



## TRIP Report: U.S. RURAL ROADS & BRIDGES HAVE SIGNIFICANT DEFICIENCIES, HIGH FATALITY RATES & LACK ADEQUATE CAPACITY; BACKLOG OF NEEDED REPAIRS & IMPROVEMENTS TO RURAL ROADS & BRIDGES TOTALS \$180 BILLION<sup>[OB]</sup>

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America's rural transportation system is in need of repairs and modernization to support economic growth and improve traffic safety, but the US faces a \$180 billion backlog in funding for needed repairs and improvements to the rural transportation system. This is according to a new report released today by [TRIP, a national transportation research nonprofit](#). The report, [Rural Connections: Examining the Safety, Connectivity, Condition and Funding Needs of America's Rural Roads & Bridges](#), evaluates the safety and condition of the nation's rural roads and bridges and finds that the nation's rural transportation system is in need of immediate improvements to address deficient roads and bridges, high crash rates, and inadequate connectivity and capacity.

Roads, highways, rails and bridges in the nation's rural areas face a number of significant challenges: they lack adequate capacity; they fail to provide needed levels of connectivity to many communities; and, they cannot adequately support growing freight travel in many corridors. Rural roads and bridges have significant deficiencies and deterioration, they lack many desirable safety features, and rural non-Interstate roads experience fatal traffic crashes at a rate far higher than all other roads and highways.

The chart below ranks states based on their rate of rural pavements in poor condition, share of rural bridges that are rated poor/structurally deficient, and fatality rates on non-Interstate, rural roads.

RANK	STATE	Rural Pavements In Poor Condition	STATE	Rural Bridges Poor/ Structurally Deficient	STATE	Fatality Rate per 100M VMT on Rural Non-Interstate Roads	Fatality Rate per 100M VMT on All Other Roads
1	Arkansas	33%	Iowa	21%	South Carolina	4.13	0.99
2	Rhode Island	32%	West Virginia	20%	Oregon	3.12	1.00
3	New Mexico	32%	South Dakota	18%	Arizona	2.78	1.42
4	West Virginia	31%	Pennsylvania	15%	Georgia	2.74	1.13
5	Hawaii	30%	Rhode Island	15%	Louisiana	2.72	1.36
6	Mississippi	24%	Maine	15%	Tennessee	2.64	1.30
7	Connecticut	22%	Louisiana	14%	California	2.62	1.08
8	Washington	22%	Michigan	12%	Montana	2.58	0.96
9	Missouri	20%	North Dakota	11%	Kentucky	2.56	1.15
10	Maine	20%	New York	10%	West Virginia	2.54	1.09
11	Alaska	19%	Oklahoma	10%	North Carolina	2.52	1.01
12	Vermont	19%	Missouri	10%	Florida	2.51	1.48
13	Pennsylvania	18%	Hawaii	9%	Texas	2.48	1.23
14	Wisconsin	17%	Illinois	9%	Mississippi	2.45	1.40
15	Louisiana	15%	New Jersey	8%	Virginia	2.32	0.74
16	Colorado	15%	Nebraska	8%	Nevada	2.30	1.11
17	Michigan	13%	North Carolina	8%	Kansas	2.29	1.08
18	New Hampshire	13%	Alaska	8%	Delaware	2.28	1.11
19	Indiana	13%	New Hampshire	8%	Indiana	2.23	0.77
20	Massachusetts	12%	California	7%	Alabama	2.19	0.99
	<b>US AVERAGE</b>	<b>12%</b>	<b>US AVERAGE</b>	<b>8%</b>	<b>US AVERAGE</b>	<b>2.17</b>	<b>1.09</b>

America's rural transportation system provides the first and last link in the supply chain from farm to market, connects manufacturers to their customers, supports the tourism industry, and enables the production of energy, food and fiber. Rural Americans are more reliant on the quality of their transportation system than their urban counterparts, with vehicle travel in rural communities averaging approximately 50 percent higher than in urban communities.

