conditions. Also, researchers expect this variability may be a bigger challenge for northern counties.

The proportion of county spending allocated to winter operations for 2021–23 is shown in Table 20 and Figures 11–13. The proportion of spending allocated to winter operations across all counties was 4% in 2022, 6% in 2021, and 5% in 2020 (Figures 15–17). In 2022, 69 counties reported spending less than 2% of their operations spending on winter operations, including seven counties that did not report winter operations spending separate from other maintenance and repair spending. Marshall and Martin counties reported the highest percentage of all counties in 2022 at 28% of operations spending.

Table 22 summarizes the average winter operations spending for 2020–22 by population category and by region. Annual expenses are dependent on winter weather which is highly variable. Average winter operations spending generally increases with county population. The data also indicates northern counties spent 2 to 3 times more on winter operations on average than central and southern counties during the three-year period.

Table 22. Winter operations expenses, 2020–22

	2022	2021	2020
Study county average	$342,519	$466,210	$393,050
Counties > $0	83	86	85
Category A average	$190,752	$209,317	$195,736
Category B average	$364,351	$577,261	$385,740
Category C average	$508,318	$705,248	$642,927
Northern region average	$577,327	$803,193	$610,667
Central region average	$290,674	$353,772	$423,185
Southern region average	$170,573	$262,707	$164,827

Sources: 2020–22 annual operational reports; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Regions were established using INDOT districts as a rough guide. Northern counties generally include those in the INDOT La Porte and Fort Wayne districts. Central counties include those in the Crawfordsville and Greenfield districts, and southern counties include those in the Seymour and Vincennes district.
3. Only data from counties that reported winter operations spending was used to calculate the averages reported here.
4. Spending excludes other financing uses including debt repayment—principal and interest, interfund loan payments, interfund loans, investments purchased, transfers out, and other.
5. The averages reported here include only counties that reported winter operations spending.

Revenue

Table 23 shows county road and bridge revenue by fund for 2022. Figures 18–21 provide a summary of average revenue by fund for 2020–22.

Average county road and bridge revenue increased by year and with population from 2020–22. The overall average county revenue reported increased from $7.7 million in 2020 to $8.8 million in 2022. For Category A counties, average revenue increased from $4.8 million in 2020 to $5.5 million in 2022. For the same period, average revenue for Category B counties increased from $7 million to $7.8 million, and average revenue for Category C counties increased from $12.4 million to $14.4 million. Revenue in the Motor Vehicle Highway funds (restricted and unrestricted), Local Roads and Streets funds, and Cumulative Bridge Funds followed a similar pattern, increasing by size of county. This is not surprising given that the MVH formula generally is weighted toward counties with higher populations.

For 2020–22, Category A and Category B counties reported similar average revenue in other funds. Average revenue in other funds in Category C counties was substantially higher.

Table 23. Road and bridge revenue by fund—2022

County	Pop. category	All revenue	Motor Vehicle Highway Fund—Unrestricted	Motor Vehicle Highway Fund—Restricted	Local Road and Street Fund	Cumulative Bridge Fund	Total—other funds	% other funds
Adams	B	$8,369,070	$2,128,535	$1,685,589	$535,821	$879,740	$3,139,385	38%
Allen	C	$33,500,183	$11,100,216	$5,703,718	$3,215,426	$0	$13,480,824	40%
Bartholomew	C	$9,517,753	$2,252,003	$2,162,037	$956,756	$2,076,461	$2,070,497	22%
Benton	A	$3,611,901	$1,610,920	$1,466,684	$155,923	$278,919	$99,455	3%
Blackford	A	$2,322,491	$1,116,774	$852,509	$201,900	$151,307	$0	0%
Boone	C	$9,094,261	$1,763,357	$4,473,868	$649,852	$839,653	$1,367,531	15%
Brown	A	$4,914,320	$1,886,836	$1,014,425	$362,254	$263,955	$1,386,850	28%
Carroll	A	$6,557,957	$1,955,942	$1,783,332	$404,372	$752,489	$1,661,822	25%
Cass	B	$8,627,711	$3,057,168	$2,150,016	$639,806	$419,707	$2,361,014	27%
Clark	C	$9,344,484	$2,085,512	$2,030,036	$989,961	$2,178,322	$2,060,653	22%
Clay	A	$6,120,727	$2,347,599	$1,643,792	$467,960	$242,874	$1,418,502	23%
Clinton	B	$7,360,429	$1,913,806	$1,894,787	$599,785	$1,016,782	$1,935,269	26%
Crawford	A	$3,186,092	$1,117,698	$1,117,698	$212,842	$170,074	$567,781	18%
Daviess	B	$11,648,449	$4,030,069	$1,924,152	$567,575	$2,519,984	$2,606,670	22%
Dearborn	C	$9,376,164	$1,571,674	$3,844,006	$926,476	$957,416	$2,076,591	22%
Decatur	A	$6,094,032	$2,649,406	$1,597,222	$1,312,010	$535,395	$0	0%
DeKalb	B	$6,734,692	$2,244,272	$1,925,634	$754,000	$613,010	$1,197,775	18%
Delaware	C	$11,128,573	$3,299,532	$2,452,187	$904,546	$2,339,917	$2,132,392	19%
Dubois	B	$6,581,526	$2,971,124	$1,828,717	$710,043	$1,071,643	$0	0%
Elkhart	C	$27,561,306	$4,867,718	$4,027,213	$2,665,455	$1,327,049	$14,673,872	53%
Fayette	A	$3,879,161	$1,141,430	$942,010	$419,223	$352,970	$1,023,528	26%
Floyd	C	$4,572,949	$1,532,895	$1,501,990	$1,012,296	$525,768	$0	0%
Fountain	A	$6,059,874	$2,136,295	$1,525,741	$310,919	$604,207	$1,482,713	24%
Franklin	A	$5,986,954	$1,606,905	$1,573,432	$508,371	$780,935	$1,517,311	25%
Fulton	A	$5,159,861	$2,697,832	$1,809,209	$384,626	$268,194	$0	0%
Gibson	B	$7,298,855	$2,839,573	$2,267,166	$615,602	$1,576,514	$0	0%
Grant	C	$7,848,101	$2,591,402	$2,417,667	$666,165	$2,172,867	$0	0%
Greene	B	$8,053,097	$3,403,965	$2,107,606	$574,129	$456,815	$982,592	12%
Hamilton	C	$23,822,143	$4,145,079	$4,014,691	$1,347,046	$0	$14,315,327	60%
Hancock	C	$9,630,519	$3,498,274	$2,085,218	$1,427,962	$2,619,064	$0	0%
Harrison	B	$7,510,764	$2,203,903	$2,168,417	$871,200	$933,411	$1,333,833	18%
Hendricks	C	$15,801,472	$3,617,883	$3,051,766	$2,022,470	$5,136,563	$1,972,790	12%
Henry	B	$8,195,465	$2,178,022	$2,043,271	$797,551	$355,711	$2,820,910	34%
Howard	C	$6,493,084	$2,775,187	$1,967,692	$773,839	$976,365	$0	0%
Huntington	B	$7,778,305	$3,246,350	$2,129,907	$649,876	$820,307	$931,865	12%
Jackson	B	$6,248,720	$1,983,084	$1,952,159	$758,508	$524,503	$1,030,466	16%
Jasper	B	$9,357,687	$2,311,237	$2,251,842	$802,803	$328,548	$3,663,257	39%
Jay	A	$4,948,326	$2,250,120	$1,716,896	$349,845	$631,465	$0	0%
Jefferson	B	$6,252,711	$2,310,593	$1,414,088	$701,025	$809,855	$1,017,150	16%
Jennings	A	$5,262,278	$1,770,044	$1,672,679	$542,293	$415,878	$861,384	16%
Johnson	C	$15,829,616	$4,850,866	$2,567,817	$1,516,262	$714,628	$6,180,044	39%

Table 23. Road and bridge revenue by fund—2022 (cont.)

County	Pop. category	All revenue	Motor Vehicle Highway Fund—Unrestricted	Motor Vehicle Highway Fund—Restricted	Local Road and Street Fund	Cumulative Bridge Fund	Total—other funds	% other funds
Knox	B	$7,086,685	$3,129,901	$2,126,799	$572,409	$762,042	$495,535	7%
Kosciusko	C	$11,227,192	$3,620,783	$3,139,895	$1,304,051	$721,285	$2,441,178	22%
LaGrange	B	$6,200,062	$3,329,928	$1,912,360	$588,550	$369,223	$0	0%
Lake	C	$14,588,704	$4,733,761	$4,629,695	$1,432,456	$364,243	$3,428,550	24%
La Porte	C	$17,728,970	$3,299,833	$3,080,152	$1,387,199	$1,380,184	$8,581,603	48%
Lawrence	B	$8,209,846	$2,868,278	$1,747,686	$742,553	$1,121,763	$1,729,566	21%
Madison	C	$10,276,019	$2,997,793	$2,876,030	$1,242,570	$1,325,023	$1,834,604	18%
Marshall	B	$8,831,811	$2,801,690	$2,307,067	$819,203	$1,903,851	$1,000,000	11%
Martin	A	$3,051,895	$1,421,281	$918,934	$195,045	$327,396	$189,239	6%
Miami	B	$8,476,573	$1,955,170	$1,935,367	$602,408	$339,988	$3,643,640	43%
Monroe	C	$25,137,901	$5,262,234	$2,377,166	$1,306,867	$1,928,387	$14,263,248	57%
Montgomery	B	$8,140,172	$3,060,645	$2,143,523	$651,524	$1,014,716	$1,269,763	16%
Morgan	C	$8,217,236	$2,532,540	$3,413,097	$1,151,283	$422,922	$697,394	8%
Newton	A	$11,564,704	$1,664,964	$1,525,705	$314,264	$272,267	$7,787,505	67%
Noble	B	$8,517,291	$3,315,559	$2,646,283	$847,051	$1,708,398	$0	0%
Ohio	A	$2,432,014	$425,741	$425,741	$116,812	$122,109	$1,341,611	55%
Orange	A	$6,227,799	$1,551,759	$1,469,425	$337,709	$682,701	$2,186,205	35%
Owen	A	$6,140,382	$1,591,792	$1,528,037	$902,592	$507,724	$1,610,239	26%
Parke	A	$5,355,827	$2,297,770	$1,674,124	$340,933	$413,230	$629,770	12%
Perry	A	$5,231,854	$1,436,307	$1,229,270	$330,746	$367,898	$1,867,634	36%
Pike	A	$5,541,181	$1,361,700	$1,287,333	$242,734	$247,531	$2,401,885	43%
Porter	C	$15,932,265	$3,062,093	$3,049,060	$1,932,009	$6,876,003	$1,013,100	6%
Posey	A	$9,858,461	$2,349,034	$1,736,498	$475,644	$2,007,654	$3,289,633	33%
Pulaski	A	$4,144,862	$1,937,932	$1,934,114	$246,236	$26,581	$0	0%
Putnam	B	$8,281,742	$3,245,977	$1,935,712	$634,163	$1,088,990	$1,376,900	17%
Randolph	A	$6,069,518	$2,042,920	$2,013,653	$431,135	$470,793	$1,111,017	18%
Ripley	A	$3,604,881	$674,495	$1,767,903	$547,120	$613,513	$1,850	0%
Rush	A	$5,213,060	$1,725,026	$1,907,117	$931,416	$297,278	$352,223	7%
St. Joseph	C	$24,648,167	$4,403,861	$4,295,719	$3,933,434	$951,524	$11,063,629	45%
Scott	A	$2,780,553	$939,626	$925,561	$463,502	$451,864	$0	0%
Shelby	B	$9,715,947	$3,544,712	$2,150,532	$2,435,391	$1,585,312	$0	0%
Spencer	A	$8,131,494	$1,987,045	$1,753,845	$387,009	$614,198	$3,389,397	42%
Starke	A	$6,310,178	$1,772,720	$1,647,747	$580,488	$192,902	$2,116,321	34%
Steuben	B	$6,746,130	$3,428,192	$1,655,266	$661,095	$317,009	$684,567	10%
Sullivan	A	$10,668,941	$2,880,623	$3,722,975	$337,059	$470,176	$3,258,107	31%
Switzerland	A	$3,050,916	$827,714	$814,990	$167,915	$257,214	$983,083	32%
Tippecanoe	C	$19,978,387	$3,090,353	$3,245,943	$1,664,768	$3,397,346	$8,579,976	43%
Tipton	A	$4,103,314	$2,069,796	$1,380,626	$303,902	$348,991	$0	0%
Union	A	$2,460,133	$691,465	$1,096,042	$132,562	$310,119	$229,945	9%
Vanderburgh	C	$18,908,659	$5,130,720	$2,630,395	$1,570,716	$2,525,604	$7,051,225	37%
Vermillion	A	$3,485,870	$1,023,163	$1,252,637	$250,321	$340,901	$618,848	18%

Table 23. Road and bridge revenue by fund—2022 (cont.)

