TRIP REPORT: SOUTH CAROLINA ROAD & BRIDGE CONDITIONS, CONGESTION, SAFETY & TRANSPORTATION FUNDING NEEDS EXAMINED IN NEW STATEWIDE REPORT. RECENT FUNDING INCREASES ALLOWED SOUTH CAROLINA TO ACCELERATE NEEDED PROJECTS, BUT FUNDING CHALLENGES REMAIN

Posted on September 23, 2021 by Greg

The increased transportation funding provided by the South Carolina legislature's passage of the 2017 Roads Bill (Act 40) has allowed South Carolina to move forward with numerous projects to improve safety and accelerate road and bridge repairs. But the state still faces challenges maintaining its aging system and reliably accommodating growing passenger and freight traffic to serve the needs of the state's growing economy, according to a new report released today by TRIP, a Washington, DC, based national transportation research nonprofit.

The TRIP report, *"Moving South Carolina Forward: Providing a Modern, Sustainable Transportation System in the Palmetto State,"* examines the condition, use, safety and efficiency of South Carolina's surface transportation system, the impact of Act 40, the importance of reauthorization of the federal surface transportation program and the challenges South Carolina faces to accommodate future transportation growth and sustain adequate funding.

"Act 40 has been a game-changer for our state, and every county is benefitting from this investment. Since 2017, considerable progress has been made to improve our state-owned roads. South Carolina is in the midst of tackling a monumental task, and unfortunately, we cannot press pause while we play catch-up on these long-overdue repairs. While current funding levels will help get us to a state of good repair, South Carolina is unprepared to financially deal with the immediate demands associated with population growth and continued economic development," said Jennifer Patterson, Executive Director, SC Alliance to Fix Our Roads.

With South Carolina's population expected to increase to approximately 6.4 million people by 2040, and vehicle travel growing at the fifth highest rate in the nation from 2014 to 2019, the TRIP report finds that congestion is worsening, costing South Carolina drivers a total of $2.1 billion each year in the form of lost time and wasted fuel – as much as of $1,165 per driver in some urban areas. South Carolina drivers lose as many as 56 hours and waste up to 22 gallons of fuel annually as a result of congestion. A full list of the most congested Interstate segments in the state is included in the report. Due to the COVID-19 pandemic, vehicle travel in South Carolina dropped by as much as 37 percent in April 2020 (as compared to vehicle travel during the same month the previous year) but rebounded to four percent above June 2019 volume in June 2021.

The efficiency and condition of South Carolina's transportation system, particularly its highways, is critical to the health of the state's economy. Annually, 465 tons of freight are shipped to, from or through South Carolina, an amount that is anticipated to grow by 65 percent by 2040. Accommodating the significant increase expected in the movement of truck freight in South Carolina will be further challenged by the significant number of freight routes in the state that are constrained because they have inadequate load carrying capacity to accommodate large trucks. The TRIP report includes a list of the worst highway freight bottlenecks in South Carolina. Regions with congested or poorly maintained roads may see businesses relocate to areas with a smoother, more efficient and more modern transportation system.

"Interstate 26 is the state's economic lifeline and truly the most SC-centric Interstate corridor in the state. It has enabled the development and growth of our international, domestic, and tourism sectors like no other route. But when other modes fail, or I-26 bogs down, everything and everybody do too. To remain competitive, I-26, like all of our public infrastructure, must be

improved, expanded, and modernized. The state and federal governments have dedicated funding for deepening South Carolina's shipping highway – the Charleston Harbor – they can do the same for I-26," said Rick Todd, President & CEO, SC Trucking Association.

Since 2018, SCDOT has been able to start approximately 4,000 miles of paving projects statewide, partly due to the additional funding provided by Act 40. According to the TRIP report, 18 percent of South Carolina's major locally and state-maintained roads are in poor condition and 25 percent are in mediocre condition. Eighteen percent of major roads in the state are in fair condition and the remaining 39 percent are in good condition.