TRIP's report finds that the nation's rural roads and bridges have significant deficiencies. Twelve percent of U.S. rural roads are rated in poor condition, while 19 percent are in mediocre condition. Seventeen percent of the nation's rural roads are in fair condition and the remaining 51 percent are in good condition. Eight percent of the nation's rural bridges are rated in poor/structurally

deficient condition, meaning there is significant deterioration to the major components of the bridge. Poor/structurally deficient bridges are often posted for lower weight or closed to traffic, restricting or redirecting large vehicles, including agricultural equipment, commercial trucks, school buses and emergency services vehicles. Forty-eight percent of rural bridges are rated fair. A fair rating indicates that a bridge's structural elements are sound but minor deterioration has occurred to the bridge's deck, substructure or superstructure. The remaining 44 percent of rural bridges are rated in good condition.

The TRIP report finds that traffic crashes and fatalities on rural non-Interstate roads are disproportionately high, occurring at a rate double than on all other roads. In 2020, non-Interstate rural roads had a traffic fatality rate of 2.17 deaths for every 100 million vehicle miles of travel (VMT), compared to a fatality rate on all other roads of 1.09. While the nation's rural non-Interstate roads carried 23 percent of all vehicle travel in 2020, 38 percent of fatalities occurred on these roads. Rural roads are more likely to have narrow lanes, limited shoulders, sharp curves, exposed hazards, pavement drop-offs, steep slopes and limited clear zones along roadsides.

"Roadway safety countermeasures like median cable barriers, rumble strips and guardrails are among the most cost-effective ways to prevent traffic crashes and to save lives when they do happen," said AAA traffic safety advocacy & research director, Jake Nelson. "At a time when our nation is recording record high traffic deaths, transportation investments ought to prioritize curbing traffic injuries where we can make the greatest impact—rural roads."

Signed into law in November 2021, the [Infrastructure Investment and Jobs Act](#) (IIJA) will provide a significant boost in federal investment in roads, bridges and transit and offers an opportunity for the nation to make progress in improving the safety, reliability and condition of America's transportation system. The IIJA will provide \$454 billion over the five-year period from 2022 to 2026 for investment in highways and transit, resulting in a 38 percent increase in federal investment in 2022. The IIJA includes a \$2 billion [Rural Surface Transportation Grant Program](#) that will support projects to improve and expand the surface transportation infrastructure in rural areas to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life.

"Farmers and ranchers depend on rural roads, highways and bridges to bring critical inputs like fertilizer and feed onto the farm and to move their products to market," said Zippy Duvall, president of the American Farm Bureau Federation. "As recent supply chain challenges have highlighted, transportation delays and costs take a bite out of our profitability and competitiveness and impact the quality of rural life. Enactment of the IIJA will provide a significant boost to federal investment in roads and bridges and offers an opportunity to improve the safety, reliability and condition of America's transportation system."

An analysis of the [Status of the Nation's Highways, Bridges and Transit Conditions and Performance Report, 24<sup>rd</sup> Edition](#) report, submitted by the USDOT to Congress in 2021, indicates that the U.S. faces a \$180 billion backlog in needed repairs and improvements to the nation's rural roads, highways and bridges. This includes a \$109 billion backlog for rural road and highway rehabilitation, a \$35 billion backlog for needed rural bridge rehabilitation, and a \$36 billion backlog for needed rural roadway enhancements.

"A reliable, safe, and well-connected transportation network is critical for American businesses, farmers and producers to reach important markets for their goods and to ensure the continued support and strengthening of our nation's economy," said John Drake, vice president for transportation, infrastructure, supply chain policy at the U.S. Chamber of Commerce. "The significant boost in federal investments to our highways, bridges, and ports provided by the IIJA will be vital for these Americans' ability to remain competitive in the global marketplace while providing much needed improvements to our nation's transportation system."

"The health of the nation's economy and the safety and quality of life in America's small communities and rural areas ride on our rural transportation system," said Dave Kearby, executive director of TRIP. "Providing the nation with a rural transportation network that supports rural America's economy and will support its future development will require that the U.S. invest in a rural transportation system that is safe, efficient, and well-maintained, and that provides adequate mobility and connectivity to the nation's rural communities."