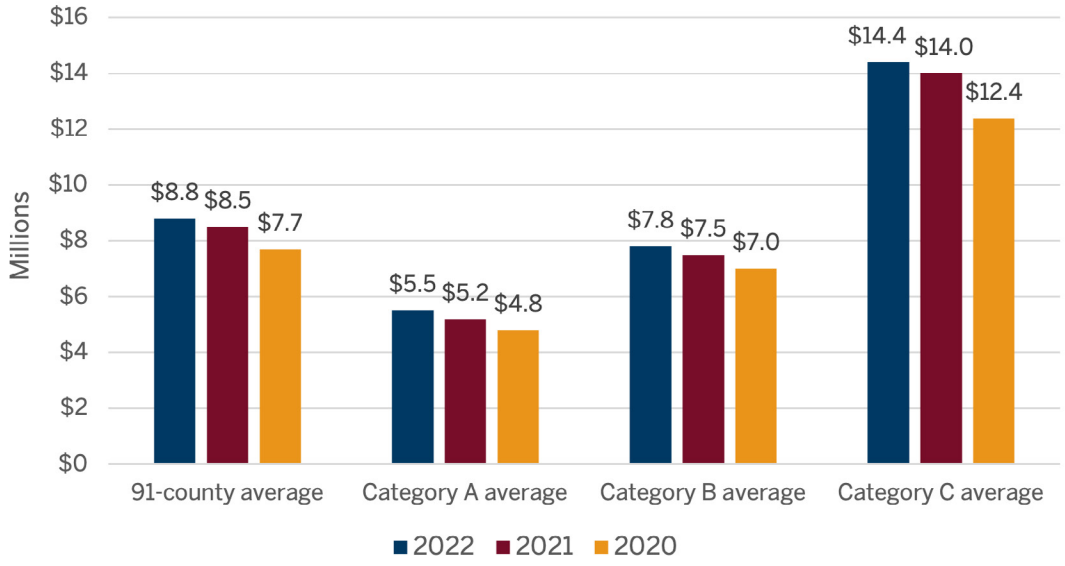
County	Pop. category	All revenue	Motor Vehicle Highway Fund—Unrestricted	Motor Vehicle Highway Fund—Restricted	Local Road and Street Fund	Cumulative Bridge Fund	Total—other funds	% other funds
Vigo	C	$8,701,062	$3,339,725	$2,516,364	$1,081,567	$921,594	$841,812	10%
Wabash	B	$5,546,313	$1,858,346	$1,837,563	$536,548	$340,534	$973,322	18%
Warren	A	$4,622,013	$1,501,345	$1,249,287	$170,324	$336,049	$1,365,008	30%
Warrick	C	$13,024,692	$3,385,532	$2,154,171	$1,266,168	$301,543	$5,917,277	45%
Washington	A	$6,033,015	$1,929,680	$1,866,045	$813,363	$478,343	$945,584	16%
Wayne	C	$6,702,193	$2,085,573	$1,985,331	$683,379	$1,456,800	$491,110	7%
Wells	A	$5,155,320	$2,223,961	$1,766,602	$581,875	$494,260	$88,621	2%
White	A	$12,311,235	$2,277,912	$2,131,195	$485,743	$1,344,593	$6,071,791	49%
Whitley	B	$6,429,160	$1,697,023	$1,677,681	$664,809	$1,107,472	$1,282,174	20%
91-county total	**N/A**	**$798,444,663**	**$232,847,097**	**$191,253,141**	**$74,083,391**	**$85,867,305**	**$213,865,738**	**N/A**
91-county average	**N/A**	**$8,774,117**	**$2,558,759**	**$2,101,683**	**$814,103**	**$943,597**	**$2,350,173**	**27%**
Category A average	**N/A**	**$5,464,563**	**$1,707,726**	**$1,519,501**	**$413,658**	**$459,077**	**$1,364,602**	**25%**
Category B average	**N/A**	**$7,776,893**	**$2,732,966**	**$1,993,046**	**$743,593**	**$922,532**	**$1,364,448**	**18%**
Category C average	**N/A**	**$14,392,298**	**$3,588,756**	**$3,025,664**	**$1,445,592**	**$1,645,798**	**$4,686,490**	**33%**

Sources: 2022 annual operational reports; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Total revenue excludes other financing sources including bond proceeds, note/loan proceeds, interfund proceeds, investments matured or sold, transfers in, and other.

Figure 18. Average revenue dedicated for road and bridge work by fund—2020–22

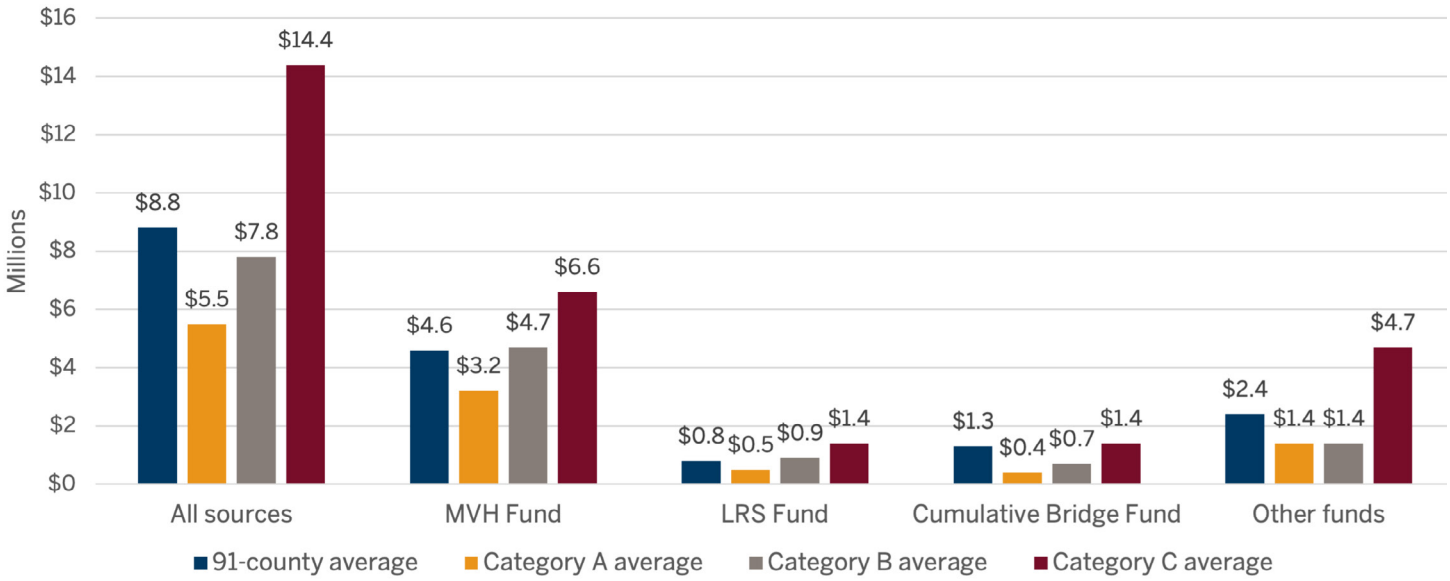


Sources: 2020–22 annual operational reports; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Total revenue excludes other financing sources including bond proceeds, note/loan proceeds, interfund proceeds, investments matured or sold, transfers in, and other.

Figure 19. Average revenue dedicated for road and bridge work by fund—2022

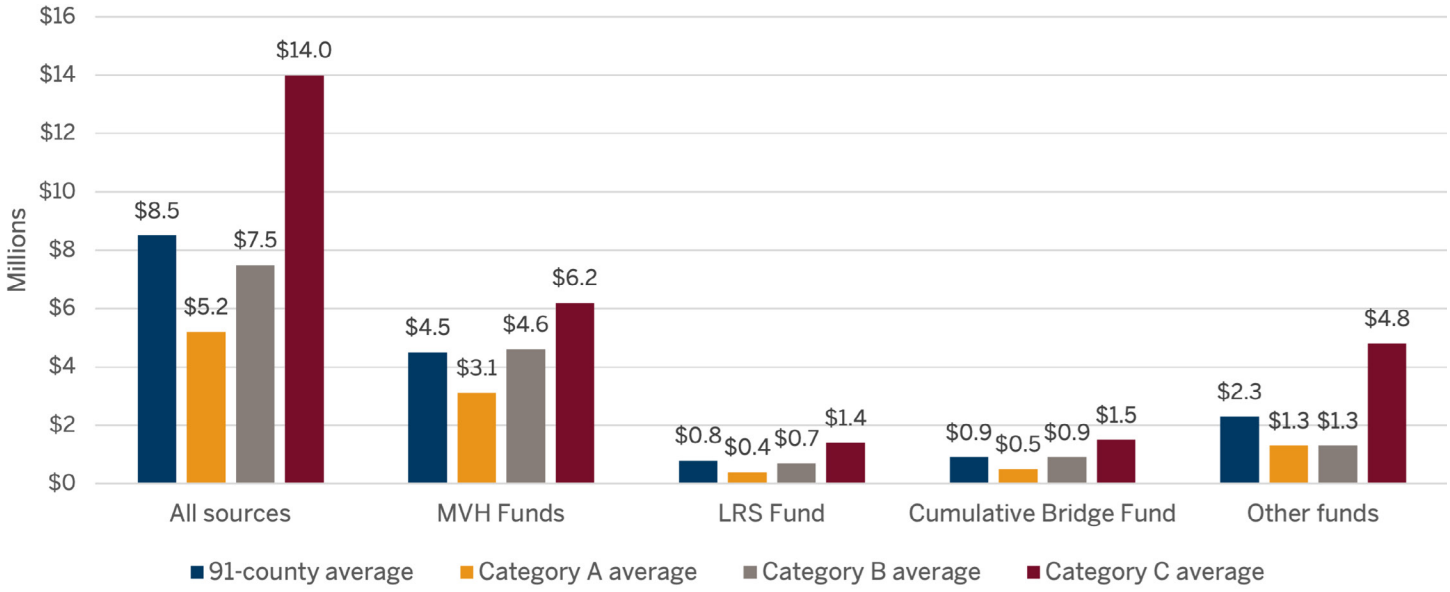


Sources: 2022 annual operational reports; U.S. Census Bureau.

Notes:

1. Percentages may not total to 100% due to rounding.
2. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
3. Total revenue excludes other financing sources including bond proceeds, note/loan proceeds, interfund proceeds, investments matured or sold, transfers in, and other.

Figure 20. Average revenue dedicated for road and bridge work by fund—2021

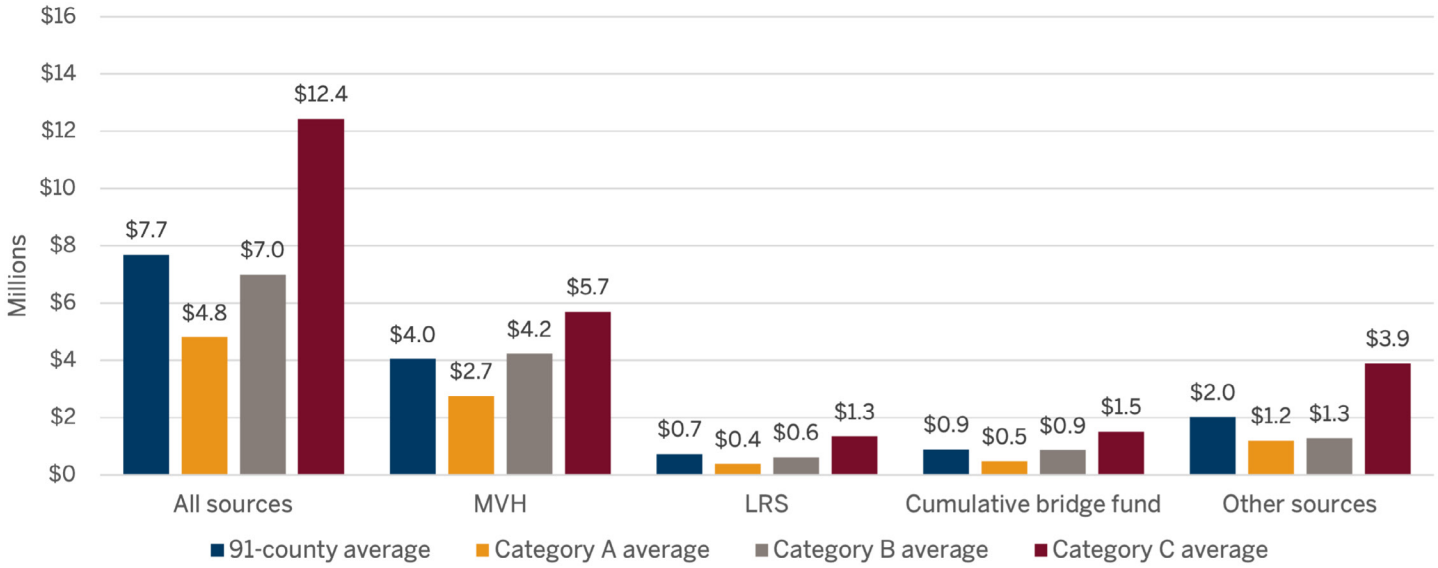


Sources: 2021 annual operational reports; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Total revenue excludes other financing sources including bond proceeds, note/loan proceeds, interfund proceeds, investments matured or sold, transfers in, and other.

