New Mexico Transportation by the Numbers

MEETING THE STATE'S NEED FOR SAFE, SMOOTH AND EFFICIENT MOBILITY

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Founded in 1971, TRIP ® of Washington, DC, is a nonprofit organization that researches, evaluates and distributes economic and technical data on surface transportation issues. TRIP is sponsored by insurance companies, equipment manufacturers, distributors and suppliers; businesses involved in highway and transit engineering and construction; labor unions; and organizations concerned with efficient and safe surface transportation.

NEW MEXICO KEY TRANSPORTATION FACTS

THE HIDDEN COSTS OF DEFICIENT ROADS

Driving on New Mexico roads that are deteriorated, congested and that lack some desirable safety features costs New Mexico drivers a total of $3 billion each year. TRIP has calculated the cost to the average motorist in the state's largest urban areas in the form of additional vehicle operating costs (VOC) as a result of driving on rough roads, the cost of lost time and wasted fuel due to congestion, and the financial cost of traffic crashes. The chart below shows the cost of deficient roads statewide and for the average driver in the state's largest urban areas.

Location	VOC	Safety	Congestion	TOTAL
Albuquerque	$928	$635	$1,041	$2,604
Las Cruces	$910	$513	$418	$1,841
Santa Fe	$817	$560	$643	$2,020
NEW MEXICO STATEWIDE	**$1.3 Billion**	**$847 Million**	**$845 Million**	**$3 Billion**

NEW MEXICO ROADS PROVIDE A ROUGH RIDE

Due to inadequate state and local funding, 56 percent of major roads and highways in New Mexico are in poor or mediocre condition. Driving on rough roads costs the average New Mexico driver $901 annually in additional vehicle operating costs – a total of $1.3 billion statewide. The chart below details pavement conditions on major roads in the state's largest urban areas and statewide.

Location	Poor	Mediocre	Fair	Good
Albuquerque	39%	21%	11%	30%
Las Cruces	32%	36%	12%	21%
Santa Fe	32%	21%	14%	34%
NEW MEXICO STATEWIDE	**34%**	**22%**	**11%**	**32%**

NEW MEXICO BRIDGE CONDITIONS

Five percent of New Mexico's bridges are rated in poor/structurally deficient condition, meaning there is significant deterioration of the bridge deck, supports or other major components. Fifty-eight percent of the state's bridges are rated in fair condition and the remaining 36 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 New Mexico, 49 percent of the state's bridges were built in 1969 or earlier. The chart below details bridge conditions statewide and in the state's largest urban areas.

	POOR/STRUCTURALLY DEFICIENT		FAIR		GOOD		TOTAL
	Number	Share	Number	Share	Number	Share	BRIDGES
Albuquerque	7	1%	345	70%	144	29%	496
Las Cruces	12	5%	154	59%	96	37%	262
Santa Fe	6	2%	133	53%	110	44%	249
NEW MEXICO STATEWIDE	**208**	**5%**	**2,351**	**58%**	**1,466**	**36%**	**4,025**

NEW MEXICO ROADS ARE INCREASINGLY CONGESTED

In 2019, the state's transportation system carried 27.8 billion annual vehicle miles of travel (VMT), a 22 percent increase since 2000. Due to the Covid-19 pandemic, vehicle travel in New Mexico dropped by as much as 41 percent in April 2020 (as compared to vehicle travel during the same month the previous year), but rebounded to 15 percent above November 2019 volumes by November 2021.

Congested roads choke commuting and commerce and cost New Mexico drivers $845 million each year in the form of lost time and wasted fuel. The chart below shows the annual number of hours lost to congestion, the cost of lost time and wasted fuel, and gallons of fuel lost to congestion for the average driver in the state's largest urban areas.

Location	Hours Lost to Congestion	Annual Cost Per Driver	Gallons of Fuel Wasted Per Driver
Albuquerque	45	$1,041	21
Las Cruces	19	$418	9
Santa Fe	29	$643	14

NEW MEXICO TRAFFIC SAFETY AND FATALITIES

From 2015 to 2019, 1,894 people were killed in traffic crashes in New Mexico. In 2019, New Mexico had 1.53 traffic fatalities for every 100 million miles traveled, the third highest rate in the nation and significantly higher than the national average of 1.11.