## **RURAL CONNECTIONS: Examining the safety, connectivity, condition and funding needs of America's rural roads and bridges**

### **Executive Summary**

America's rural areas are the primary source of many of the goods and products that support our nation's economy and way of life, home to a significant share of the nation's population, and the site of many natural resources and popular tourist destinations. The strength of the nation's rural economy is heavily reliant on the quality of its transportation system, particularly the roads and highways that link rural America with the rest of the U.S. and to markets around the globe. As the backbone of the nation's energy, food and fiber supply chain, the importance of America's rural transportation system was heightened during the response to the COVID-19 pandemic.

America's rural transportation network provides the first and last link in the supply chain from farm to market. The quality and connectivity of America's rural transportation system supports the economy of the entire nation and quality of life for the approximately 60 million Americans living in rural areas. Safe, reliable transportation is essential in rural areas, where household vehicle travel is approximately 50 percent higher than in urban communities, to provide access to jobs, to facilitate the movement of goods and people, to access opportunities for health care and education, and to provide links to social services.

Roads, highways, rails and bridges in the nation's rural areas face a number of significant challenges: they lack adequate capacity; they fail to provide needed levels of connectivity to many communities; and, they cannot adequately support growing freight travel in many corridors. Rural roads and bridges have significant deficiencies and deterioration, they lack many desirable safety features, and they experience fatal traffic crashes at a rate far higher than all other roads and highways. This report looks at the condition, use and safety of the nation's rural transportation system, particularly its roads, highways and bridges, and identifies needed improvements.

The term rural areas in this report is based on the U.S. Census Bureau definition, which defines rural areas as regions outside of urban areas with a population of 2,500 or more. Road, bridge and safety data in this report are based on the Federal Highway Administration (FHWA) definition for rural areas, which allows states to use the U.S. Census Bureau definition to identify rural routes or to define rural areas as regions outside of urban areas with a population of 5,000 or more.

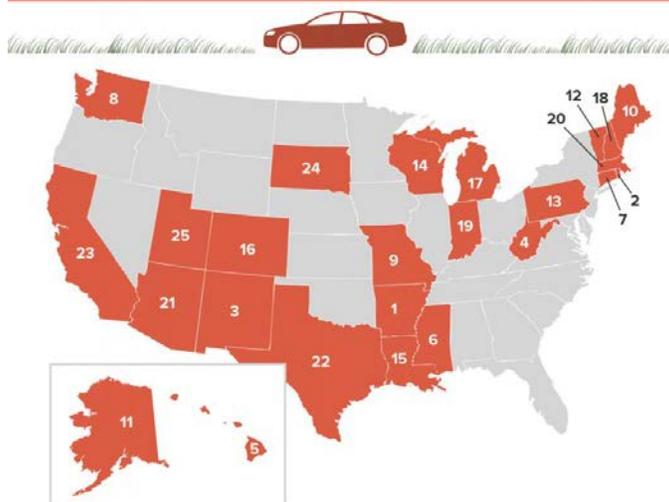
The following are the key findings of the report.

### **RURAL AMERICA AT A GLANCE**

**Rural America is the primary source of the energy, food and fiber that drives the U.S. economy. Rural Americans tend to be more heavily reliant on their limited transportation network – primarily rural roads and highways – than their counterparts in urban areas.**

- The U.S. Census Bureau defines rural areas as regions outside of urban areas with a population of 2,500 or more.
- According to the U.S. Census Bureau definition, 18 percent of the nation's population live in rural areas – approximately 60 million people.
- America's rural economy is far more reliant on goods production, which includes farming, ranching, forestry, fishing, manufacturing, mining and energy extraction than is the nation's urban economy.
- Many of the transportation challenges facing rural America are similar to those in urbanized areas. However, rural residents tend to be more heavily reliant on their limited transportation network – primarily rural roads and highways – than their counterparts in urban areas, with household vehicle travel in rural communities averaging approximately 50 percent higher than in urban communities.

### **TOP 25 STATES WITH HIGHEST PERCENTAGE OF MAJOR RURAL ROADS IN POOR CONDITION**



Residents of rural areas often must travel longer distances to access education, employment, retail locations, social opportunities and health services.