Eight percent of South Carolina's locally and state-maintained bridges are rated poor/structurally deficient. A bridge is deemed poor/structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Bridges that are poor/structurally deficient may be posted for lower weight limits or closed if their condition warrants such action. Since 2018, SCDOT has begun repairs on 211 of the 465 state-maintained bridges that were in poor condition or restricted to carrying lighter weight vehicles and prioritized by SCDOT for repair. Based on current funding, SCDOT anticipates that the number of state-maintained bridges that are either in poor condition or restricted to carrying lighter weight vehicles will increase by 81 percent by 2040, from 548 to 994.

"Noticeable progress has been made since passage of Act 40 to enhance safety and address road repairs. Agriculture and forestry businesses are dependent upon the state's rural transportation network to connect these agribusinesses to their markets and ultimately the consumer. Bridges are key connectors for our supply chain, and additional investments at the federal and state level are necessary to ensure that our bridges receive necessary upgrades and repairs," said Ronnie Summers, CEO, Palmetto Agribusiness Council.

Traffic crashes in South Carolina claimed the lives of 5,018 people from 2015 to 2019. South Carolina's overall traffic fatality rate of 1.73 fatalities per 100 million vehicle miles of travel in 2019 is the highest in the U.S. The fatality rate on South Carolina's non-Interstate rural roads in 2019 was also the highest rate in the country and approximately three-and-a-half times higher than all other roads in the state (3.46 per 100 million vehicle miles of travel vs. 0.98). The SCDOT has initiated a rural roads safety program targeting 1,957 miles of rural roads, which represents approximately five percent of the state's rural roads, but account for approximately 30 percent of the state's rural fatal and serious traffic crashes. Since passage of Act 40, safety improvements have been initiated on 635 miles of the 1,000 miles of rural roads to be addressed under the state's current 10-year plan. These improvements include the addition of rumble strips, guardrails, raised pavement markers, paved shoulders and wider clear zones.

"While the 2017 investment has provided a significant boost to the state's ability to address repairs and improvements, South Carolina will need to look for opportunities to increase transportation investment from all levels of government – federal, state, and local," said Dave Kearby, TRIP's executive director. "A safe, reliable and well-maintained transportation system that offers improved mobility and accessibility to meet the needs of South Carolina residents, businesses, and tourists alike, is critical to moving South Carolina forward."

Moving South Carolina Forward:
Providing a Modern, Sustainable Transportation System in the Palmetto State

Executive Summary

Accessibility and connectivity are critical factors in a state's quality of life and economic competitiveness. The growth and development of a state or region hinges on efficient and safe access to employment, customers, commerce, recreation, education and healthcare via multiple transportation modes. The quality of life in South Carolina — one of the fastest growing states in the country — and the pace of the state's economic growth are directly tied to the condition, efficiency, safety and resiliency of its transportation system.

An adequate and reliable source of transportation funding is critical to providing the system of roads, highways and bridges that can support commerce within South Carolina and connect the state to markets around the globe, while providing the safe, smooth and efficient mobility that residents require. The increased transportation funding provided by the state legislature's passage of Act 40 in 2017, combined with previous state legislative actions, has allowed South Carolina to accelerate projects to improve traffic safety, relieve Interstate congestion and improve the condition of roads, highways and bridges. But, while current transportation investment levels have allowed South Carolina to make significant progress, the state still faces challenges in reliably accommodating growing passenger and freight traffic, and providing needed roadway safety improvements and road, highway and bridge repairs.

TRIP's "Moving South Carolina Forward" report examines the condition, use, safety and efficiency of South Carolina's surface transportation system, the impact of Act 40, the importance of reauthorization of the federal surface transportation program and the challenges South Carolina faces to accommodate future transportation growth and sustain adequate state funding despite the potential of increasing fuel efficiency standards and the adoption of electric vehicles. Sources of information for this report include the South Carolina Department of Transportation (SCDOT), the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), the Bureau of Transportation Statistics (BTS), the U.S. Census Bureau, the Texas Transportation Institute (TTI), the American Road & Transportation Builders Association (ARTBA), and the National Highway Traffic Safety Administration (NHTSA).