Figure 21. Average revenue dedicated for road and bridge work by fund—2020



Sources: 2020 annual operational reports; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Total revenue excludes other financing sources including bond proceeds, note/loan proceeds, interfund proceeds, Investments matured or sold, transfers in, and other.

Counties use a variety of funding sources to support local road and bridge work. Table 24 shows selected sources of new revenue from local taxes and intergovernmental sources identified by two or more counties in 2022 in their operational reports, annual financial reports, or by agencies responsible for the distributions of particular revenue sources. All counties received regular MVH and Local Road and Street (LRS) distributions. Fourteen counties received special MVH distributions for covered bridges. Eighty-nine counties reported allocating property taxes to their cumulative capital bridge or major bridge funds, and four counties reported using tax increment financing for roads and bridges. Seventy-nine counties allocated Financial Institution taxes to roads and bridges. Seventy-three counties also allocated Vehicle/Aircraft Excise taxes to this purpose. Fifty-four counties collected County Wheel and Surtaxes. Seventeen counties allocated local option income taxes to roads and bridges. Six counties also indicated having a cumulative capital fund utilizing a variety of revenue types.

The Indiana Department of Transportation awarded Community Crossing Matching grants to 88 study counties in 2022. Twenty-four counties reported receiving federal grants, in most cases, for bridge work.

Counties used a variety of other sources such as riverboat revenue sharing, landfill fees, and wind farm fees. For example, Boone County mentioned that the county food and beverage tax revenue was used for roads and bridges. Decatur County also mentioned that they recently had begun utilizing landfill tipping fees for roads and bridges.

Table 24. Selected sources of new revenue—2022

Revenue type	# of counties
Motor Vehicle Highway Fund distributions	91
Local Road and Street Fund distributions	91
Covered bridge MVH distributions	14
Property taxes (bridge cumulative capital and major bridge funds)	89
Property taxes (tax increment financing (TIF))	4
Financial Institutions Tax distributions	79
Vehicle/Aircraft Excise Tax distributions	73
County Wheel Tax and Surtax	54
Local income taxes (LIT/LOIT/COIT/CEDIT)	17
Various revenue (cumulative capital funds)	6
Community Crossings Matching Grants	89
Federal grants, principally bridge grants	24
Riverboat distributions	5
Landfill/wind farm fees	3

Sources: 2022 annual operational reports; 2022 annual financial reports; *Indiana handbook of taxes, revenues, and appropriations—Fiscal Year 2022*; Indiana Department of Transportation.

Notes:

1. This table only includes new county revenue in 2022. In some cases, expenditures were made from existing account balances that also may have come from these revenue types.
2. The revenue reported here reflects what was identifiable within county annual operational reports, annual financial reports, or state agency distribution data. Revenue may not have been identified in cases in which counties did not use recognizable fund names, funding categories, or revenue coding.

In 2022, 13 counties reported using bonds, notes, and loans to fund road and bridge construction/reconstruction or to buy vehicles or construction equipment. Of those, six counties specifically identified using these funds for road and bridge work, and three for vehicles or construction equipment. The Boone County Highway Department shared that they were able to issue a set of small bonds to allow them to provide match Community Crossings and federal bridge grants. Four counties provided no detail about the specific use. Fewer counties reported using these debt mechanisms in 2022 than in 2020 and 2021.

Twenty-three counties also reported using capital leases to secure vehicles and construction equipment in 2022. Nineteen counties identified using this mechanism for vehicles and construction equipment. Four counties provided no detail about the specific use. The number of counties that reported using leases in 2022 was less than in 2021, but greater than in 2020.

FARMER PERSPECTIVES ON LOCAL ROADS AND BRIDGES

To identify current perceptions from agricultural stakeholders about local roads and bridges, the project team conducted a survey that was administered to members of the Indiana Soybean Alliance and Indiana Corn Marketing Council in March and April 2024.

Twenty-three stakeholders provided responses. All respondents were farmers with 22 indicating they produced grain. Seven respondents indicated producing livestock also, and two indicated growing other crops. In addition to farming, a few respondents chose additional agricultural roles, including trucker/commercial hauler, farm supplier, custom manure applicator, feed sales, and crop insurance adjuster. Respondents identified 27 Indiana counties in which they operate, representing a mix of counties by population category and region (Figure 22). Twelve indicated they farm in multiple counties. Two indicated also farming in adjacent counties in Ohio or Illinois. When asked the types of vehicles they used on public roads and bridges, they indicated almost universally that they use semitrucks, heavy duty trucks, and farm implements and equipment.

Figure 22. Respondents' counties of operations

• Boone	• Hendricks	• Putnam (2)
• Carroll	• Henry	• Rush
• Clay (2)	• Jackson	• Shelby (5)
• Daviess	• Johnson	• Spencer
• Decatur	• Knox (2)	• Sullivan
• DeKalb	• LaGrange	• Vanderburgh
• Franklin (2)	• Marshall	• Vigo
• Greene	• Noble	• Warrick
• Hancock	• Parke	• White

When asked to rate current road and bridge conditions in their areas, 34% of respondents indicated conditions were excellent or good, 43% were fair, and 22% were poor (Figure 23). When asked to assess how conditions have changed during the past five years, 52% indicated they had improved a lot or somewhat, and 26% said that they deteriorated somewhat or a lot (Figure 24). The remaining 22% reported that conditions had remained the same.

Figure 23. Farmer perceptions of current road and bridge conditions

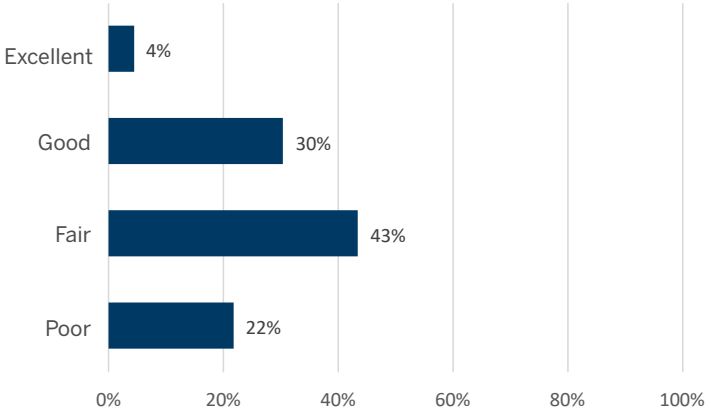
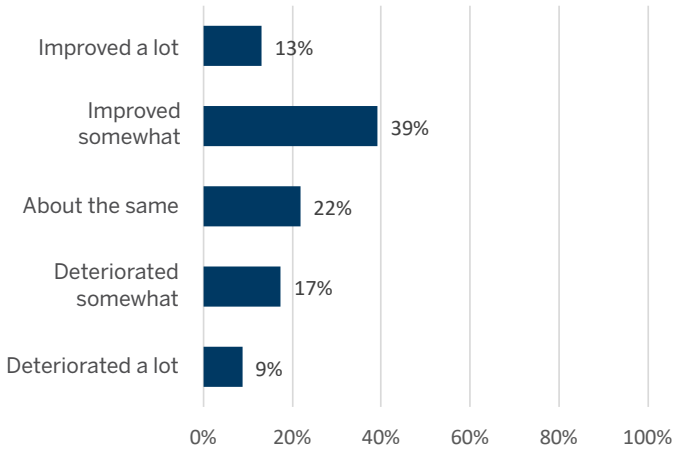


Figure 24. Farmer perceptions of changes in road and bridge conditions during the past five years



When asked about specific challenges that respondents experienced when using local roads and bridges to make farm-to-farm or farm-to-market trips, 96% of respondents indicated struggling with road width (Figure 25). More than 80% of respondents also identified pavement condition, bridge dimensions, and bridge weight restrictions as challenges. Seventy percent of respondents said turning radii at intersections was problematic. When given the opportunity to identify other obstacles farmers face, three or more identified peaked or rough conditions at railroad crossings, roundabout sizing and curbing, utility lines and poles, driver behavior and awareness, and restrictions on roads in cities and towns. A full list of the additional obstacles identified is shown in Figure 26.

Many respondents indicated there were times when they had to detour around an obstacle or cross a bridge, railroad crossing, or intersection with extreme care. In two instances, respondents indicated they staged equipment late at night to avoid daytime traffic or used spotters to assist in navigating obstacles.

Figure 25. Road and bridge challenges for farmers

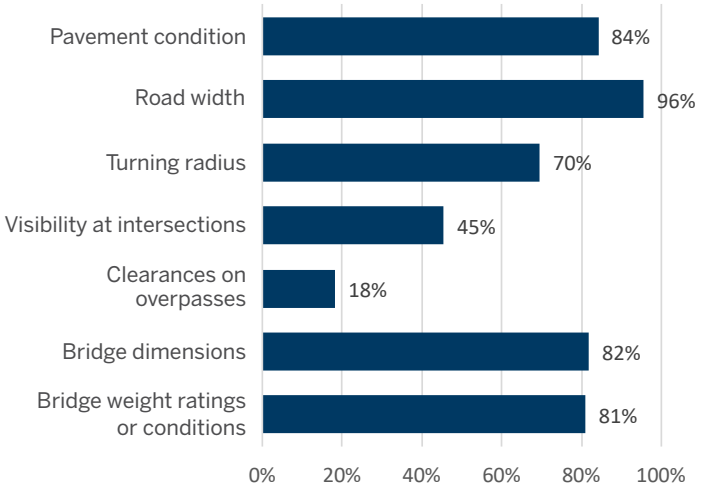


Figure 26. Additional road and bridge challenges identified by farmers

- Railroad crossings—peaked, rough/uneven (8)
- Roundabouts—size and curbing (4)
- Power/phone/fiber optics wires and poles (3)
- Driver behavior and awareness (3)
- Restrictions on main thoroughfares in cities and towns (3)
- Drop-offs at pavement edges (2)
- Gravel roads spring and winter (2)
- Traffic (2)
- Construction detours, including for state highways (2)
- Roadside ditches (2)
- Clearances on railroad bridges (2)
- State roads—rough pavement, bad bridges
- Inadequate fixes
- Commercial traffic on county roads
- Infrastructure built at a time when standards were different and haven't been updated
- Overgrown vegetation
- Old culverts with curbing
- River crossings when flooded

FINDINGS

The research team's findings regarding road and bridge conditions, treatment activity, spending, and revenue, as well as recommendations for improved data tracking are summarized below. The availability of a third year of data for all counties allowed the analysis of short-term trends.

Roads

- For the three-year period (2021–23) the road inventory for the 91 counties increased slightly from 63,062 centerline miles in 2021 to 63,280 in 2023, if Benton County's chip seal inventory is included.
- The mix of pavement types remained consistent during the three-year period. In 2023, the mix included asphalt pavements at 56%, chip seal at 25%, gravel at 18%, and other types comprising the remaining 2%.
- The number of counties with one or more poor average ratings for any pavement type decreased from 36 in 2021 to 24 in 2023, a 33% decrease.
- The overall weighted ratings for asphalt pavements were similar for the three-year period.
- The average ratings for chip seal pavements in PASER counties improved from 5.4 to 5.7 or by 6% between 2021 and 2023. The average ratings for PCI counties were stable for the three-year period.
- Gravel pavements are rated by a PASER 5-point or 10-point scale, and a PCI scale. During the three-year period, average ratings for gravel pavements were stable for counties using the 5-point PASER scale. The average ratings decreased from 5.1 in 2021 to 4.0 in 2023 for counties using the 10-point PASER scale. Tippecanoe County—the only PCI county to rate gravel pavements—reported stable ratings.
- Concrete pavements accounted for less than 1% of pavements in 2023. The weighted average rating for PASER counties and for PCI counties declined during the three-year period.
- There were 7,808 road miles treated in 2022. That was similar to the 7,610 miles treated in 2021 but fewer than the 8,172 road miles treated in 2020. The most common treatments were overlays of varying depths, chip seals, and crack sealing.

Bridges

- In 2023, the 91 study counties reported an inventory of 11,138 bridges and 1,444 culverts. These numbers reflect 14 fewer bridges and 26 more culverts than reported in 2021.
- Bridge condition ratings improved between 2021 and 2023. Bridge data showed the number of poor bridge decks, superstructures, and substructures decreased by 5, 24, and 22, respectively, across the study counties. Also, there were fewer failed bridges than in the previous two years, while the number of bridges in imminent failure was the same in 2021 and 2023.
- From 2021–23, condition ratings for culverts showed improvement, with 38 additional culverts rated in good condition and no culverts rated as being in imminent failure.
- Currently, there is no source of data that adequately reflects treatment activity. Spending from bridge-specific funds provides some limited information in this regard and is addressed in the spending and revenue summary below.