- The rural U.S. population is older than the nation as a whole, with an average age in rural areas of 49 years, compared to 46 in urban areas.
- The movement of retiring baby boomers to rural America is likely to continue in the future as aging Americans seek out communities that offer affordable housing, small-town quality of life and desirable natural amenities, while often located within a short drive of larger metropolitan areas.

### **RURAL TRANSPORTATION CHALLENGES: FUNDING**

**Improving the safety, reliability and condition of the nation’s rural roads, highways and bridges will require increased investment.**

- An analysis of the [Status of the Nation’s Highways, Bridges and Transit Conditions and Performance Report, 24rd Edition](#) report, submitted by the USDOT to Congress in 2021, indicates that the U.S. faces a \$180 billion backlog in needed repairs and improvements to the nation’s rural roads, highways and bridges. This includes a \$109 billion backlog for rural road and highway rehabilitation, a \$35 billion backlog for needed rural bridge rehabilitation, and a \$36 billion backlog for needed rural roadway enhancements.
- [report](#) indicate that the nation’s annual \$21 billion investment in rural road, highway and bridge rehabilitation and enhancements by all levels of government should be increased by 38 percent, to approximately \$29 billion annually, to improve their condition, reliability and safety.
- [Infrastructure Investment and Jobs Act](#) (IIJA) will provide a significant boost in federal investment in roads, bridges and transit and offers an opportunity for the nation to make progress in improving the safety, reliability and condition of America’s transportation system. The IIJA will provide \$454 billion over the five-year period from 2022 to 2026 for investment in highways and transit, resulting in a 38 percent increase in federal investment in 2022.
- [Rural Surface Transportation Grant Program](#) that will support projects to improve and expand the surface transportation infrastructure in rural areas to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life.

### **RURAL TRANSPORTATION CHALLENGE: SAFETY**

**Traffic fatalities on the nation’s rural, non-Interstate roads occur at a rate double that on all other roads. A disproportionate share of fatalities take place on rural roads compared to the amount of traffic they carry.**

- Rural, non-Interstate roads have a traffic fatality rate that is double that on all other roads. In 2020, non-Interstate rural roads had a traffic fatality rate of 2.17 deaths for every 100 million vehicle miles of travel (VMT), compared to a fatality rate of 1.09 deaths per 100 million VMT on all other roads.
- Rural, non-Interstate routes accounted for 23 percent of all VMT in the U.S. in 2020. However, crashes on the nation’s rural, non-Interstate routes resulted in 38 percent (14,582 of 38,824) of the nation’s traffic fatalities in 2020.
- The chart below shows the 25 states that led the nation in the number of rural, non-Interstate traffic fatalities in 2020. Data for all states is available in [Appendix B](#).

States with Highest Number of Rural Non-Interstate Traffic Fatalities (2020)					
1	Texas	1,334	14	Tennessee	438
2	California	1,035	15	Virginia	425
3	North Carolina	779	16	Michigan	403
4	South Carolina	699	17	Wisconsin	358
5	Florida	629	18	Oklahoma	342
6	Georgia	594	19	Louisiana	341
7	Alabama	474	20	Illinois	305
8	Indiana	467	21	New York	273
9	Mississippi	458	22	Oregon	272
10	Missouri	457	23	Arizona	250
11	Kentucky	446	24	Kansas	238
12	Pennsylvania	442	25	Minnesota	226
13	Ohio	440		<b>U.S. Total</b>	<b>14,582</b>

- The chart below shows the 25 states with the highest rate of rural, non-Interstate traffic fatalities per 100 million VMT in 2020, and the fatality rate per 100 million VMT on all other roads in the state. Data for all states is available in [Appendix C](#).