SOUTH CAROLINA'S TRANSPORTATION SYSTEM AND FUNDING

Investment in South Carolina's roads, highways and bridges is funded by local, state and federal governments. A lack of sufficient funding at all levels will make it difficult to adequately maintain and improve the state's existing transportation system.

To address a lack of adequate transportation funding, in 2017, the South Carolina legislature passed Act 40, which is anticipated to raise approximately $600 million per year from 2018 to 2027 for repairs and improvements to the state's roads, highways and bridges through a phased-in increase in the state's motor fuel user fee, an increase in vehicle registration fees, the imposition of a fee on the purchase of motor vehicles, and the creation of a registration fee for electric and hybrid vehicles.

The additional revenue provided by Act 40 has allowed SCDOT to increase its annual investment in roads, bridges, Interstates, safety and metropolitan transportation systems by 72 percent, from $763 million in 2016 to $1.3 billion in 2021, and is expected to allow a further increase of 20 percent by 2026, to $1.6 billion. Despite the additional revenue generated by Act 40, SCDOT estimates that it will still face an annual $403 million gap in funds to make needed improvements to the state's roads, highways, bridges, pedestrian and bicycle facilities, and mass transit systems to improve safety, reliability and physical conditions.

The current federal transportation legislation, Fixing America's Surface Transportation Act (FAST Act), was set to expire on September 30, 2020. Congress extended it by one year to September 30, 2021. The FAST Act is a major source of funding for road, highway and bridge repairs in South Carolina. Throughout the FAST Act – fiscal years 2016 to 2021 – the program provided $4.3 billion to South Carolina for road repairs and improvements, an average of $713 million per year.

TRAFFIC CONGESTION IN SOUTH CAROLINA

Congested roads, highways and bottlenecks choke commuting and commerce and cost South Carolina drivers $2.1 billion each year in the form of lost time and wasted fuel. From 2000 to 2019, vehicle travel in South Carolina increased by 27 percent. From 2014 to 2019 vehicle travel in South Carolina increased by 14 percent, the fifth highest rate of travel growth in the nation. Due to the COVID-19 pandemic, vehicle travel in South Carolina dropped by as much as 37 percent in April 2020 (as compared to vehicle travel during the same month the previous year) but rebounded to nearly four percent above June 2019 volume in June 2021. The chart below details the annual hours lost to congestion, congestion costs per driver and the average amount of fuel per driver wasted annually due to congestion in the state's largest urban areas. GSA metro refers to the Greenville-Spartanburg-Anderson urban area.

Location	Hours Lost to Congestion	Annual Cost Per Driver	Gallons of Fuel Wasted Per Driver
Charleston	56	$1,165	22
Columbia	43	$842	17
Florence	30	$697	13
GSA Metro	26	$615	12
Myrtle Beach	32	$745	14

Increasing congestion on South Carolina's major highways and roads hampers the state's ability to support economic development and quality of life by reducing the reliability and efficiency of personal and commercial travel, including the transport of goods and services. Traffic congestion robs commuters of time and money and imposes increased costs on businesses, shippers and manufacturers, which are often passed along to consumers. Increased levels of congestion can also reduce the attractiveness of a location when a company is considering expansion or deciding where to locate a new facility. The chart below lists South Carolina's 10 most congested interstate segments based on measuring volume of traffic carried by a roadway compared to its capacity. A chart containing a full list of the most congested interstate segments in South Carolina is included in the report.

Rank	County	Facility/Route	From	To	Length (mile)	Avg. Daily Traffic
1	Greenville, Spartanburg	I-85	I-385/SC-146/Woodruff Rd/Exit 51	County Limit/SC-14/Exit 56	4.9	122,806
2	Charleston, Berkeley	I-526	I-26/Exit 17	Clements Ferry Rd/Exit 23	5.6	79,795
3	Charleston	I-26	US-78/University Blvd/Exit 205	Remount Rd/Exit 212A	7.8	140,419
4	Richland, Lexington	I-26	Broad River Rd/Exit 101	I-126/US-76/Exit 108	7.5	109,640
5	Charleston	I-526	Paul Cantrell Blvd/Exit 11	I-26/Exit 17	5.7	85,407
6	York	I-77	SC-161/Exit 82	US-21/Carowinds Blvd/Exit 90	9.0	118,640
7	Charleston	I-26	Remount Rd/Exit 212A	US 17/Exit 220B	7.6	96,195
8	Spartanburg	I-85	County Limit/SC-14/Exit 56	E Main St/Exit 63	7.6	97,647
9	Lexington	I-26	I-126/US-76/Exit 108	I-77/Exit 116	6.9	93,537
10	Berkeley, Charleston	I-26	N Main St/Exit 199	US-78/University Blvd/Exit 205	5.9	86,152