Spending and revenue

- Average county road and bridge spending increased year-over-year from 2020–22, from $7.4 million in 2020 to $8.3 million in 2022. Average spending also increased during the period for counties within each of the population categories. For Category A counties, average spending increased from $4.5 million in 2020 to $5 million in 2022. Average spending for Category B counties increased from $6.4 million to $7.5 million, and the average spending for Category C counties increased from $12.4 million to $13.6 million.
- In 2022, counties reported that more than half of their spending went to construction, reconstruction, and preservation activities. They reported about 19% went to winter operations and other maintenance and repair activities. The proportions reported across population counties in 2022 were very similar to those reported in 2020 and 2021.
- The research team utilized spending from bridge-specific funds as a rough proxy for bridge spending and activity. Average spending across all study counties and for specifically for Category B and Category B counties from bridge-specific funds increased modesty from 2020–22. Average spending was stable for Category A counties at about $500,000 a year. While the proportion of spending by activity varies from year-to-year more than for overall spending, counties consistently reported spending the most on construction, reconstruction, and preservation.
- Winter operations spending does show some variability across years, population categories, and region. Across the three-year period, counties with larger populations generally spent more than counties with smaller populations and northern counties consistently spent 2 to 3 times more on winter operations than central and southern counties.
- Average county road and bridge revenue increased year-over-year from 2020–22, from $7.7 million in 2020 to $8.8 million in 2022. Average revenue also increased year-over-year for counties within each of the population categories. For Category A counties, average revenue increased from $4.8 million in 2020 to $5.5 million in 2022. Category B counties increased from $7 million to $7.8 million, and the average revenue for Category C counties increased from $12.4 million to $14.4 million.
- Counties continued to use a variety of funding sources to support road and bridge work in 2022. All or nearly all study counties reported using County Motor Vehicle Highway and Local Road and Street distributions and property taxes. Most counties also received Community Crossing Matching Grants. More than half of counties reported using Financial Institutions Tax, Vehicle/Aircraft Excise Tax, and county Wheel Tax and Surtax distributions.
- The number of counties and award amounts for Community Crossings Matching grants varied from year to year. Among study counties, 88 counties received grants for $85.1 million in 2022, the highest number of individual counties and overall award amount during the three-year period. Eighty-four counties received grants for $77.9 million in 2021, and 87 counties received Community Crossing Matching grants totaling $83.3 million in 2020.

- Thirteen counties reported using debt to fund road and bridge infrastructure and equipment in 2022, fewer than in the previous two years. Twenty-three counties reported using capital leases to secure vehicles and construction equipment, fewer than in 2021 but more than in 2020.

Farmer perspectives on local roads and bridges

- Among farmer respondents, 34% indicated that county road and bridge conditions in their areas were excellent or good. Forty-three percent rated them as fair and 22% rated them as poor.
- Regarding the change in conditions during the past five years, 52% of respondent farmers indicated conditions had improved a lot or somewhat, while 26% indicated they had deteriorated somewhat or a lot.
- When asked about specific challenges when using local roads and bridges to make farm-to-farm or farm-to-market trips, the most common issue reported was struggling with road width (96%). More than 70% of respondents also indicated that pavement condition, bridge dimensions, bridge weight restrictions, and turning radii at intersections are challenges. When given the opportunity to identify other obstacles, three or more respondents identified peaked or rough conditions at railroad crossings, roundabout sizing and curbing, utility lines and poles, driver behavior and awareness, and restrictions on roads in cities and towns. Many respondents indicated there were times they had to detour around an obstacle or cross a bridge, railroad crossing, or intersection with extreme care.

RECOMMENDATIONS

The research team makes the following recommendations for strategic improvement of local roads and bridges, and robust data collection for tracking assets and conditions over time.

Improving roads and bridges

- Farmers reported varied road and bridge conditions across counties. Even in counties reporting generally good road and bridge conditions, many farmers still face challenges during planting and harvest seasons such as road width, bridge dimensions, bridge weight restrictions, and turning radii at intersections. County officials should evaluate these issues strategically using traffic collision and other data when planning for the preservation, reconstruction, and safety improvements of the relevant road and bridge assets.
- Community Crossings Matching Grants account for a substantial proportion of the increased funding that counties have received since road and bridge funding legislation passed in 2016 and 2017. It has been an important resource for counties in working to improve local road and bridge conditions.

  In spring 2019, the research team conducted focus groups with stakeholders in six counties. At that time, some counties reported difficulties in utilizing these funds to complete bridge projects and when paired with other sources to complete parts of more complex road projects. INDOT adjusted the administrative requirements of the program in 2019. Since then, INDOT has reported that grant funds typically are used on paving projects. This appears to be, in part, an artifact of the grant's administrative requirements, particularly a two-year project window to ensure that a unit can apply in future grant cycles. As counties make network improvements over time, additional flexibility in the program's administrative requirements may be necessary to ensure that grants can be applied to each county's most critical priorities.

Improving tracking data

It is critical that policy makers have good data that allows them to track assets and conditions over time. This type of data helps support the need for continued resources for local roads and bridges as well as maximizing the utility of these limited resources at the local level. The research team offers the following recommendations to improve data collection, quality, and consistency among local agencies. The research team recommends consideration and implementation by LTAP, the Association of Indiana Counties (AIC), the Association of Indiana County Commissioners (IACC), in collaboration with local agencies and officials.

- Ensure robust, consistent local asset inventories and ratings systems for county roads and bridges
    - Discrepancies in pavement inventory mileages still exist in many counties between asset management plans and operational reports. Information also varies from year to year. For example, one county did not report chip seal mileage in 2023 resulting in an inventory loss from the 2022 inventory. Counties should work to resolve these discrepancies and ensure all current assets appear in the road inventory.
    - Within asset management plans, some counties report inventory in particular pavement types but do not rate all of those assets. Counties should be required to rate all assets, even when inventories for particular pavement types are small. For instance, in 2023, 16 counties did not rate gravel roads and 16 counties assigned the same rating to all gravel roads.
    - Inconsistencies remain in identifying pavements as chip seal. As suggested in previous reports, counties report using chip seal treatments to upgrade gravel roads and as a preservation application for asphalt pavements. In the past, the research team also found some counties define asphalt pavements with a chip seal treatment as asphalt when rating them in asset management plans but as chip seal in the annual operational reports. Only treatments on a gravel base should be reported as chip seal. Consistent definitions across counties and across reports are critical to creating a meaningful analysis of conditions. Resolving this issue requires good communication between highway departments and the firms they use to complete pavement ratings.
    - Counties also use a mix of 5-point and 10-point scales to rate gravel roads. In 2023, 32 counties used the 5-point PASER scale and 33 used the 10-point PASER scale. The research team recommends all counties use the 5-point scale published by the University of Wisconsin—Madison.[6]
- Collect additional data
    - As of this report, there is no secondary data resource documenting bridge work. The current structure of operational reports allows some segmentation of bridge activities for bridge-specific funds. However, MVH and LRS disbursements currently include both road and bridge activities. One option would be to add completed treatment to asset management plans. Currently, only prospective projects appear in these plans. Another option would be to restore some of the detail about road and bridge activities that previously was available in Section 3 in the annual operational report. This latter solution also would allow additional indicators and analyses of spending for roads and bridges.
    - To better allow comparisons across counties, it would be useful to create a standard list of other revenue counties have reported in the annual operational reports that can be used to categorize spending and revenue in addition to local fund names. Another option would be to encourage counties to use road and bridge identifiers in fund names.
- Resolve inconsistencies in reporting pavement treatments.
    - Some counties reported treating no pavement while others reported treating 100% of asphalt and gravel pavements. This may reflect varied interpretations among counties about the definition of treatment as well as the classification of what it means to treat a mile of pavement compared to only treating a small portion of that mile. Clear and consistent guidance may help to resolve these discrepancies.
    - Current treatments options—as defined for local asset management plans—are quite varied in scope. These range from full asphalt or concrete reconstruction to minor treatments such as patching and filling

[6] Walker, Etine, and Kummer, 2015b.

potholes. Better consistency is needed in reporting across counties. It may be useful in future analyses to distinguish between levels of treatment that reflect construction or reconstruction and others that could better be characterized as maintenance.

- In 2023, eight counties submitted unit-price databases containing costs of various treatment types with their asset management plans. These indicate a wide range of unit costs for similar treatments. For example, chip seal treatment unit prices varied from $11,000/mile to $30,000/mile. If more counties submitted these unit costs, a better estimate of future treatment costs could be generated.

- Improve winter operations reporting.
  - Winter operations has been a spending category in the annual operational reports for only a few years. Several counties reported no winter operations spending in one or more of the past three years. In 2022, seven counties reported no winter operations spending. These remaining counties should be encouraged to find a method to distinguish these costs from the other maintenance and operations costs. Effective data will allow policy makers to better understand the variability of this annual expense and the additional costs incurred by northern counties.

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APPENDIX A: METHODOLOGY

Road inventory and conditions

Road inventory data by pavement type is reported in both the county annual operational reports and in asset management plans. In the current analysis, the asset management data is used for both the analysis of the county road inventory and road conditions. In a previous report, the research team also utilized annual operational report data to analyze the full inventory. This change was made to provide more consistency across elements of the analysis.

Inventory data in the annual operational reports is available in an electronic format for 2018–23. Condition data from asset management plans currently is available for 2019–23. The research team has had access to data for all counties for three years. The current analysis utilizes data from the 2020–22 annual operational reports, the 2021–23 asset management plans, and the 2021–23 National Bridge Inventory. For each study county, there is a summary of pavements by type and rating, as well as a weighted average rating. Average ratings are normalized—or weighted—based on the relative number of pavement miles for each rating. The analysis also includes the number of pavement miles treated in each county. Data comparisons are made for each county for the three most recent years of available data, as well as the aggregate of all counties and counties by population category.

Road condition data comes from the asset management plans submitted to the Local Technical Assistance Program (LTAP) Data Management Portal[7] for participation in the INDOT Community Crossings Matching Grant program. The program requires counties update pavement ratings every two years. Counties generally rate pavements using the Pavement Surface Evaluation and Rating (PASER) system promoted and taught by LTAP and described in detail in its 2017 guide *Indiana local roads—An asset management guide for cities, towns and counties*. Additional guidance by pavement type is published by the Wisconsin Transportation Information Center and by the Center for Technology and Training.[8,9] Five counties choose to use the Pavement Condition Index (PCI) to evaluate pavements.

Tables A1–A3 summarize the PASER rating systems for asphalt, chip seal, and gravel roads, respectively. For the years included in this analysis, asphalt and chip seal roads generally were rated using 10-point scales. Readers can reference the *Sealcoat PASER guide*[10] for more detail on the 5-point rating system. Counties rated gravel roads using a combination of 5-point and 10-point scales. Ratings for the 5-point scale are provided in Table A3. It is unclear what guidance counties are using as the basis of the 10-point scale. For counties that use PCI, the rating categories are as follows: good (71–100), fair (55–70), and poor (0–54).

There is no data within asset management plans that identifies which rating scale non-PCI counties use. The research team has classified counties that have road segment ratings for the three-year study period that are equal to or less than five as using a 5-point scale, and counties that have road segments rated greater than five as using a 10-point scale.

[7] LTAP Data Management Portal https://ltapdms.itap.purdue.edu/ltap
[8] Walker, D., Etine, L., and Kummer, S., 2015a, and 2015b; Center for Technology and Training, 2022.
[9] The Transportation Information Center also publishes a PASER guide for asphalt pavements: Walker, D., Etine, L., and Kummer, S., 2013a.
[10] Walker, D., Etine, L., and Kummer, S., 2001/2013b.

Table A1. Asphalt PASER rating guide

PASER rating	Condition	Suggested level of repair
9 and 10	Excellent	No maintenance required
8	Very good	Little to no maintenance
7	Good	Preventive maintenance
5 and 6	Fair to good	Nonstructural preservation treatment
3 and 4	Poor to fair	Structural repair
1 and 2	Failed	Reconstruction

Sources: Applied Pavement Technology, Inc.; Walker, D., Etine, L., and Kummer, S., 2013a.

Table A2. Chip seal PASER rating guide

PASER rating	Condition	Visible distress	Condition description, drainage, and recommended improvement
10	Good	No distress	New construction. No maintenance needed.
9		No distress	Like new. No maintenance needed.
8		First signs of distress	Limited edge distress. Routine maintenance. Minor edge seal.
7	Fair	Minor distress	Less than 5% edge distress, lane distress, or raveling. Minor asphalt or spray injection patching. Possible single-application seal coat.
6		Moderate distress	Less than 10% edge distress, lane distress, or raveling. Moderate asphalt or spray injection patching. Single-application seal coat.
5		Distressed	Less than 20% edge distress, lane distress, or raveling. Moderate asphalt or spray injection patching. Single-application seal coat with up to half needing double-application seal coat.
4	Poor	Distressed	Less than 30% edge distress or lane distress or rutting of one-half inch to 1 inch. Asphalt or spray injection patching and double-application seal coat.
3		Distressed	Less than 50% edge distress or lane distress or rutting of 1 to 2 inches. Wedge and/or asphalt or spray injection patching and double- or triple-application seal coat. Possible crush-and-shape first.
2		Distressed	Less than 50% edge distress or lane distress or rutting greater than 2 inches. Reconstruct by crush-and-shape prior to new seal coat surface, possible return to gravel.
1		Extensive distress	Visible distress on more than 50% of surface area. Reconstruct by crush-and-shape prior to new seal coat surface or return to gravel.

Source: Center for Technology and Training, 2022.