Traffic crashes imposed a total of $2.5 billion in economic costs in New Mexico in 2019 and traffic crashes in which a lack of adequate roadway safety features, while not the primary factor, were likely a contributing factor imposed $847 million in economic costs. The chart below shows the number of people killed in traffic crashes in the state's largest urban areas between 2015 and 2019, and the cost of traffic cashes per driver.

Location	Average Fatalities 2015-2019	Crash Costs per Driver
Albuquerque	150	$635
Las Cruces	39	$513
Santa Fe	29	$560
NEW MEXICO STATEWIDE	**379**	**$847 Million**

TRANSPORTATION AND ECONOMIC DEVELOPMENT

The health and future growth of New Mexico's economy is riding on its transportation system. Each year, $120 billion in goods are shipped to and from sites in New Mexico, mostly by trucks. Increases in passenger and freight movement will place further burdens on the state's already deteriorated and congested network of roads and bridges. The value of freight shipped to and from sites in New Mexico, in inflation-adjusted dollars, is expected to increase 110 percent by 2045 and by 126 percent for goods shipped by trucks.

According to a report by the American Road & Transportation Builders Association, the design, construction and maintenance of transportation infrastructure in New Mexico supports approximately 26,000 full-time jobs across all sectors of the state economy. These workers earn $802 million annually. Approximately 349,000 full-time jobs in New Mexico in key industries like tourism, retail sales, agriculture and manufacturing are completely dependent on the state's transportation network.

NEEDED PROJECTS AND TRANSPORTATION FUNDING

Investment in New Mexico'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.

The New Mexico Department of Transportation has identified nearly $5.1 billion in needed but unfunded transportation projects throughout the state, as detailed in the chart below.

Route or Corridor	Project Description	Estimated Cost +/-
Southwest New Mexico and Border Region (District 1)		
I-25, MP 3.0 to 9.5	Reconstruction of six-lane corrridor with added capacity	$75M
I-25 at Nogal Canyon	Bridge replacement	$30M
US 180 at Deming to Bayard	Reconstruction with four-lane or alternating passing lanes	$145M
I-10 Corridor	Reconstruct pavement and infrastructure to current design standards	$850M
I-25, MP 0 to 1	Expand to six lanes	$30M
	DISTRICT ONE TOTAL COST	**$1.130 BILLION**
Southeast New Mexico and Permian Basin (District 2)		
US 380/NM 157-242, Roswell to Tatum to State Line	Capacity improvements including alternating passing lanes throughout corridor. Roadway Reconstruction and Pavement Rehabilitation	$190M
NM 31/NM 128 Corridors MP 0.5 to 22.67 and MP 0 to 59.9	Reconstruction with four-lane and alternating passing lanes, bridge replacement and major intesections improvements	$300M
NM 18, MP 58 to 71 Lovington to Hobbs	Minor pavement rehabilitation	$25M
US 62/180 MP 36 to 104	Minor pavement rehablilitation	$55M
NM 18, MP 0 to 58 Hobbs to Jal	Major pavement rehabilitation	$75M
US 54, MP 0 to 55 South of Alamogordo	Minor pavement rehabilitation	$40M
US 82, MP 139 to 171 West of Lovington	Roadway reconstruction with addition of shoulders, passing lanes and drainage improvement	$65M
US 60, MP 328 to 378 Clovis to Ft. Sumner Corridor	Roadway reconstruction, rehabilitation, additions of passing lanes and drainage improvements	$150M
	DISTRICT TWO TOTAL COST	**$900 MILLION**
Albuquerque Metro Area and Central Rio Grande Corridor (District 3)		
I-25 Montgomery and Commanche Interchanges	Reconstruction of Montgomery, Commanche, Interstate	$175M
NM 109 Jarales Overpass MP 5.25 to 6 over BNSF	Construction of bridge over BNSF tracks in Jarales	$46M
NM 500 Rio Bravo Bridge over Rio Grande	Replace NM 500 Bridges over Rio Grande	$53M
I-25 Gibson Interchange MP 223	Reconstruction Gibson I-25 interchange improvements of I-25	$125M
I-25 Mesa Del Sol Interchange	Design and Construction of new I-25 Interchange at Mesa Del Sol	$45M
I-40 Paseo Del Vulcan Cooridor I-40 to Unser	New PDV Cooridor and Interchange ROW Design Construction	$160M
I-40 6 Lane and Frontage Roads MP 133 to 153	Design and Reconstruction I-40 3 Lanes each way and Frontage Roads	$380M
NM 500 MM 4.75 to 7.5 from NM45 Coors to 118th street	Roadway reconstruction, addition of shoulders, turn lanes and drainage improvement, bridge widening	$40M
I-25 Cesar Chavez to Central	Reconstruction to correct S-Curve I-25	$500M
	DISTRICT THREE TOTAL COST	**$1.524 BILLION**