States with Highest Fatality Rate on Rural Non-Interstate Roads, and Fatality Rate on all Other Roads (2020)						
1	South Carolina	4.13	0.99	14	Mississippi	2.45 1.40
2	Oregon	3.12	1.00	15	Virginia	2.32 0.74
3	Arizona	2.78	1.42	16	Nevada	2.30 1.11
4	Georgia	2.74	1.13	17	Kansas	2.29 1.08
5	Louisiana	2.72	1.36	18	Delaware	2.28 1.11
6	Tennessee	2.64	1.30	19	Indiana	2.23 0.77
7	California	2.62	1.08	20	Alabama	2.19 0.99
8	Montana	2.58	0.96	21	Oklahoma	2.16 1.19
9	Kentucky	2.56	1.15	22	Pennsylvania	2.02 1.04
10	West Virginia	2.54	1.09	23	South Dakota	2.01 0.93
11	North Carolina	2.52	1.01	24	Illinois	2.01 1.13
12	Florida	2.51	1.48	25	Colorado	1.99 1.08
13	Texas	2.48	1.23		<b>U.S. TOTAL</b>	<b>2.17 1.09</b>

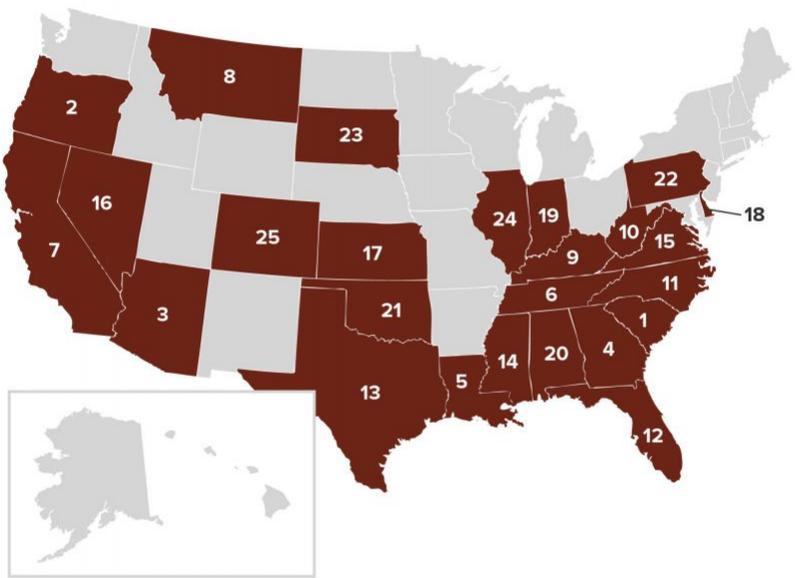
**The higher traffic fatality rate found on rural, non-Interstate routes results from multiple factors, including a lack of desirable roadway safety features, longer emergency vehicle response times, and the higher speeds traveled on rural roads compared to urban roads.**

- Rural roads are more likely than urban roads to have roadway features that reduce safety, including narrow lanes, limited shoulders, sharp curves, exposed hazards, pavement drop-offs, steep slopes and limited clear zones along roadsides.
- Because many rural routes have been constructed over a period of years, they often have inconsistent design features for such things as lane widths, curves, shoulders and clearance zones along roadsides.
- Rural roads are more likely than urban roads to be two-lane routes. Eighty-six percent of the nation’s rural non-freeway arterial roads have two lanes, compared to 58 percent of urban non-freeway arterial routes.

- Rural roads are more likely than urban roads to have narrow lanes. A desirable lane width for collector and arterial roadways is at least 11 feet. Twenty-three percent of rural non-freeway collector and arterial roads have lane widths of 10 feet or less, compared to 19 percent of urban non-freeway collector and arterial roads.
- Most head-on crashes on rural, non-Interstate roads are caused by a motorist making an unintentional maneuver as a result of driver fatigue, being distracted or driving too fast in a curve.
- While driver behavior is a significant factor in traffic crash rates, both safety belt usage and impaired driving rates are similar in their involvement rate as a factor in urban and rural traffic crashes.

**Enhancing rural roadway safety will require the implementation of a comprehensive approach that improves roadway safety features, driver behavior, vehicle safety and post-crash care. Needed roadway safety improvements are designed largely to keep vehicles from leaving the correct lane and to reduce the consequences of a vehicle leaving the roadway. Making needed roadway safety improvements would result in a significant reduction in traffic fatalities and serious injuries.**