Table A3. Gravel PASER rating guide

PASER rating	Condition	Condition description and treatment measures
5	Excellent	New construction or total reconstruction. Excellent drainage. Little or no maintenance needed.
4	Good	Recently regraded. Good crown and drainage throughout. Adequate gravel for traffic. Routine grading and dust control may be needed.
3	Fair	Shows traffic effects. Regrading (reworking) necessary to maintain. Needs some ditch improvement and culvert maintenance. Some areas may need additional gravel.
2	Poor	Travel at slow speeds (less than 25 mph) is required. Needs additional new aggregate. Major ditch construction and culvert maintenance also required.
1	Failed	Travel is difficult and road may be closed at times. Needs complete rebuilding and/or new culverts.

Source: Walker, D., Etine, L., and Kummer, S., 2013b.

Road treatment

An important part of the local asset management plans is reporting any treatments for road segments each year. Counties are provided a variety of treatment options from which to choose (Figure A1), ranging from full reconstruction to maintenance activities.

Figure A1. Road treatment options

- Asphalt full depth repairs
- Cape seal
- Chip seal
- Chip seal—Double
- Chip seal—Double and fog
- Chip seal—Triple
- Chip seal and fog
- Chip seal and microsurfacing
- Chip seal, patch, and berming
- Cold mix asphalt
- Concrete—Full depth repairs
- Concrete—Joint/crack sealing
- Concrete—Partial depth repairs
- Concrete—Slab replacement
- Crack seal
- Crack seal and chip seal
- Crack seal and microsurface
- Crack seal and patching
- Crack seal and rejuvenator
- Dust control
- Fog seal
- Full-depth reclamation with asphalt
- Full-depth reclamation with chip seal
- Liquid road
- Microsurface
- Microsurface and patching
- Microsurface double
- Microsurface double and patch
- Mill and chip seal
- Mill and double chip seal
- Mill and overlay—1"
- Mill and overlay—1.5"
- Mill and overlay—2"
- Mill and overlay—2.5"
- Mill and overlay—3"
- Mill and overlay—4"
- Mill and triple chip seal
- New road construction
- Overlay < 1.5"
- Overlay—1.5"
- Overlay—2"
- Overlay—2.5"
- Overlay—3"
- Overlay—4"
- Patching/pothole filling
- Pug mix asphalt
- Reconstruction—Asphalt
- Reconstruction—Concrete
- Rejuvenator
- Roller compacted concrete
- Slurry seal
- Thin concrete overlay

Source: LTAP Data Management System.

Bridge inventory and conditions

Biannual inspections are performed on all county bridges, and inspection results are recorded in the National Bridge Inventory (NBI) database. This is a rolling database that is updated as inspection data is submitted. In the current study, the research team is utilizing data downloaded in October 2021, December 2022, and October 2023. The 2023 data includes inspection data principally from 2022 and 2023.

Bridge conditions are recorded for four component categories:

- Bridge deck: riding surface of the bridge
- Superstructure: structure that supports the bridge deck (e.g., beams, girders, and trusses)
- Substructure: components that support superstructure (e.g., piers, bents, and foundation)
- Culvert

For each study county, there is a current inventory by component and rating, an average rating by component, a list of bridges with structurally deficient components (those at risk of imminent failure), and a list of failed bridges. There is no direct information about treatment activity available. Bridge-specific spending data is provided to estimate relative local effort, although admittedly it is not a very robust proxy.

The rating scale for bridge decks, superstructures, and substructures is shown in Table A5. A 10-point rating scale (0–9) is used for each category. A rating of 5 or 6 typically warrants maintenance and repair. A rating of 1–4 warrants rehabilitation or reconstruction, while a rating of 0 is considered failed and should be taken out of service.

A culvert is defined as a structure greater than 20 feet in length, without a deck. The roadway over the structure is set on fill. A condition rating guide for culverts is summarized in Table A6.

Table A4. Bridge condition rating guide

Rating	Condition	Description	Suggested level of repair
N	Not applicable	Not applicable.	No maintenance required
9	Excellent	No problems noted.	Schedule preventive maintenance
8	Very good	No problems noted.	
7	Good	Some minor problems.	
6	Satisfactory	Structural elements show some minor deterioration.	Preventive maintenance or repair
5	Fair	All primary structural elements are sound but may have minor section loss, cracking, spalling, or scour.	
4	Poor	Advanced section loss, deterioration, spalling, or scour.	Structurally deficient—rehabilitation or reconstruction
3	Serious	Loss of section, deterioration, spalling, or scouring have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.	
2	Critical	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	Imminent failure condition—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 the bridge back into light service.	
0	Failed	Out of service and beyond corrective action.	

Source: FWHA, 2022.

Table A5. Culvert condition rating guide

Code	Condition	Description
N	Not applicable	Not applicable.
9	Good	No deficiencies.
8		No noticeable or noteworthy deficiencies which affect the condition of the culvert. Insignificant scrape marks caused by drift.
7		Shrinkage cracks, light scaling, and insignificant spalling which does not expose reinforcing steel. Insignificant damage caused by drift with no misalignment and not requiring corrective action. Some minor scouring has occurred near curtain walls, wingwalls, or pipes. Metal culverts have a smooth symmetrical curvature with superficial corrosion and no pitting.
6	Fair	Deterioration or initial disintegration, minor chloride contamination, cracking with some leaching, or spalls on concrete or masonry walls and slabs. Local minor scouring at curtain walls, wingwalls, or pipes. Metal culverts have a smooth curvature, nonsymmetrical shape, significant corrosion, or moderate pitting.
5		Moderate to major deterioration or disintegration, extensive cracking and leaching, or spalls on concrete or masonry walls and slabs. Minor settlement or misalignment. Noticeable scouring or erosion of curtain walls, wingwalls, or pipes. Metal culverts have significant distortion and deflection in one section, significant corrosion, or deep pitting.
4	Poor	Large spalls, heavy scaling, wide cracks, considerable efflorescence, or opened construction joint permitting loss of backfill. Considerable settlement or misalignment. Considerable scouring or erosion of curtain walls, wingwalls, or pipes. Metal culverts have significant distortion and deflection throughout, extensive corrosion, or deep pitting.
3		Any condition described in Code 4, but which is excessive in scope. Severe movement or differential settlement of the segments, or loss of fill. Holes may exist in walls or slabs. Integral wingwalls nearly severed from culvert. Severe scour or erosion at curtain walls, wingwalls, or pipes. Metal culverts have extreme distortion and deflection in one section, extensive corrosion, or deep pitting with scattered perforations.
2	Imminent failure	Integral wingwalls collapsed, severe settlement of roadway due to loss of fill. Section of culvert may have failed and can no longer support embankment. Complete undermining at curtain walls and pipes. Corrective action required to maintain traffic. Metal culverts have extreme distortion and deflection throughout with extensive perforations due to corrosion.
1	Failed	Bridge closed. Corrective action may put the bridge back into light service.
0		Bridge closed. Replacement necessary.

Source: FHWA, 1995.

Spending and revenue

Counties are required to submit an annual operational report to Indiana State Board of Accounts (SBOA) and LTAP. In 2019, counties began using a new operational report form approved by SBOA. This new form established a standard format that is expected to improve data reporting and provide more consistency of data across agencies. These reports show county revenue and expenditures for highway department operations (roads and bridges), including revenue and the mix of spending in broad activity categories and by funding source.

Road and bridge expenditures are categorized as: administration and unallocated; construction, reconstruction, and preservation; maintenance and repair; winter operations; and other financing uses (Figure A7). It is not possible to parse expenditures made on roads and bridges specifically, but some bridge-specific spending can be identified using fund names. In 2018, the Indiana General Assembly required at least 50% of road funding to be spent on new construction, reconstruction, and preservation activities. Most counties deposit at least 50% of their state Motor Vehicle Highway (MVH) distributions into a Motor Vehicle Highway Restricted account to ensure the legal requirement is met.

The analysis includes 2020–22 annual operational report data for each study county, including total spending, spending by activity, and types of revenue. When possible, revenue and spending are parsed for bridge construction and reconstruction. For the current analysis, the research team chose to exclude all spending and revenue identified as other financing uses. These categories of spending and revenue include accounting transactions that often do not reflect true new spending or revenue and can create a skewed picture of local realities.

The research team also supplemented the revenue data in the annual operational reports with data from the Indiana Department of Transportation Community Crossings Matching Grant awards; local Annual Financial Reports submitted to the SBOA and available on the Gateway for Local Governments website; the Indiana Office of the Comptroller Motor Vehicle Highway Account and Local Roads and Streets distributions; and County Motor Vehicle Excise Surtax and Wheel Tax collected by Indiana Bureau of Motor Vehicles and published in the *Indiana handbook of taxes, revenues, and appropriations* from the Indiana Legislative Services Agency. Tables showing this data appear in Appendix B.

Figure A2. Annual operations report spending activity definitions

General administration and unallocated:
Costs of an administrative nature and not allocated to any specific road or bridge project. These expenses, commonly referred to as overhead, include supervisory and support staff personal services, supplies and equipment, general office expenses (e.g., rent, printing, utilities, insurance, etc.), facility expenses (e.g., repairs, maintenance, insurance), and vehicle expenses. Other types of general expenses would include utilities for traffic signals and street lights, capital outlays (e.g., acquisition of land, buildings, and improvements other than buildings including the acquisition of equipment), and annual pavement and bridge inspections. In the subcategory of "Other services and charges," disbursements would include incidental expenses not associated with roads or bridges but performed by agency forces, such as mowing grass in a county or city park, or snow and ice removal at county or municipal facilities.

Construction, reconstruction, and preservation:
Costs and expenses for work performed by internal forces or outside contractors that result in a new or improved roadway—paved or unpaved, including capacity enhancements. Activities result in the structural improvement of a roadway improving its ability to support vehicle traffic. Costs include personnel, material, and equipment expenses. Preservation is defined as actions or strategies applied to existing infrastructure that prevent, delay, or reduce further deterioration. These actions and strategies also maintain or improve the functional condition of the system—without increasing structural capacity—and extend the service life of the infrastructure. Preservation activities are intended to correct infrastructure problems before the structural integrity is impacted. Preservation is a broad category of treatments that include activities such as thin overlays or microsurfacing. Nonstructural preservation treatments are usually less than 2 inches in depth and are designed to address age-related problems—such as block cracking—or distress caused by exposure to the elements, such as transverse cracking. Crack sealing, patching of pavement, and deck patching for bridges would be included in this category. Costs include materials, personnel, contracted services, and equipment rental/operation expenses.

Pavement: Costs associated with activities that retain or extend the current roadway condition. This includes treatments to curbs, gutters, and paved shoulders and alleys. Pavement preservation is a broad category of treatments that include nonstructural treatments that are usually less than 2 inches in depth and are designed to address age-related problems (such as block cracking) or distress caused by exposure to the elements (such as transverse cracking). Some examples of such treatments are thin overlays, wedge and leveling, mill and overlays, chip seals, fog seals, scrub seals, slurry seals, microsurfacing, and crack sealing. Activities such as grinding, grading unpaved sections, line striping, raised pavement markers, and similar activities are also considered pavement preservation.

Figure A2. Annual operations report spending activity definitions (cont.)

Bridges: Costs associated with activities that preserve a bridge and its approaches. Activities include deck patching, sealing, painting, repairing and maintaining bearing assemblies and joints, clearing brush and debris accumulations at piers, deck overlays, scour repair, substructure repair, repairing approach slabs and guardrails, and repairing bridge railings. Work on culverts, pipes, and other small drainage structures underneath roads and streets are included in this category.

Right of way: Costs associated with activities that occur in the area between pavement (including paved shoulders) and right-of-way boundaries. This would include, but is not limited to, the preservation, replacement and repair of standard Manual on Uniform Traffic Control Devices (MUTCD) signs, traffic signals, barriers, guardrails, sidewalks and ramps, unpaved shoulders (e.g., berming), vegetation control for infrastructure preservation purposes only, and inspection of roadside assets for the purpose of asset management planning. It would also include work performed on drainage assets such as ditches, pipes, catch basins, underdrains and their outlets, etc.

Maintenance and repair:

Maintenance and repair expenses are disbursements associated with the routine maintenance and repair of paved and unpaved roads, streets, bridges, and highways. Maintenance and repair disbursements retain the asset above a certain condition level established by a unit and encompasses work that is performed in reaction to an event, season, or activities that are done for short-term operational need that do not have preservation value. Costs include materials, personnel, and equipment rental/operation expenses.

Winter operations:

Costs associated prior to, during, and following winter events. These include costs for planning, material purchases and management, equipment preparation and usage, and human resources. They also include the use of external resources and services contracted in winter operations.

Other maintenance and repair:

Pavement: Pavement maintenance includes activities such as graffiti removal, cleaning, pothole filling and patching, event cleanup, repairs due to vehicular accidents, or storm damage to roadways.

Bridges: Bridge maintenance includes activities such as graffiti removal, deck cleaning, repairs due to vehicular accidents, or storm damage to bridges.

Right-of-way operations: Costs associated with routine activities that occur in the area between pavement (including paved shoulders) and right-of-way boundaries. This would include—but is not limited to—maintenance and repair of signs damaged from accidents, grass cutting, tree trimming, litter control (including dead animal removal), and inspection of resident complaints.

Other financing uses

Expenses and disbursements related to debt service, loan payments, investments, and other types of financial instruments to fund road and bridge projects.

Source: State Board of Accounts, Form 54400 (8-19).