Northeastern Quadrant of New Mexico, Bordering Texas, Oklahoma and Colorado (District 4)		
NM 419, MP 17 and MP 17.42	Bridge Replacement (#6253, #6257)	$6M
NM 104, MP 71.35, MP 81.83, MP 87.12	Bridge Replacement (#5254, 5257, 5995)	$11M
I-40, MP 272.38	Bridge Replacement (#7184, #7185)	$7M
I-25, MP 412.36	Bridge Replacement (#7288, #7289,#7290, #7291)	$13M
NM 237, MP 1-2.4	Roadway Rehabilitation, ADA, Drainage Improvements.	$20M
NM 39, MP 14.6- MP 30-50	Roadway Reconstrucion/Rehabilitation, ADA, Lighting	$50M
I-25 MP 299-309	Roadway Reconstrucion/Rehabilitation	$35M
I-40, MP 270-276	Roadway Reconstrucion/Rehabilitation	$11M
I-40, MP 308- MP 313	Roadway Reconstrucion/Rehabilitation	$10M
I-40, MP 339- MP 351	Roadway Reconstrucion/Rehabilitation	$22M
I-40, MP 291-300	Roadway Reconstrucion/Rehabilitation	$17M
I-40, MP 317- MP 328	Roadway Reconstrucion/Rehabilitation	$20M
I-40, MP 360-MP 370	Roadway Reconstrucion/Rehabilitation	$20M
US 64/87, MP 349.4 to MP 404	Rehabilitation from Raton to Clayton.	$150M
BL-15, MP 2.37 to MP 3.06	Roadway Rehabilitation, ADA	$15M
US 54, MP 306.1 to MP 356.2	Reconstruction or major rehabilitation	$100M
	DISTRICT FOUR TOTAL COST	**$507 MILLION**
Northwest New Mexico and Northern Rio Grande Corridor (District 5)		
US 550, MP 99 to MP 150 (51 mi.)	Roadway centerline wall barrier	$56.6M
NM 76, NM 68 to NM 503, MP 0 to MP 10 (10 mi.)	Roadway rehabilitation and drainage improvements	$27.1M
NM 96, NM 512 to US 84 (35.5 mi)	Roadway rehabilitation / widening to add shoulders	$38.4M
Cerrillos Road in Santa Fe / St. Michael's to St. Francis	Roadway Reconstruction	$25M
NM 599 at Via Vetaranos in Santa Fe	Interchange construction	$15M
US 550 Aztec to Colorado State Line	Full depth reclamation	$28M
US 64 Shiprock Bridge	Bridge Reconstruction	$35M
US 64 Taos to Tres Piedras (37 miles)	Roadway rehabilitation / widening to add shoulders	$100M
US 550 Aztec to Colorado State Line	Full depth reclamation	$28M
	DISTRICT FIVE TOTAL COST	**$353.1 MILLION**
West-Central New Mexico, Gallup and Grants Area (District 6)		
Allison Corridor - NM 118, BNSF and I-40 overpasses and connection	Phase 2 and Phase 3	$51.3M
NM 547, MP 4 to 13.6	Widening, drainage improvements, design and construction	$54.4M
I-40 MP 0 -133	Design & addition of third lane & frontage roads	$450M
NM 264, MP 0 to 16	Design and reconstruction	$67.2M
I-40 MP 35 to 36.3, NM 118 MP 30.1 to 35.7	Phases 2-5, Drainage and flood mitigation project	$52.8M
	DISTRICT SIX TOTAL COST	**$675.7 MILLION**
	TOTAL STATEWIDE COST	**$5.090 BILLION**

Improvements to New Mexico's roads, highways and bridges are funded by local, state and federal governments. The level of highway investment is likely to increase as a result of the five-year federal Infrastructure Investment and Jobs Act (IIJA), signed into law in November 2021, which will provide $2.7 billion in road, highway and bridge funding from 2022 to 2026 resulting in a 35 percent increase in federal funding in 2022.