To relieve traffic congestion and improve reliability on key portions of the state's 851-mile Interstate highway system, SCDOT has adopted a statewide Interstate plan, which initially will target widening 140 miles of congested Interstate highways and improving interchanges between Interstate highways. To date, SCDOT has either completed or started construction on 80 out of the 140 miles of Interstate highway portions targeted for widening, including the I-85/I-385 Gateway Project in the Greenville area, the Carolina Crossroads project in the Columbia area, and the Lowcountry Corridor project in the Charleston area.

ROAD CONDITIONS IN SOUTH CAROLINA

Location	Poor	Mediocre	Fair	Good
Charleston	16%	28%	19%	37%
Columbia	11%	29%	19%	41%
Florence	22%	31%	19%	28%
GSA Metro	20%	28%	18%	34%
Myrtle Beach	24%	29%	13%	34%
South Carolina Statewide	**18%**	**25%**	**18%**	**39%**

Statewide, 43 percent of South Carolina's major roads are in poor or mediocre condition. Eighteen percent of South Carolina's major locally and state-maintained roads are in poor condition and 25 percent are in mediocre condition. Eighteen percent of South Carolina's major roads are in fair condition and the remaining 39 percent are in good condition. Since 2018, SCDOT has been able to start approximately 4,000 miles of paving projects, partly due to the additional funding provided by Act 40.

BRIDGE CONDITIONS IN SOUTH CAROLINA

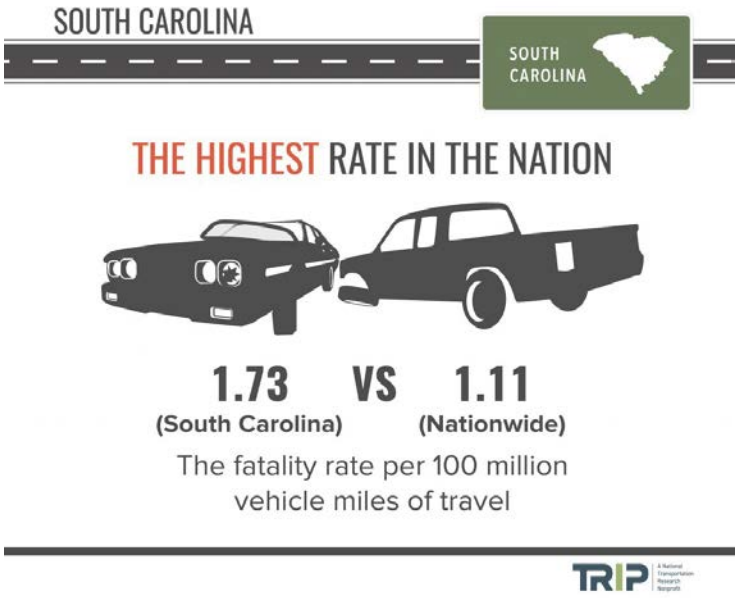
Eight percent of South Carolina's bridges are rated in poor/structurally deficient condition. Bridges that are rated poor/structurally deficient have significant deterioration of the bridge deck, supports or other major components. Forty-eight percent of the state's bridges are rated in fair condition and the remaining 44 percent are in good condition. Most bridges are designed to last 50 years before major overhaul or replacement, although many newer bridges are being designed to last 75 years or longer. In South Carolina, 46 percent of the state's bridges were built in 1969 or earlier.