APPENDIX B: SUPPLEMENTAL REVENUE DATA

Table B1. County Local Roads and Streets and Motor Vehicle Highway distributions—2020–23

County	Population category	CY 2023			CY 2022			CY 2021			CY 2020			% difference MVH + LRS CY 2020–22
		2023 LRS	2023 MVH	2023 total	2022 LRS	2022 MVH	2022 total	2021 LRS	2021 MVH	2021 total	2020 LRS	2020 MVH	2020 total	
Adams	B	$537,285	$3,494,647	$4,031,933	$517,428	$3,371,178	$3,888,606	$502,646	$3,238,864	$3,741,510	$461,290	$2,931,377	$3,392,667	15%
Allen	C	$3,143,161	$11,862,222	$15,005,383	$3,009,030	$11,407,437	$14,416,467	$2,806,079	$10,897,334	$13,703,413	$2,557,990	$9,854,360	$12,412,349	16%
Bartholomew	C	$951,669	$4,454,267	$5,405,936	$941,515	$4,309,847	$5,251,362	$936,407	$4,122,840	$5,059,247	$853,409	$3,702,682	$4,556,091	15%
Benton	A	$163,120	$3,044,921	$3,208,041	$155,923	$2,933,368	$3,089,291	$150,157	$2,812,798	$2,962,954	$136,963	$2,543,228	$2,680,191	15%
Blackford	A	$202,746	$1,744,393	$1,947,139	$201,589	$1,690,478	$1,892,067	$196,893	$1,623,407	$1,820,300	$179,690	$1,467,947	$1,647,637	15%
Boone	C	$663,740	$4,469,803	$5,133,543	$649,852	$4,295,858	$4,945,710	$655,866	$4,130,631	$4,786,497	$594,035	$3,738,303	$4,332,337	14%
Brown	A	$377,574	$2,110,982	$2,488,557	$362,254	$2,028,849	$2,391,103	$351,677	$1,944,101	$2,295,778	$320,881	$1,756,804	$2,077,684	15%
Carroll	A	$418,159	$3,699,634	$4,117,793	$404,324	$3,566,664	$3,970,988	$389,600	$3,416,864	$3,806,463	$358,417	$3,087,687	$3,446,104	15%
Cass	B	$654,388	$4,387,877	$5,042,264	$639,806	$4,234,459	$4,874,265	$620,719	$4,060,435	$4,681,154	$569,885	$3,669,471	$4,239,356	15%
Clark	C	$1,040,696	$4,318,335	$5,359,031	$989,961	$4,060,072	$5,050,033	$952,112	$3,866,699	$4,818,811	$864,444	$3,474,640	$4,339,085	16%
Clay	A	$481,146	$3,410,056	$3,891,202	$466,336	$3,287,584	$3,753,920	$449,014	$3,151,214	$3,600,228	$411,298	$2,849,838	$3,261,136	15%
Clinton	B	$566,930	$3,924,839	$4,491,769	$549,785	$3,789,574	$4,339,359	$534,381	$3,636,504	$4,170,885	$492,938	$3,291,234	$3,784,172	15%
Crawford	A	$215,621	$2,291,808	$2,507,429	$207,725	$2,207,606	$2,415,330	$198,313	$2,114,299	$2,312,612	$181,144	$1,911,156	$2,092,299	15%
Daviess	B	$506,029	$3,993,833	$4,499,862	$490,661	$3,848,303	$4,338,964	$470,193	$3,682,651	$4,152,844	$426,833	$3,320,540	$3,747,373	16%
Dearborn	C	$960,298	$3,254,995	$4,215,293	$923,976	$3,130,047	$4,054,023	$889,121	$3,002,714	$3,891,834	$817,678	$2,719,086	$3,536,764	15%
Decatur	A	$472,460	$3,311,300	$3,783,760	$460,841	$3,194,444	$3,655,285	$449,855	$3,061,869	$3,511,724	$412,327	$2,763,080	$3,175,407	15%
DeKalb	B	$760,546	$3,994,885	$4,755,431	$736,935	$3,832,269	$4,569,204	$711,708	$3,668,686	$4,380,395	$650,864	$3,317,225	$3,968,089	15%
Delaware	C	$904,653	$5,063,818	$5,968,471	$887,076	$4,904,374	$5,791,450	$874,221	$4,723,825	$5,598,047	$804,198	$4,266,011	$5,070,209	14%
Dubois	B	$737,695	$3,802,994	$4,540,689	$704,772	$3,657,434	$4,362,206	$682,655	$3,502,795	$4,185,449	$628,139	$3,170,305	$3,798,443	15%
Elkhart	C	$2,744,951	$8,356,402	$11,101,354	$2,665,455	$8,054,425	$10,719,881	$2,566,837	$7,695,653	$10,262,489	$2,337,061	$6,947,981	$9,285,042	15%
Fayette	A	$378,894	$2,159,250	$2,538,144	$366,922	$2,080,301	$2,447,224	$353,411	$1,993,958	$2,347,369	$324,435	$1,802,648	$2,127,083	15%
Floyd	C	$1,029,925	$3,008,783	$4,038,708	$995,352	$2,903,979	$3,899,331	$973,345	$2,802,752	$3,776,097	$899,137	$2,542,188	$3,441,325	13%
Fountain	A	$303,853	$3,164,498	$3,468,351	$294,104	$3,049,984	$3,344,087	$283,709	$2,922,854	$3,206,563	$262,173	$2,646,407	$2,908,580	15%
Franklin	A	$523,052	$3,232,903	$3,755,954	$499,300	$3,106,863	$3,606,163	$478,547	$2,971,008	$3,449,554	$439,976	$2,684,169	$3,124,145	15%
Fulton	A	$394,834	$3,756,118	$4,150,952	$384,626	$3,618,407	$4,003,034	$369,962	$3,467,190	$3,837,152	$339,000	$3,134,716	$3,473,716	15%
Gibson	B	$581,517	$4,697,748	$5,279,265	$566,883	$4,534,333	$5,101,216	$554,105	$4,357,233	$4,911,337	$509,724	$3,940,501	$4,450,225	15%
Grant	C	$677,600	$4,552,341	$5,229,941	$663,712	$4,395,692	$5,059,404	$639,443	$4,217,329	$4,856,771	$589,189	$3,818,896	$4,408,086	15%
Greene	B	$594,596	$4,377,409	$4,972,005	$574,129	$4,215,213	$4,789,342	$549,920	$4,036,358	$4,586,278	$503,551	$3,647,982	$4,151,532	15%
Hamilton	C	$1,410,404	$8,499,510	$9,909,914	$1,346,207	$8,029,383	$9,375,590	$1,341,898	$7,708,353	$9,050,252	$1,233,544	$6,968,863	$8,202,407	14%
Hancock	C	$1,151,276	$4,348,614	$5,499,889	$1,117,010	$4,170,437	$5,287,446	$1,115,145	$3,994,965	$5,110,109	$1,023,681	$3,620,803	$4,644,483	14%
Harrison	B	$894,424	$4,511,901	$5,406,324	$856,721	$4,336,833	$5,193,555	$827,083	$4,112,450	$4,939,533	$766,111	$3,651,206	$4,417,317	18%
Hendricks	C	$2,065,139	$6,355,947	$8,421,085	$2,022,276	$6,103,533	$8,125,808	$2,046,840	$5,846,361	$7,893,201	$1,857,296	$5,275,992	$7,133,288	14%
Henry	B	$819,467	$4,242,259	$5,061,726	$797,551	$4,086,542	$4,884,093	$763,691	$3,916,999	$4,680,690	$705,252	$3,546,829	$4,252,081	15%
Howard	C	$777,556	$4,065,692	$4,843,247	$765,530	$3,934,385	$4,699,915	$745,182	$3,769,134	$4,514,316	$683,663	$3,408,898	$4,092,561	15%
Huntington	B	$632,600	$3,604,810	$4,237,410	$615,058	$3,483,875	$4,098,932	$597,630	$3,348,390	$3,946,020	$547,842	$3,028,758	$3,576,600	15%

Table B1. County Local Roads and Streets and Motor Vehicle Highway distributions—2020–23 (cont.)

County	Population category	CY 2023			CY 2022			CY 2021			CY 2020			% difference MVH + LRS CY 2020–22
		2023 LRS	2023 MVH	2023 total	2022 LRS	2022 MVH	2022 total	2021 LRS	2021 MVH	2021 total	2020 LRS	2020 MVH	2020 total	
Jackson	B	$778,198	$4,043,595	$4,821,793	$758,508	$3,904,317	$4,662,826	$731,953	$3,738,220	$4,470,173	$660,582	$3,372,097	$4,032,679	16%
Jasper	B	$701,302	$4,667,359	$5,368,660	$676,481	$4,500,907	$5,177,388	$654,210	$4,324,903	$4,979,113	$599,138	$3,913,588	$4,512,726	15%
Jay	A	$359,589	$3,562,529	$3,922,118	$349,845	$3,433,792	$3,783,637	$337,776	$3,291,613	$3,629,389	$308,839	$2,973,768	$3,282,607	15%
Jefferson	B	$547,728	$2,931,602	$3,479,329	$532,909	$2,828,175	$3,361,085	$516,121	$2,711,916	$3,228,037	$475,665	$2,453,112	$2,928,777	15%
Jennings	A	$555,469	$3,516,062	$4,071,530	$542,293	$3,345,358	$3,887,651	$524,853	$3,210,266	$3,735,119	$477,641	$2,900,911	$3,378,552	15%
Johnson	C	$1,527,899	$5,363,088	$6,890,987	$1,503,436	$5,135,633	$6,639,069	$1,508,820	$4,911,158	$6,419,978	$1,373,982	$4,426,214	$5,800,196	14%
Knox	B	$560,218	$4,403,267	$4,963,485	$544,874	$4,249,638	$4,794,512	$518,391	$4,070,588	$4,588,979	$472,252	$3,673,438	$4,145,689	16%
Kosciusko	C	$1,305,384	$6,439,119	$7,744,503	$1,270,311	$6,207,898	$7,478,209	$1,236,145	$5,949,924	$7,186,069	$1,143,734	$5,380,105	$6,523,839	15%
Lagrange	B	$589,693	$3,967,175	$4,556,868	$570,879	$3,824,719	$4,395,599	$540,172	$3,654,557	$4,194,729	$496,366	$3,304,422	$3,800,788	16%
Lake County	C	$1,460,234	$9,564,798	$11,025,032	$1,432,456	$9,259,371	$10,691,827	$1,391,438	$8,886,180	$10,277,618	$1,284,063	$8,072,966	$9,357,029	14%
La Porte	C	$1,416,394	$6,353,571	$7,769,964	$1,386,517	$6,144,450	$7,530,966	$1,338,064	$5,899,822	$7,237,886	$1,229,877	$5,334,495	$6,564,372	15%
Lawrence	B	$792,748	$3,785,508	$4,578,256	$772,018	$3,651,974	$4,423,992	$742,553	$3,495,372	$4,237,925	$680,967	$3,158,761	$3,839,729	15%
Madison	C	$1,279,756	$5,965,406	$7,245,162	$1,242,570	$5,752,059	$6,994,629	$1,197,441	$5,516,441	$6,713,882	$1,097,910	$4,988,941	$6,086,851	15%
Marshall	B	$850,954	$4,789,349	$5,640,303	$819,203	$4,614,133	$5,433,336	$787,535	$4,419,744	$5,207,279	$723,653	$3,994,438	$4,718,091	15%
Martin	A	$198,028	$1,906,959	$2,104,987	$192,923	$1,837,868	$2,030,791	$185,671	$1,761,636	$1,947,306	$169,668	$1,594,404	$1,764,071	15%
Miami	B	$618,640	$4,014,870	$4,633,510	$601,569	$3,870,735	$4,472,303	$580,736	$3,713,182	$4,293,918	$538,706	$3,362,576	$3,901,282	15%
Monroe	C	$1,348,481	$4,903,446	$6,251,927	$1,304,875	$4,754,332	$6,059,207	$1,254,495	$4,565,603	$5,820,099	$1,158,338	$4,145,113	$5,303,451	14%
Montgomery	B	$680,605	$4,261,295	$4,941,900	$651,524	$4,115,130	$4,766,654	$627,022	$3,944,402	$4,571,424	$575,070	$3,567,048	$4,142,118	15%
Morgan	C	$1,189,952	$4,440,612	$5,630,565	$1,151,283	$4,265,844	$5,417,126	$1,119,988	$4,087,755	$5,207,743	$1,030,865	$3,701,232	$4,732,097	14%
Newton	A	$302,834	$3,167,813	$3,470,648	$291,278	$3,051,409	$3,342,687	$279,849	$2,924,022	$3,203,871	$259,131	$2,645,237	$2,904,369	15%
Noble	B	$863,285	$4,422,568	$5,285,852	$835,899	$4,264,247	$5,100,146	$805,283	$4,079,432	$4,884,715	$734,253	$3,676,702	$4,410,956	16%
Ohio	A	$123,718	$886,164	$1,009,881	$116,712	$851,482	$968,194	$113,604	$816,562	$930,166	$103,781	$743,766	$847,547	14%
Orange	A	$346,190	$3,047,288	$3,393,478	$337,709	$2,938,705	$3,276,414	$324,067	$2,816,897	$3,140,964	$294,172	$2,536,357	$2,830,529	16%
Owen	A	$450,881	$3,174,049	$3,624,930	$433,452	$3,054,208	$3,487,660	$417,532	$2,926,487	$3,344,019	$383,441	$2,646,280	$3,029,722	15%
Parke	A	$288,009	$3,473,820	$3,761,829	$277,731	$3,344,278	$3,622,010	$264,184	$3,204,748	$3,468,932	$241,516	$2,894,972	$3,136,488	15%
Perry	A	$341,107	$2,552,677	$2,893,784	$328,995	$2,456,975	$2,785,970	$315,072	$2,352,658	$2,667,730	$285,767	$2,124,928	$2,410,695	16%
Pike	A	$252,189	$2,671,277	$2,923,466	$242,734	$2,574,665	$2,817,399	$232,929	$2,468,178	$2,701,107	$215,260	$2,229,766	$2,445,026	15%
Porter	C	$1,973,076	$6,326,380	$8,299,456	$1,914,817	$6,098,119	$8,012,936	$1,858,445	$5,854,484	$7,712,929	$1,711,855	$5,300,528	$7,012,383	14%
Posey	A	$489,242	$3,602,415	$4,091,657	$475,644	$3,472,995	$3,948,639	$460,651	$3,330,877	$3,791,528	$420,914	$3,011,634	$3,432,548	15%
Pulaski	A	$252,559	$4,004,870	$4,257,429	$246,036	$3,862,355	$4,108,391	$236,097	$3,700,765	$3,936,862	$218,455	$3,346,185	$3,564,641	15%
Putnam	B	$660,172	$3,947,088	$4,607,259	$634,121	$3,799,298	$4,433,419	$608,794	$3,637,738	$4,246,531	$554,420	$3,284,647	$3,839,067	15%
Randolph	A	$444,508	$4,137,370	$4,581,878	$431,135	$3,985,517	$4,416,651	$415,719	$3,820,557	$4,236,276	$383,860	$3,454,798	$3,838,658	15%
Ripley	A	$569,105	$3,671,902	$4,241,007	$547,120	$3,535,806	$4,082,925	$528,031	$3,385,895	$3,913,926	$485,592	$3,062,233	$3,547,825	15%
Rush	A	$315,654	$3,556,733	$3,872,386	$307,940	$3,428,851	$3,736,791	$299,315	$3,288,534	$3,587,849	$273,003	$2,974,629	$3,247,631	15%
St. Joseph	C	$2,952,405	$8,872,521	$11,824,926	$2,906,235	$8,591,438	$11,497,673	$2,829,077	$8,257,229	$11,086,307	$2,601,778	$7,475,047	$10,076,825	14%
Scott	A	$418,483	$1,917,771	$2,336,254	$408,367	$1,851,122	$2,259,489	$388,758	$1,770,034	$2,158,791	$353,394	$1,598,924	$1,952,318	16%
Shelby	B	$856,341	$4,468,711	$5,325,052	$826,953	$4,301,063	$5,128,016	$795,625	$4,119,781	$4,915,406	$719,070	$3,711,366	$4,430,436	16%