Highway and bridge spending multiplies through the economy by stimulating additional output. A 2021 macroeconomic analysis by IHS Markit found that that every dollar spent on highway and bridge improvements results in $3.4 dollars in combined direct, indirect and induced output from industries throughout the economy, resulting in a multiplier for highway and bridge investment of 3.4.

The ability of revenue from New Mexico's motor fuel tax – a critical source of state transportation funds – to keep pace with the state's future transportation needs is likely to erode as a result of increasing vehicle fuel efficiency and the increasing use of electric vehicles. The average fuel efficiency of U.S. passenger vehicles increased from 20 miles per gallon in 2010 to 24.5 miles per gallon in 2020. Average fuel efficiency is expected to increase another 31 percent by 2030, to 32 miles per gallon, and increase 51 percent by 2040, to 37 miles per gallon. The share of electric vehicles of total passenger vehicle sales in the U.S. is expected to increase to five percent by 2023 and to 60 percent by

2040, by which time electric vehicles will represent approximately 30 percent of the passenger vehicle fleet.

Sources of information for this report include the Federal Highway Administration (FHWA), the New Mexico Department of Transportation (NMDOT), 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). Cover photo credit: Kerry M. Halasz.

INTRODUCTION

New Mexico's roads, highways and bridges form vital transportation links for the state's residents, visitors and businesses, providing daily access to homes, jobs, shopping, natural resources and recreation. Modernizing New Mexico's transportation system is critical to quality of life and economic competitiveness in the Land of Enchantment. Inadequate transportation investment, which will result in deteriorated transportation facilities and diminished access, will negatively affect New Mexico's economic competitiveness and quality of life.

To accommodate population and economic growth, maintain its level of economic competitiveness and achieve further economic growth, New Mexico will need to maintain and modernize its roads, highways and bridges by improving the physical condition of its transportation network and enhancing the system's ability to provide efficient, reliable and safe mobility for residents, visitors and businesses. Making needed improvements to New Mexico's roads, highways, bridges and transit systems could also provide a significant boost to the state's economy by creating jobs in the short term and stimulating long-term economic growth as a result of enhanced mobility and access. The importance of New Mexico's surface transportation system and the reliable movement of goods it provides has been heightened during the ongoing response to the COVID-19 pandemic.

This report examines the condition, use and safety of New Mexico's roads, highways and bridges, and the state's future mobility needs. Sources of information for this report include the Federal Highway Administration (FHWA), the New Mexico Department of Transportation (NMDOT), 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).

In addition to statewide data, the TRIP report includes regional data for the Albuquerque, Las Cruces and Santa Fe urban areas. An urban area is defined as a region's municipalities and surrounding suburbs for pavement condition and congestion data; bridge and traffic fatality data include a region's major counties.[1]

POPULATION, TRAVEL AND ECONOMIC TRENDS IN NEW MEXICO

New Mexico motorists and businesses require a high level of personal and commercial mobility. To foster quality of life and spur continued economic growth, it is critical that the state provide a safe and modern transportation system that can accommodate future growth in population, tourism, business, recreation and vehicle travel.

New Mexico's population grew to approximately 2.1 million residents in 2021, a 15 percent increase since 2000.[2] New Mexico had approximately 1.4 million licensed drivers in 2019.[3] In 2019 (the most recent year when vehicle travel was not impacted by the pandemic), the state's transportation system carried 27.8 billion vehicle miles of travel (VMT), a 22 percent increase from 2000.[4] In 2020, the state's transportation system carried 23.8 billion vehicle miles of travel, down six percent overall from the previous year.[5] Due to the Covid-19 pandemic, vehicle travel in New Mexico dropped by as much as 41 percent in April 2020 (as compared to vehicle travel during the same month the previous year), but rebounded to 15 percent above November 2019 volumes by November 2021.[6] From 2000 to 2020, New Mexico's gross domestic product (GDP), a measure of the state's economic output, increased by 33 percent, when adjusted for inflation.[7] U.S. GDP increased 40 percent during the same period.[8]

CONDITION OF NEW MEXICO ROADS

The life cycle of New Mexico's roads is greatly affected by the state and local governments' ability to perform timely maintenance and upgrades to ensure that road and highway surfaces last as long as possible.