Since 2018, SCDOT has started repairs on 211 of the 465 state-maintained bridges that were in poor condition or restricted to carrying lighter weight vehicles and prioritized by SCDOT for repair. Based on current funding, SCDOT anticipates that the number of state-maintained bridges that are either in poor condition or restricted to carrying lighter weight vehicles will increase by 81 percent by 2040, from 548 to 994. The chart below details bridge conditions statewide and in the state's largest urban areas.

Location	Poor/Structurally Deficient		Fair		Good		Total
	Number	Share	Number	Share	Number	Share	Bridges
Charleston	37	7%	306	61%	157	31%	500
Columbia	43	7%	234	40%	309	53%	586
Florence	4	1%	148	53%	126	45%	278
GSA Metro	129	7%	673	39%	926	54%	1,728
Myrtle Beach	20	4%	177	38%	263	57%	460
South Carolina Statewide	**745**	**8%**	**4,574**	**48%**	**4,136**	**44%**	**9,455**

TRAFFIC SAFETY IN SOUTH CAROLINA

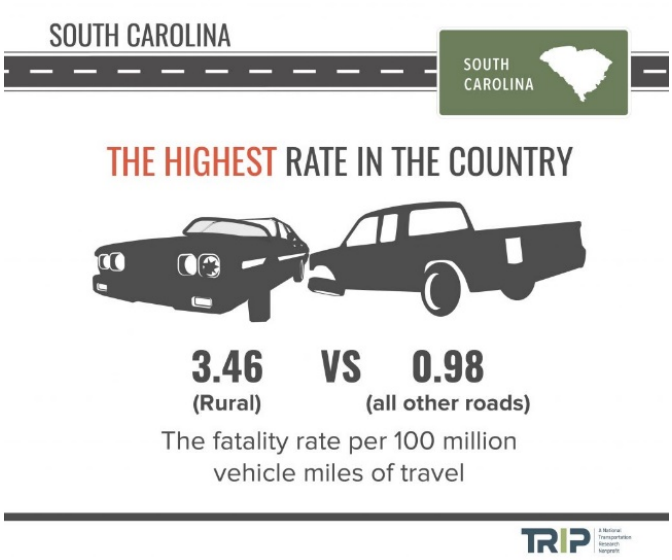
From 2015 to 2019, 5,018 people were killed in traffic crashes in South Carolina. The state's 2019 traffic fatality rate of 1.73 fatalities for every 100 million miles traveled is the highest rate in the country and significantly higher than the national average in 2019 of 1.11. The fatality rate on South Carolina's non-Interstate rural roads in 2019 was also the highest rate in the country and approximately three-and-a-half times higher than all other roads in the state (3.46 per 100 million vehicle miles of travel vs. 0.98).



The SCDOT has initiated a rural roads safety program targeting 1,957 miles of rural roads, which represents approximately five percent of the state's rural roads, but account for approximately 30 percent of the state's rural fatal and serious traffic crashes. Since passage of Act 40, safety improvements have been initiated on 635 miles of the 1,000 miles of rural roads to be

addressed under the state's current 10-year plan. These improvements include the addition of rumble strips, guardrails, raised pavement markers, paved shoulders and wider clear zones.

From 2015 to 2019, 17 percent of the state's traffic fatalities in crashes involving motorized vehicles were pedestrians or bicyclists. Improving safety on South Carolina's roadways can be achieved through further improvements in vehicle safety; improvements in driver, pedestrian, and bicyclist behavior; and, a variety of improvements in roadway safety features. In early 2021, the SCDOT adopted a "Complete Streets" policy that requires the agency to work with regional governments to identify and include walking, biking and transit needs as part of their transportation plans to improve the safety and accessibility of state routes. The chart below shows annual traffic fatalities in South Carolina from 2015 to 2019.