Table B1. County Local Roads and Streets and Motor Vehicle Highway distributions—2020–23 (cont.)

County	Population category	CY 2023			CY 2022			CY 2021			CY 2020			% difference MVH + LRS CY 2020–22
		2023 LRS	2023 MVH	2023 total	2022 LRS	2022 MVH	2022 total	2021 LRS	2021 MVH	2021 total	2020 LRS	2020 MVH	2020 total	
Spencer	A	$401,523	$3,645,741	$4,047,263	$387,009	$3,507,690	$3,894,700	$373,414	$3,367,417	$3,740,832	$343,533	$3,058,526	$3,402,058	14%
Starke	A	$489,863	$3,421,272	$3,911,135	$473,488	$3,295,493	$3,768,982	$451,971	$3,157,887	$3,609,859	$414,847	$2,858,550	$3,273,397	15%
Steuben	B	$661,867	$3,428,360	$4,090,227	$647,395	$3,310,533	$3,957,928	$628,885	$3,174,228	$3,803,113	$572,871	$2,866,014	$3,438,886	15%
Sullivan	A	$347,410	$4,010,174	$4,357,584	$335,033	$3,864,082	$4,199,115	$319,474	$3,704,216	$4,023,690	$291,954	$3,355,338	$3,647,293	15%
Switzerland	A	$190,803	$1,832,181	$2,022,984	$183,577	$1,764,593	$1,948,170	$174,330	$1,689,796	$1,864,126	$158,880	$1,521,821	$1,680,701	16%
Tippecanoe	C	$1,719,709	$6,219,369	$7,939,078	$1,660,884	$5,993,910	$7,654,794	$1,590,822	$5,753,660	$7,344,482	$1,450,705	$5,182,900	$6,633,605	15%
Tipton	A	$304,108	$2,798,263	$3,102,371	$299,031	$2,688,117	$2,987,148	$289,555	$2,570,268	$2,859,823	$265,104	$2,324,729	$2,589,834	15%
Union	A	$138,623	$1,422,295	$1,560,918	$132,562	$1,369,118	$1,501,680	$128,192	$1,313,054	$1,441,245	$118,051	$1,187,078	$1,305,128	15%
Vanderburgh	C	$1,617,229	$5,448,318	$7,065,547	$1,567,383	$5,260,789	$6,828,172	$1,519,393	$5,074,768	$6,594,160	$1,404,580	$4,627,607	$6,032,187	13%
Vermillion	A	$256,991	$2,132,532	$2,389,523	$250,321	$2,046,326	$2,296,647	$241,438	$1,960,523	$2,201,961	$220,096	$1,769,814	$1,989,910	15%
Vigo	C	$1,111,142	$5,216,896	$6,328,038	$1,076,507	$5,032,728	$6,109,235	$1,024,272	$4,824,918	$5,849,190	$941,860	$4,368,620	$5,310,480	15%
Wabash	B	$540,942	$3,765,431	$4,306,373	$526,768	$3,632,307	$4,159,075	$511,907	$3,486,542	$3,998,449	$475,965	$3,158,962	$3,634,926	14%
Warren	A	$175,120	$2,592,208	$2,767,328	$170,324	$2,498,575	$2,668,898	$165,338	$2,396,929	$2,562,267	$154,283	$2,172,828	$2,327,111	15%
Warrick	C	$1,242,684	$4,485,352	$5,728,036	$1,189,941	$4,308,342	$5,498,283	$1,144,742	$4,125,332	$5,270,073	$1,042,391	$3,726,816	$4,769,207	15%
Washington	A	$548,348	$3,874,681	$4,423,029	$531,895	$3,732,089	$4,263,984	$509,109	$3,571,843	$4,080,952	$464,594	$3,228,435	$3,693,029	15%
Wayne	C	$697,291	$4,106,562	$4,803,853	$683,379	$3,970,662	$4,654,042	$660,548	$3,820,720	$4,481,268	$605,873	$3,455,370	$4,061,244	15%
Wells	A	$531,781	$3,656,939	$4,188,720	$518,053	$3,533,204	$4,051,257	$502,255	$3,388,622	$3,890,877	$458,879	$3,053,769	$3,512,648	15%
White	A	$500,854	$4,430,269	$4,931,123	$485,743	$4,262,390	$4,748,133	$470,806	$4,072,786	$4,543,592	$430,435	$3,674,423	$4,104,858	16%
Whitley	B	$689,418	$3,484,024	$4,173,442	$664,713	$3,355,363	$4,020,076	$646,117	$3,216,546	$3,862,663	$589,246	$2,903,703	$3,492,949	15%
Total	**N/A**	**$69,564,743**	**$376,321,679**	**$445,886,422**	**$67,481,986**	**$362,439,204**	**$429,921,190**	**$65,347,350**	**$347,397,726**	**$412,745,076**	**$59,885,179**	**$314,032,742**	**$373,917,921**	**15%**

Source: Office of the Indiana State Comptroller; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Marion County is excluded.
3. These totals reflect the calendar year in which the distributions were made.
4. 2023 data is included here for reference only. The analysis of revenue and spending in this report covers only 2020–22. The 2023 annual operational reports will not be available until June 2024.

Table B2. County Wheel Tax and Motor Vehicle Excise Tax distributions—CY 2020–22

County	Population category	CY 2022			CY 2021			CY 2020			% difference CY 2020–22
		Wheel tax	Surtax	Total	Wheel tax	Surtax	Total	Wheel tax	Surtax	Total	
Adams	B	$140,063	$826,948	$967,012	$141,088	$837,065	$978,153	$145,759	$820,849	$966,608	0.0%
Allen	C	$789,104	$7,342,240	$8,131,344	$854,663	$7,516,600	$8,371,262	$848,386	$7,252,952	$8,101,338	0.4%
Blackford	A	$42,036	$329,646	$371,682	$46,652	$342,493	$389,145	$43,789	$337,278	$381,067	-2.5%
Brown	A	$79,831	$667,971	$747,802	$80,035	$692,112	$772,147	$81,922	$665,854	$747,777	0.0%
Carroll	A	$126,594	$717,731	$844,325	$133,223	$739,541	$872,764	$137,793	$709,526	$847,320	-0.4%
Cass	B	$105,373	$945,926	$1,051,299	$105,936	$973,273	$1,079,208	$105,262	$940,372	$1,045,633	0.5%
Clay	A	$104,379	$761,173	$865,552	$114,361	$780,337	$894,698	$112,339	$755,937	$868,276	-0.3%
Clinton	B	$133,906	$962,169	$1,096,075	$140,831	$986,206	$1,127,036	$148,511	$950,488	$1,098,999	-0.3%
Daviess	B	$108,347	$687,765	$796,112	$112,965	$723,579	$836,543	$112,662	$691,097	$803,759	-1.0%
Decatur	A	$145,725	$1,397,290	$1,543,015	$149,825	$1,432,662	$1,582,487	$142,902	$1,408,557	$1,551,459	-0.5%
Delaware	C	$215,105	$2,330,108	$2,545,213	$219,196	$2,410,220	$2,629,416	$218,224	$2,386,346	$2,604,570	-2.3%
Dubois	B	$125,512	$961,986	$1,087,499	$134,706	$1,004,987	$1,139,693	$130,884	$983,749	$1,114,633	-2.4%
Elkhart	C	$397,023	$4,894,659	$5,291,683	$404,112	$4,998,084	$5,402,196	$387,350	$4,829,826	$5,217,176	1.4%
Fayette	A	$42,688	$597,391	$640,080	$43,325	$613,567	$656,892	$42,298	$592,978	$635,276	0.8%
Fountain	A	$66,834	$469,863	$536,697	$66,959	$482,571	$549,530	$67,460	$464,020	$531,481	1.0%
Fulton	A	$112,015	$554,166	$666,182	$115,108	$572,448	$687,556	$105,948	$551,182	$657,130	1.4%
Gibson	B	$18,337	$691,528	$709,865	$19,539	$720,046	$739,585	$20,093	$719,875	$739,969	-4.1%
Greene	B	$82,847	$900,489	$983,335	$84,345	$924,828	$1,009,173	$81,617	$890,445	$972,061	1.2%
Hancock	C	$277,809	$2,142,228	$2,420,037	$250,644	$2,129,764	$2,380,407	$240,194	$2,077,571	$2,317,765	4.4%
Hendricks	C	$283,584	$4,508,846	$4,792,429	$309,609	$4,534,701	$4,844,311	$322,655	$4,384,118	$4,706,773	1.8%
Henry	B	$263,486	$2,006,243	$2,269,729	$275,714	$2,061,350	$2,337,064	$272,317	$1,994,047	$2,266,364	0.15%
Howard	C	$77,473	$1,614,155	$1,691,628	$80,996	$1,721,285	$1,802,281	$74,566	$1,676,987	$1,751,553	-3.4%
Huntington	B	$164,438	$1,002,343	$1,166,781	$164,683	$1,022,100	$1,186,783	$180,901	$1,000,217	$1,181,118	-1.2%
Jay	A	$118,429	$363,914	$482,343	$120,494	$387,421	$507,915	$113,236	$373,309	$486,545	-0.9%
Johnson	C	$313,807	$3,914,595	$4,228,402	$314,408	$3,948,617	$4,263,025	$312,649	$3,827,046	$4,139,696	2.1%
Kosciusko	C	$338,944	$3,102,532	$3,441,477	$348,005	$3,161,559	$3,509,564	$391,816	$3,007,724	$3,399,540	1.2%
LaGrange	B	$48,826	$352,256	$401,082	$51,034	$363,330	$414,364	$50,140	$342,541	$392,681	2.1%
Lawrence	B	$86,182	$1,231,356	$1,317,538	$91,418	$1,279,102	$1,370,520	$82,479	$1,231,450	$1,313,929	0.3%
Madison	C	$276,679	$3,047,542	$3,324,221	$276,763	$3,148,306	$3,425,069	$267,530	$3,047,921	$3,315,450	0.3%
Miami	B	$110,597	$708,052	$818,649	$113,558	$731,336	$844,895	$112,367	$712,413	$824,780	-0.7%
Monroe	C	$206,500	$2,661,131	$2,867,631	$223,732	$2,735,836	$2,959,567	$225,839	$2,657,521	$2,883,360	-0.5%
Montgomery	B	$112,545	$1,007,050	$1,119,596	$118,179	$1,013,497	$1,131,676	$114,018	$994,562	$1,108,579	1.0%
Morgan	C	$198,628	$2,152,550	$2,351,178	$209,294	$2,192,247	$2,401,541	$213,374	$2,130,346	$2,343,720	0.3%
Noble	B	$164,218	$1,252,259	$1,416,477	$169,087	$1,309,405	$1,478,492	$165,386	$1,265,755	$1,431,141	-1.0%
Owen	A	$53,537	$624,788	$678,325	$55,077	$634,822	$689,899	$55,207	$615,154	$670,361	1.2%
Parke	A	$78,328	$310,241	$388,569	$73,186	$323,649	$396,834	$71,206	$308,946	$380,152	2.2%
Perry	A	$29,280	$329,951	$359,231	$30,473	$344,246	$374,718	$30,622	$336,093	$366,715	-2.0%
Posey	A	$81,600	$605,145	$686,745	$86,246	$636,332	$722,578	$84,823	$625,402	$710,225	-3.3%

Table B2. County Wheel Tax and Motor Vehicle Excise Tax distributions—CY 2020–22 (cont.)