The pavement data in this report, which is for all arterial and collector roads and highways, is provided by the Federal Highway Administration (FHWA), based on data submitted annually by the New Mexico Transportation Cabinet on the condition of major state and locally maintained roads and highways. Pavement data for Interstate highways and other principal arterials is collected for all system mileage, whereas pavement data for minor arterial and all collector roads and highways is based on sampling portions of roadways as prescribed by FHWA to ensure the data collected is adequate to provide an accurate assessment of pavement conditions on these roads and highways.

Statewide, more than half of New Mexico's major roads are in poor or mediocre condition. Thirty-four percent of New Mexico's major locally and state-maintained roads are in poor condition and 22 percent are in mediocre condition.[9] Eleven percent of New Mexico's major roads are in fair condition and the remaining 32 percent are in good condition.[10]

Forty-two percent of New Mexico's major locally and state-maintained urban roads and highways have pavements rated in poor condition and 26 percent are in mediocre condition.[11] Twelve percent of New Mexico's major urban roads are rated in fair condition and the remaining 20 percent are rated in good condition.[12]

Thirty-two percent of New Mexico's major locally and state-maintained rural roads and highways have pavements rated in poor condition and 22 percent are in mediocre condition.[13] Eleven percent of New Mexico's major rural roads are rated in fair condition and the remaining 35 percent are rated in good condition.[14] The chart below details pavement conditions on major urban roads in the state's largest urban areas and statewide.[15]

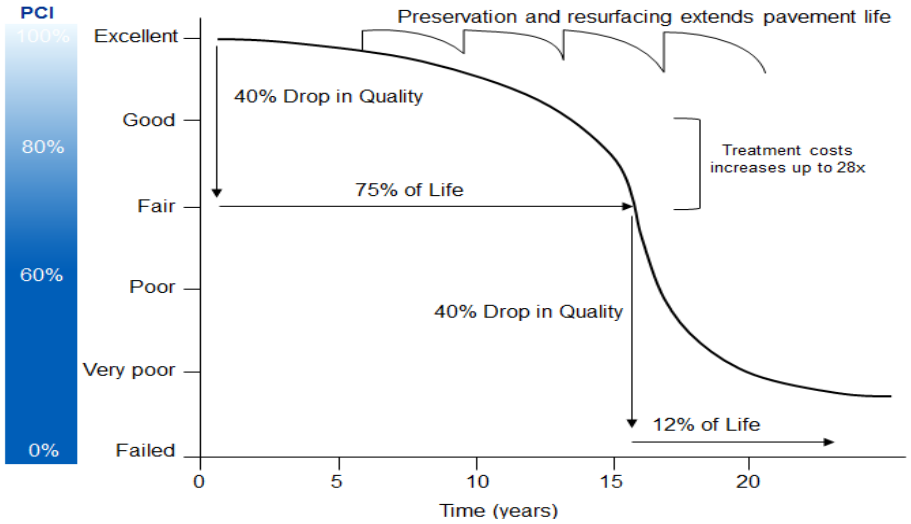
Chart 1. Pavement conditions on major urban roads in New Mexico's largest urban areas and statewide.

Location	Poor	Mediocre	Fair	Good
Albuquerque	39%	21%	11%	30%
Las Cruces	32%	36%	12%	21%
Santa Fe	32%	21%	14%	34%
NEW MEXICO STATEWIDE	**34%**	**22%**	**11%**	**32%**

Source: TRIP analysis of Federal Highway Administration data.

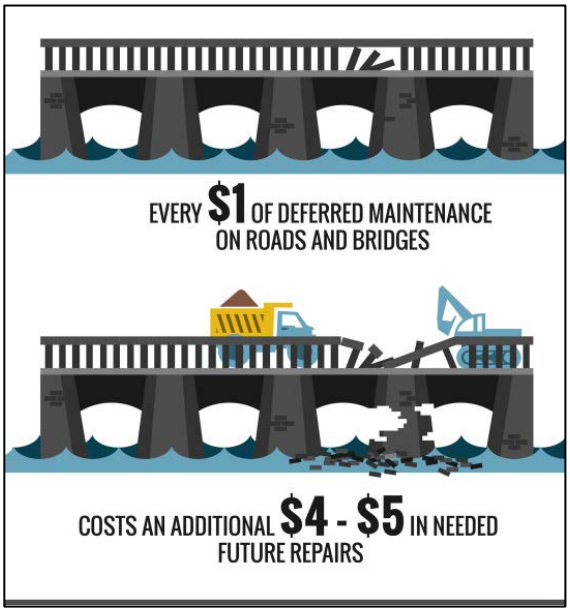
Pavement failure is caused by a combination of traffic, moisture and climate. Moisture often works its way into road surfaces and the materials that form the road's foundation. Road surfaces at intersections are more prone to deterioration because the slow-moving or standing loads occurring at these sites subject the pavement to higher levels of stress. It is critical that roads are fixed before they require major repairs because reconstructing roads costs approximately four times more than resurfacing them.[16] As roads and highways continue to age, they will reach a point of deterioration where routine paving and maintenance will not be adequate to keep pavement surfaces in good condition and costly reconstruction of the roadway and its underlying surfaces will become necessary.