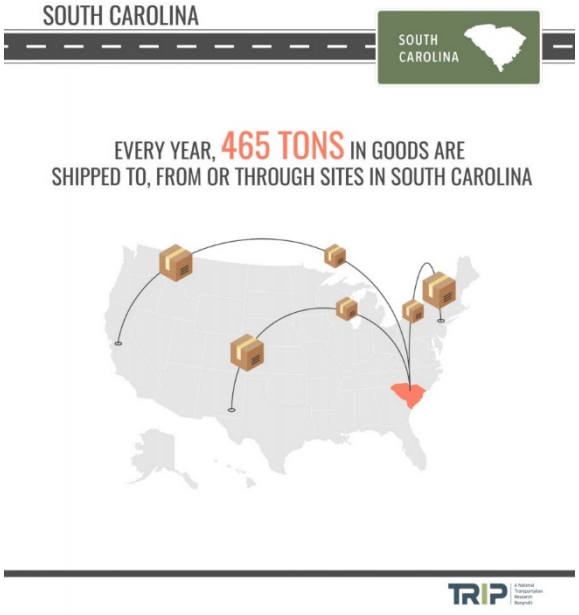
Year	Total Fatalities	Pedestrian Fatalities	Bicycle Fatalities	Share Bike and Ped.
2015	977	123	16	14%
2016	1,015	144	25	17%
2017	988	155	17	17%
2018	1,037	165	23	18%
2019	1,001	160	26	19%
TOTAL	**5,018**	**747**	**107**	**17%**
AVERAGE	**1,004**	**149**	**21**	**17%**

Traffic crashes in South Carolina imposed a total of $5.9 billion in economic costs in 2019. TRIP estimates that roadway features, while not the primary factor, were likely a contributing factor in approximately one-third of all fatal traffic crashes, resulting in $2 billion in economic costs in South Carolina in 2019. These costs include work and household productivity losses, property damage, medical costs, rehabilitation costs, legal and court costs, congestion costs, and emergency services.

FREIGHT TRANSPORTATION IN SOUTH CAROLINA

The health and future growth of South Carolina's economy is riding on its surface transportation system. Each year, 465 tons of freight are shipped to, from or through South Carolina, an amount that is anticipated to grow by 65 percent by 2040.

The amount of freight transported in South Carolina and the rest of the U.S. is expected to increase significantly as a result of further economic growth, changing business and retail models, increasing international trade, and rapidly changing consumer expectations that place an emphasis on faster deliveries, often of smaller packages or payloads.



Accommodating the significant increase expected in the movement of truck freight in South Carolina will be further challenged by the significant number of freight routes in the state that are constrained because they have inadequate load carrying capacity to accommodate large trucks. The following chart shows the worst highway freight bottlenecks in South Carolina.

Rank	Route	Urban area	Interchange	Avg. Daily Truck	Length (Miles)
1	I-20	Columbia	Broad River Road Interchange	4,191	15.1
2	I-20	Columbia	I-26 Interchange	3,320	7.3
3	I-26	Columbia	St. Andrews Road Interchange	5,478	5.8
4	I-26	Charleston	US-52 Connector Interchange	5,254	19.2
5	I-26	Charleston	I-526 Interchange	5,741	18.3
6	I-126	Columbia	I-26 Interchange	3,839	12.5
7	I-526	Charleston	Leeds Avenue Merge	2,243	8.5
8	I-526	Charleston	Paul Cantrell Boulevard Interchange	1,347	21.6

THE IMPACT OF TRANSPORTATION INVESTMENT ON ECONOMIC GROWTH IN SOUTH CAROLINA

According to a report by the American Road & Transportation Builders Association, the design, construction and maintenance of transportation infrastructure in South Carolina supports approximately 50,000 full-time jobs across all sectors of the economy. These workers earn $1.7 billion annually. Approximately 919,000 full-time jobs in South Carolina in key industries like tourism, retail sales, agriculture and manufacturing are completely dependent on the state's transportation network.

Sources of information for this report include the Federal Highway Administration (FHWA), the South Carolina Department of Transportation (SCDOT), the American Association of State Highway and Transportation Official (AASHTO), the American Road and Transportation Builders Association (ARTBA), the Bureau of Transportation Statistics (BTS), the U. S. Census Bureau, the Center for Transportation Studies, the Texas Transportation Institute (TTI) and the National Highway Traffic Safety Administration (NHTSA). All data used in the report are the most recent available.