County	Population category	CY 2022			CY 2021			CY 2020			% difference CY 2020–22
		Wheel tax	Surtax	Total	Wheel tax	Surtax	Total	Wheel tax	Surtax	Total	
Putnam	B	$138,557	$1,021,380	$1,159,937	$142,338	$1,032,255	$1,174,593	$138,856	$995,250	$1,134,106	2.3%
Randolph	A	$160,297	$695,861	$856,159	$159,492	$705,373	$864,865	$154,307	$684,289	$838,596	2.1%
Rush	A	$108,728	$493,197	$601,925	$112,959	$505,120	$618,078	$106,651	$495,485	$602,136	0.0%
St. Joseph	C	$148,295	$5,952,835	$6,101,130	$338,792	$6,126,878	$6,465,669	$327,378	$5,986,103	$6,313,481	-3.4%
Shelby	B	$32,304	$1,337,339	$1,369,643	$192,433	$1,354,748	$1,547,181	$196,747	$1,318,324	$1,515,070	-9.6%
Steuben	B	$490,604	$1,727,645	$2,218,249	$447,995	$1,817,279	$2,265,275	$456,123	$1,739,206	$2,195,328	1.0%
Sullivan	A	$56,051	$379,904	$435,955	$59,368	$407,720	$467,087	$59,010	$388,491	$447,501	-2.6%
Tippecanoe	C	$182,779	$2,846,262	$3,029,042	$186,850	$2,905,239	$3,092,089	$184,959	$2,834,077	$3,019,036	0.3%
Tipton	A	$87,484	$464,942	$552,426	$89,856	$479,395	$569,250	$88,078	$464,725	$552,803	-0.1%
Union	A	$43,829	$216,574	$260,402	$43,049	$217,325	$260,374	$43,966	$210,829	$254,795	2.2%
Vanderburgh	C	$235,734	$3,477,351	$3,713,085	$242,149	$3,530,848	$3,772,998	$257,705	$3,446,857	$3,704,562	0.2%
Vermillion	A	$71,085	$212,940	$284,025	$73,589	$219,733	$293,322	$72,618	$209,220	$281,838	0.8%
Vigo	C	$64,293	$1,358,199	$1,422,493	$68,853	$1,406,347	$1,475,200	$71,126	$1,369,408	$1,440,535	-1.3%
Warrick	C	$52,443	$1,426,447	$1,478,890	$54,939	$1,464,616	$1,519,556	$56,001	$1,425,462	$1,481,464	-0.2%
Wells	A	$46,433	$380,032	$426,465	$51,971	$400,282	$452,253	$51,046	$385,722	$436,768	-2.4%
Whitley	B	$73,073	$434,122	$507,195	$77,293	$439,699	$516,992	$76,794	$425,696	$502,490	0.9%
Total	**N/A**	**$8,112,598**	**$81,401,256**	**$89,513,861**	**$8,671,395**	**$83,442,381**	**$92,113,769**	**$8,655,889**	**$80,939,598**	**$89,595,488**	**-0.1%**

Sources: Indiana Bureau of Motor Vehicles as published by the Indiana Legislative Services Agency; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. The table includes only counties that have adopted the County Wheel Tax and Motor Vehicle Excise Tax. Marion County also is excluded.
3. This data includes total distributions made to adopting counties. The funds are allocated to the county and each city and town based on the formula established for the Local Roads and Streets account.
4. These totals reflect the calendar year in which the distributions were made.

Table B3. Community Crossings Matching Grant awards—2020–23

County	Population category	CY 2023	CY 2022	CY 2021	CY 2020	Total CY 2020–22
Adams	B	$0	$999,879	$999,719	$450,000	$2,449,599
Allen	C	$1,000,000	$1,000,000	$1,000,000	$1,020,059	$4,020,059
Bartholomew	C	$1,000,000	$1,000,000	$1,128,139	$1,063,577	$4,191,715
Benton	A	$741,468	$671,119	$0	$748,252	$2,160,840
Blackford	A	$239,973	$853,825	$0	$0	$1,093,798
Boone	C	$978,864	$1,000,000	$1,220,916	$997,917	$4,197,697
Brown	A	$0	$1,000,000	$1,000,000	$1,000,000	$3,000,000
Carroll	A	$964,200	$1,000,000	$983,986	$999,999	$3,948,185
Cass	B	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Clark	C	$0	$967,748	$151,557	$656,678	$1,775,983
Clay	A	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Clinton	B	$1,000,000	$1,000,000	$1,000,000	$947,985	$3,947,985
Crawford	A	$0	$982,585	$534,735	$0	$1,517,320
Daviess	B	$979,799	$1,000,000	$1,085,074	$1,000,000	$4,064,873
Dearborn	C	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Decatur	A	$999,978	$999,999	$999,867	$999,970	$3,999,813
DeKalb	B	$1,000,000	$1,000,000	$813,429	$1,000,000	$3,813,429
Delaware	C	$972,633	$948,295	$1,077,670	$1,000,000	$3,998,598
Dubois	B	$984,801	$950,522	$1,059,244	$1,000,000	$3,994,567
Elkhart	C	$1,308,006	$1,000,000	$1,000,000	$1,188,934	$4,496,940
Fayette	A	$1,000,000	$947,120	$1,000,000	$1,000,000	$3,947,120
Floyd	C	$563,023	$951,228	$700,450	$931,479	$3,146,179
Fountain	A	$1,000,000	$1,000,000	$999,750	$814,730	$3,814,480
Franklin	A	$996,788	$923,701	$999,053	$1,000,000	$3,919,541
Fulton	A	$1,000,000	$1,000,000	$1,111,838	$1,198,890	$4,310,728
Gibson	B	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Grant	C	$957,500	$350,000	$390,000	$1,005,740	$2,703,240
Greene	B	$1,000,000	$1,000,000	$1,000,000	$999,552	$3,999,552
Hamilton	C	$1,248,351	$1,000,000	$1,359,645	$1,042,893	$4,650,888
Hancock	C	$1,026,455	$1,000,000	$1,064,077	$996,220	$4,086,753
Harrison	B	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Hendricks	C	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Henry	B	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Howard	C	$982,566	$323,813	$995,075	$1,000,000	$3,301,453
Huntington	B	$923,692	$1,652,189	$931,865	$781,778	$4,289,524
Jackson	B	$991,380	$983,241	$1,000,000	$1,000,000	$3,974,621
Jasper	B	$1,000,000	$1,000,000	$1,139,586	$1,000,000	$4,139,586
Jay	A	$46,300	$1,000,000	$0	$1,000,000	$2,046,300
Jefferson	B	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Jennings	A	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Johnson	C	$1,000,000	$1,000,000	$500,867	$1,000,000	$3,500,867
Knox	B	$1,000,000	$1,000,000	$1,000,000	$998,740	$3,998,740
Kosciusko	C	$855,950	$1,000,000	$806,933	$496,802	$3,159,685

Table B3. Community Crossings Matching Grant awards—2020–23 (cont.)

County	Population category	CY 2023	CY 2022	CY 2021	CY 2020	Total CY 2020–22
LaGrange	B	$1,000,000	$1,000,000	$0	$977,075	$2,977,075
Lake	C	$1,000,000	$1,000,000	$1,000,000	$975,073	$3,975,073
La Porte	C	$1,000,000	$1,000,000	$1,000,000	$996,975	$3,996,975
Lawrence	B	$1,000,000	$1,000,000	$675,424	$1,000,000	$3,675,424
Madison	C	$0	$1,328,016	$999,781	$994,354	$3,322,151
Marshall	B	$1,000,000	$1,000,000	$1,000,000	$1,020,250	$4,020,250
Martin	A	$1,367,725	$1,000,000	$997,627	$989,436	$4,354,788
Miami	B	$1,000,000	$954,607	$939,785	$999,731	$3,894,123
Monroe	C	$1,000,000	$987,794	$1,004,026	$1,032,549	$4,024,369
Montgomery	B	$1,000,000	$999,542	$1,000,000	$872,159	$3,871,701
Morgan	C	$999,870	$697,394	$1,000,000	$911,086	$3,608,350
Newton	A	$0	$0	$0	$736,823	$736,823
Noble	B	$1,000,000	$1,036,533	$1,000,000	$1,123,400	$4,159,933
Ohio	A	$930,668	$1,000,000	$714,603	$760,250	$3,405,521
Orange	A	$1,000,000	$998,932	$999,058	$962,614	$3,960,604
Owen	A	$974,410	$1,085,969	$961,951	$881,386	$3,903,716
Parke	A	$1,006,409	$1,002,930	$972,117	$938,991	$3,920,447
Perry	A	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Pike	A	$989,987	$981,981	$1,004,357	$1,003,469	$3,979,794
Porter	C	$1,125,876	$1,000,000	$1,000,000	$1,125,263	$4,251,139
Posey	A	$1,000,000	$1,000,000	$1,000,000	$754,122	$3,754,122
Pulaski	A	$501,746	$970,758	$0	$786,413	$2,258,916
Putnam	B	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Randolph	A	$971,250	$856,575	$197,658	$854,058	$2,879,541
Ripley	A	$998,713	$493,533	$925,109	$955,549	$3,372,904
Rush	A	$649,998	$462,140	$650,478	$0	$1,762,616
St. Joseph	C	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Scott	A	$987,516	$0	$96,280	$866,372	$1,950,168
Shelby	B	$1,000,000	$928,757	$976,929	$997,538	$3,903,224
Spencer	A	$1,000,000	$1,015,997	$1,000,000	$1,140,278	$4,156,275
Starke	A	$1,195,550	$1,000,000	$682,763	$1,033,750	$3,912,062
Steuben	B	$1,000,000	$448,244	$0	$1,000,000	$2,448,244
Sullivan	A	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Switzerland	A	$1,052,365	$1,004,878	$981,374	$899,960	$3,938,577
Tippecanoe	C	$978,649	$1,000,000	$1,024,247	$999,999	$4,002,895
Tipton	A	$1,325,682	$1,000,000	$1,320,507	$0	$3,646,189
Union	A	$1,000,000	$1,000,000	$1,000,000	$989,880	$3,989,880
Vanderburgh	C	$1,107,051	$1,098,466	$997,642	$903,163	$4,106,322
Vermillion	A	$993,456	$965,277	$972,873	$1,000,000	$3,931,605
Vigo	C	$1,000,000	$1,000,000	$730,058	$1,000,000	$3,730,058
Wabash	B	$998,710	$961,185	$1,253,241	$137,263	$3,350,400
Warren	A	$885,119	$982,659	$928,627	$976,924	$3,773,328
Warrick	C	$1,000,000	$1,004,358	$952,093	$1,073,620	$4,030,070

Table B3. Community Crossings Matching Grant awards—2020–23 (cont.)

County	Population category	CY 2023	CY 2022	CY 2021	CY 2020	Total CY 2020–22
Washington	A	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$4,000,000
Wayne	C	$149,520	$417,328	$458,000	$1,000,000	$2,024,849
Wells	A	$1,064,042	$1,017,968	$854,308	$1,329,564	$4,265,881
White	A	$1,000,000	$1,040,787	$1,000,000	$1,000,000	$4,040,787
Whitley	B	$1,000,000	$806,558	$621,299	$983,616	$3,411,472
Total	**N/A**	**$82,016,036**	**$85,054,426**	**$77,945,688**	**$83,323,145**	**$328,339,295**

Sources: Indiana Department of Transportation; U.S. Census Bureau.

Notes:

1. Population categories are A=0–29,999; B=30,000–49,999; and C=50,000+.
2. Marion County is excluded.
3. The Adams County grant for 2020 was a joint grant with the city of Berne.
4. These totals reflect the calendar year in which the grants were awarded. Local expenditures for these grants may have occurred during multiple years.
5. 2023 data is included here for reference. The analysis of revenue and spending in this report covers only 2020–22. The 2023 annual operational reports will not be available until June 2024.

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