Chart 2. Pavement Condition Cycle Time with Treatment and Cost



Source: North Carolina Department of Transportation (2016). 2016 Maintenance Operations and Performance Analysis Report.

Long-term repair costs increase significantly when road and bridge maintenance is deferred, as road and bridge deterioration accelerates later in the service life of a transportation facility and requires more costly repairs. A report on maintaining pavements found that every $1 of deferred maintenance on roads and bridges costs an additional $4 to $5 in needed future repairs.[17]



THE COST TO MOTORISTS OF ROADS IN INADEQUATE CONDITION

TRIP has calculated the additional cost to motorists of driving on roads in poor, mediocre or fair condition. When roads are in poor, mediocre or fair condition – which may include potholes, rutting or rough surfaces – the cost to operate and maintain a vehicle increases. These additional vehicle operating costs (VOC) include accelerated vehicle depreciation, additional vehicle repair costs, increased fuel consumption and increased tire wear. TRIP estimates that additional VOC borne by New Mexico motorists as a result of deteriorated road conditions is $1.3 billion annually, an average of $901 per driver statewide.[18] The chart below shows additional VOC per motorist in the state's largest urban areas.

Chart 3. Vehicle operating costs per motorist as a result of driving on deteriorated roads.

Location	VOC
Albuquerque	$928
Las Cruces	$910
Santa Fe	$817
NEW MEXICO STATEWIDE	**$1.3 Billion**

Source: TRIP estimates.

Additional vehicle operating costs have been calculated in the Highway Development and Management Model (HDM), which is recognized by the U.S. Department of Transportation and more than 100 other countries as the definitive analysis of the impact of road conditions on vehicle operating costs. The HDM report is based on numerous studies that have measured the impact of various factors, including road conditions, on vehicle operating costs.[19] The HDM study found that road deterioration increases ownership, repair, fuel and tire costs. The report found that deteriorated roads accelerate the pace of depreciation of vehicles and the need for repairs because the stress on the vehicle increases in proportion to the level of roughness of the pavement surface. Similarly, tire wear and fuel consumption increase as roads deteriorate since there is less efficient transfer of power to the drive train and additional friction between the road and the tires.

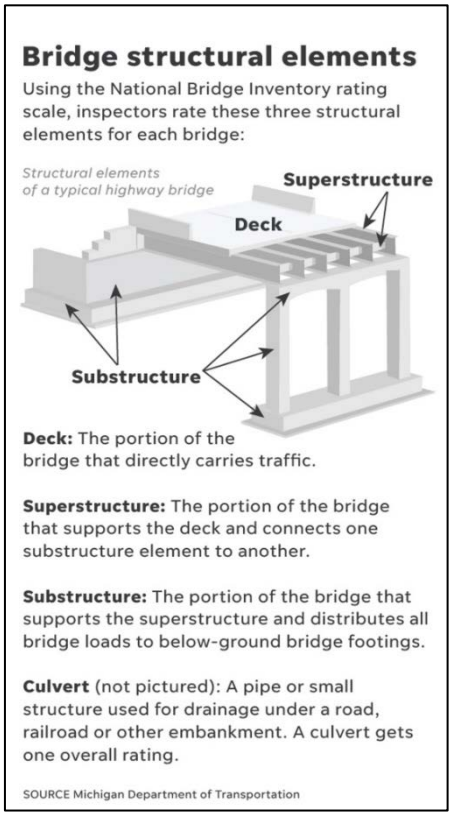
TRIP's additional VOC estimate is based on taking the average number of miles driven annually by a motorist, calculating current VOC based on AAA's driving cost estimates and then using the HDM model to estimate the additional VOC paid by drivers as a result of substandard roads.[20] Additional research on the impact of road conditions on fuel consumption by the Texas Transportation Institute (TTI) is also factored into TRIP's vehicle operating cost methodology.