## TOP 25 STATES WITH THE HIGHEST RURAL ROAD FATALITY RATE (NON-INTERSTATE)



- [report](#) from the [AAA Foundation for Traffic Safety](#) found that implementing the \$146 billion in needed, cost-effective roadway safety improvements on U.S. roadways would save approximately 63,700 lives and reduce the number of serious injuries as a result of traffic crashes by approximately 350,000 over 20 years. Thus, over a 20-year period, every \$100 million spent on needed roadway safety improvements would reduce the number of traffic fatalities by 44 and serious traffic injuries by 760.
- [National Roadway Safety Strategy](#), a roadmap for addressing the nation's roadway safety crisis based on a [Safe System](#) approach. The Safe System approach, which is also being adopted by state and local transportation agencies has five objectives: [Safer People](#), [Safer Roads](#), [Safer Vehicles](#), [Safer Speeds](#), and improved [Post-Crash Care](#).
- safety improvements include installing rumble strips along the centerline and sides of roads, improving signage and pavement/lane markings including higher levels of retroreflectivity, installing lighting, removing or shielding roadside obstacles, using chevrons and post-mounted delineators to indicate roadway alignment along curves, adding skid resistant surfaces at curves, upgrading or adding guardrails, and improving pedestrian and bicycling facilities.
- improvements include adding turn lanes at intersections, resurfacing pavements and adding median barriers.
- improvements include improving roadway alignment, reducing the angle of curves, widening lanes, converting conventional intersections to roundabouts, adding or paving shoulders, adding intermittent passing lanes, or adding a third or fourth lane.



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### RURAL TRANSPORTATION CHALLENGES: DEFICIENT ROAD AND BRIDGE CONDITIONS

**The nation's rural roads, highways and bridges have significant deficiencies and deterioration. Twelve percent of the nation's rural roads have pavements in poor condition, and nearly one-in-twelve of the nation's rural bridges need rehabilitation, repair or replacement.**

- In 2020, 12 percent of the nation's major rural roads (arterials and collectors) were rated in poor condition, 19 percent were rated in mediocre condition, 17 percent were rated in fair condition and 51 percent were rated in good condition.
- The chart below ranks the 25 states with the greatest percentage of rural roads in poor condition in 2020. Rural pavement conditions for all states can be found in [Appendix D](#).
- In 2022, eight percent of the nation's rural bridges were rated as poor/structurally deficient. Forty-eight percent of rural bridges were rated fair and 44 percent of rural bridges were rated in good condition.
- Of the nation's 618,253 bridges, 70 percent (435,189 bridges) are rural. Of the nation's 42,639 bridges that are rated poor/structurally deficient, 80 percent (34,026 bridges) are rural.

States with Highest Share of Rural Pavements in Poor Condition					
1	Arkansas	33%	14	Wisconsin	17%
2	Rhode Island	32%	15	Louisiana	15%
3	New Mexico	32%	16	Colorado	15%
4	West Virginia	31%	17	Michigan	13%
5	Hawaii	30%	18	New Hampshire	13%
6	Mississippi	24%	19	Indiana	13%
7	Connecticut	22%	20	Massachusetts	12%
8	Washington	22%	21	Arizona	12%
9	Missouri	20%	22	Texas	12%
10	Maine	20%	23	California	12%
11	Alaska	19%	24	South Dakota	11%
12	Vermont	19%	25	Utah	11%
13	Pennsylvania	18%		<b>U.S. Average</b>	<b>12%</b>

- A bridge is rated poor/structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Poor/structurally deficient bridges are often posted for lower weight or closed to traffic, restricting or redirecting large vehicles, including commercial trucks, agricultural equipment, school buses and emergency services vehicles. A fair rating indicates that a bridge's structural elements are sound but minor deterioration has occurred to the bridge's deck, substructure or superstructure.
- The chart below ranks the 25 states with the highest share of rural bridges rated poor/structurally deficient in 2022. Rural bridge conditions for all states can be found in [Appendix E](#).

States with Highest Share of Rural Bridges in Poor/Structurally Deficient Condition					
1	Iowa	21%	14	Illinois	9%
2	West Virginia	20%	15	New Jersey	8%
3	South Dakota	18%	16	Nebraska	8%
4	Pennsylvania	15%	17	North Carolina	8%
5	Rhode Island	15%	18	Alaska	8%
6	Maine	15%	19	New Hampshire	8%
7	Louisiana	14%	20	California	7%
8	Michigan	12%	21	Kentucky	7%
9	North Dakota	11%	22	Montana	7%
10	New York	10%	23	Massachusetts	7%
11	Oklahoma	10%	24	Wisconsin	7%
12	Missouri	10%	25	Mississippi	7%
13	Hawaii	9%		<b>U.S. Average</b>	<b>8%</b>

### **RURAL TRANSPORTATION CHALLENGE: CONNECTIVITY**

**The potential for economic growth in many rural areas is being impeded by the failure to significantly modernize the nation's rural transportation system and provide for adequate connectivity.**

- Sixty-six U.S. cities with a population of 50,000 or more do not have direct access to the Interstate Highway System [Appendix A](#).
- Rural transportation accessibility and connectivity are critical to transportation-dependent business sectors, including the growing energy production and extraction sectors, advanced manufacturing, and tourism. Many jobs located in urban areas also depend on economic input from rural communities.
- Since the routes for the Interstate Highway System were designated in 1956, the nation's population has doubled, from 165 million to 333 million.
- The abandonment of more than 100,000 miles of rail lines in recent decades, mostly in rural areas, has reduced access in many rural communities and increased reliance on trucking for freight movement.
- A report by the [American Association of State Highway and Transportation Officials](#) (AASHTO) found that connectivity is particularly poor in

rural portions of Western states because of the significant distance between Interstate highway routes and the lack of adequate rail service.

- Only 60 percent of rural counties nationwide have public transportation available. Twenty-eight percent of those have very limited service.
- Residents of rural areas often must travel longer distances to access education, employment, retail locations, social opportunities and health services. Rural residents also assume additional risks as a result of living in areas that may be farther from emergency response services including police, fire or medical assistance.

### **RURAL QUALITY OF LIFE AND ECONOMIC VITALITY RELY ON TRANSPORTATION**



**America's rural transportation network provides the first and last link in the supply chain from farm to market while supporting the tourism industry and enabling the production of energy, food and fiber. The quality of life in America's small communities and rural areas, and the health of the nation's rural economy, is highly reliant on the quality of the nation's transportation system, particularly its roads, highways and bridges.**

- The importance of the rural transportation system as the backbone of the nation's energy, food and fiber supply chain was heightened during the COVID-19 pandemic.
- Freight mobility and efficiency is fundamental to rural economic vitality and prosperity. Economic growth and stability in rural areas are heavily reliant on the ability to move raw materials into, or the value-added products out of, these areas.
- The average annual U.S. rural household's vehicle miles of travel is approximately 50 percent higher than the average urban household.
- Agriculture, food, and related industries, including food and beverage manufacturing, apparel manufacturing and food and beverage stores and establishments — which rely on agricultural inputs — contributed \$1.2 trillion to the U.S. gross domestic product (GDP) in 2021. This represents 5.3 percent of overall U.S. GDP.
- While farming accounts for just six percent of all jobs in rural America, for every person employed in farming there are seven more jobs in agribusiness, including wholesale and retail trade, processing, marketing, production, and distribution.
- Employment in goods production, which includes farming, forestry,

fishing, mining and energy extraction, accounts for 11 percent of earnings in the nation's rural economy versus two percent in the urban economy.

- Manufacturing jobs account for 15 percent of earnings in the nation's rural economy, versus nine percent in the urban economy.
- A [United States Department of Agriculture](#) (USDA) report found that "an effective transportation system supports rural economies, reducing the prices farmers pay for inputs such as seeds and fertilizers, raising the value of their crops and greatly increasing market access."

- The [Council of State Governments](#) (CSG) found that “rural highways provide many benefits to the nation’s transportation system, including serving as a bridge to other states, supporting the agriculture and energy industries, connecting economically challenged citizens in remote locations to employers, enabling the movement of people and freight, and providing access to America’s tourist attractions.”
- Transportation is becoming an even more critical segment of the food distribution network. While food demand is concentrated mostly in urban areas, food distribution is the most dispersed segment of the economy.
- A report by the [Pacific Economic Cooperation Council](#) recommends that governments improve the quality of their transportation systems serving the movement of goods from rural to urban regions as a strategy to lower food costs and increase economic prosperity. A highly competitive and efficient transportation system can lead to lower food costs for U.S. consumers and higher market prices for producers due to lower shipping costs, smaller margins and more competitive export prices.
- A report on agricultural transportation by the [USDA](#) found it likely that market changes and shifts in consumer preferences would further increase the reliance on trucking to move U.S. agricultural products.

## **RURAL CONNECTIONS TO TOURISM AND RECREATION**

**The condition and quality of the nation’s highway system plays a critical role in providing access to America’s many tourist destinations, particularly its scenic parks and recreational areas, which are mostly located in rural areas.**

## **RURAL ACCESS TO ENERGY SOURCES**

**Travel loads on America’s rural roads are increasing, due partly to the booming energy extraction sector. This has been driven by increases in domestic oil and gas extraction, largely as a result of advancements in hydraulic fracturing (fracking), which has greatly increased the accessibility of shale oil and gas deposits, and the increased production of renewable energy such as wind and solar.**

- Ethanol production in the U.S. increased from 1.6 billion gallons in 2000 to 15 billion gallons in 2021.
- U.S. production of liquid fuels, including crude oil and natural gas, increased 90 percent from 2000 to 2021, increasing liquid fuel’s share of overall U.S. energy production (including coal and nuclear) from 49 to 67 percent.
- U.S. production of renewable energy, including wind and solar, increased 102 percent from 2000 to 2021, increasing renewable energy’s share of overall U.S. energy production from nine to 13 percent.
- The development of significant new oil and gas fields in numerous areas, particularly in the North Central Plains, and increased agricultural production, are placing increased traffic loads by large trucks on non-Interstate rural roads, which often have not been constructed to carry such high load volumes.
- The average annual travel per-lane-mile by large trucks on rural Interstate highways in the U.S. increased 31 percent from 2000 to 2020.

## **TRANSPORTATION OPPORTUNITIES IN RURAL AMERICA**



**America must adopt transportation policies that improve rural transportation connectivity, safety and conditions to provide the nation’s small communities and rural areas with a level of safe and efficient access that will support quality of life and enhance economic productivity. The following recommendations for an improved rural transportation system are based partially on findings and recommendations made by AASHTO, the National Highway Cooperative Research Program (NCHRP), the Council of State Governments (CSG) and the Ports-to-Plains Alliance.**

### **Improve access and connectivity in America’s small communities and rural areas**

- Widen and extend key highway routes, including Interstates, to increase connectivity to smaller and emerging communities to facilitate access to jobs, education and healthcare, while improving access for agriculture, energy, manufacturing, forestry, tourism and other critical segments of the rural economy.
- A [NCHRP report](#) found that the construction of an additional 30,000 lane miles of limited access highways, largely along existing corridors, is needed to address the nation’s need for increased rural connectivity.
- Modernize major two-lane roads and highways so they can accommodate increased personal and commercial travel.
- Improve public transit service in rural America to provide improved mobility for people without access to private vehicles.

### **Improve rural traffic safety**

- Adequately fund needed rural roadway safety improvements and provide enhanced enforcement, education and improved emergency response to reduce the rate of rural traffic fatalities.

- Implement cost-effective roadway safety improvements, including rumble strips, shoulder improvements, lane widening, curve reductions, skid resistant surfaces at curves, passing lanes, intersection improvements and improved signage, pavement markings and lighting, guardrails and barriers, and improved shielding of obstacles.

### **Improve the condition of rural roads, highways and bridges**

- Adequately fund local and state transportation programs to ensure sufficient preservation of rural roads, highways and bridges to maintain transportation service and accommodate large truck travel, which is needed to support the rural economy.

**All data used in this report is the most current available. Sources of information for this report include: the Federal Highway Administration (FHWA), the National Highway Traffic Safety Administration (NHTSA), the National Cooperative Highway Research Program (NCHRP), the American Association of State Highway and Transportation Officials (AASHTO), the United States Department of Agriculture (USDA), the Council of State Governments (CSG), the General Accountability Office (GAO) and the U.S. Census Bureau. Cover photo image: Shutterstock.**