BRIDGE CONDITIONS IN NEW MEXICO

New Mexico's bridges form key links in the state's highway system, providing communities and individuals access to employment, schools, shopping and medical facilities, and facilitating commerce and access for emergency vehicles.

Five percent (208 of 4,025) of New Mexico's locally and state-maintained bridges are rated in poor/structurally deficient condition.[21] This includes all bridges that are 20 feet or more in length. A bridge is deemed structurally deficient if there is significant deterioration of the bridge deck, supports or other major components.

Bridges that are structurally deficient may be posted for lower weight limits or closed if their condition warrants such action. Deteriorated bridges can have a significant impact on daily life. Restrictions on vehicle weight may cause many vehicles – especially emergency vehicles, commercial trucks, school buses and farm equipment – to use alternate routes to avoid posted bridges. Redirected trips also lengthen travel time, waste fuel and reduce the efficiency of the local economy.



Fifty-eight percent of New Mexico's locally and state-maintained bridges have been rated in fair condition.[22] 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 36 percent of the state's bridges are rated in good condition.[23]

The chart below details the condition of bridges statewide and in New Mexico's largest urban areas.

Chart 4. Bridge conditions statewide and in New Mexico's largest urban areas.

	POOR/STRUCTURALLY DEFICIENT		FAIR		GOOD		TOTAL
	Number	Share	Number	Share	Number	Share	BRIDGES
Albuquerque	7	1%	345	70%	144	29%	496
Las Cruces	12	5%	154	59%	96	37%	262
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NEW MEXICO STATEWIDE	**208**	**5%**	**2,351**	**58%**	**1,466**	**36%**	**4,025**

Source: TRIP analysis of Federal Highway Administration National Bridge Inventory (2021).

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 New Mexico, 48 percent of the state's bridges were built in 1969 or earlier.[24]

The service life of bridges can be extended by performing routine maintenance such as resurfacing decks, painting surfaces, ensuring that a facility has good drainage and replacing deteriorating components. But most bridges will eventually require more costly reconstruction or major rehabilitation to remain operable.

TRAFFIC SAFETY IN NEW MEXICO

A total of 1,894 people were killed in New Mexico traffic crashes from 2015 to 2019, an average of 379 fatalities per year.[25]

Chart 5. Traffic Fatalities in New Mexico 2015-2019.

Year	Fatalities
2015	298
2016	402
2017	397
2018	391
2019	424
TOTAL	**1,894**
AVERAGE	**379**

Source: National Highway Traffic Safety Administration.

New Mexico's overall traffic fatality rate of 1.53 fatalities per 100 million vehicle miles of travel in 2019 is the third highest in the nation and significantly higher than the national average of 1.11.[26]

The chart below shows the average number of people killed in traffic crashes in the state's largest urban areas between 2015 and 2019, and the cost of traffic crashes per driver.

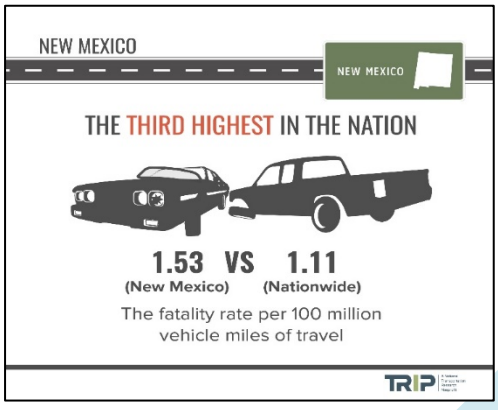

Chart 6. Average fatalities between 2015 and 2019 and the annual cost of crashes per driver.

Location	Average Fatalities 2015-2019	Crash Costs per Driver
Albuquerque	150	$635
Las Cruces	39	$513
Santa Fe	29	$560
NEW MEXICO STATEWIDE	**379**	**$847 Million**

Source: TRIP analysis of NHTSA data.

Three major factors are associated with fatal vehicle crashes: driver behavior, vehicle characteristics and roadway features. It is estimated that roadway features are likely a contributing factor in approximately one-third of fatal traffic crashes. Roadway features that impact safety include the number of lanes, lane widths, lighting, lane markings, rumble strips, shoulders, guard rails, other shielding devices, median barriers and intersection design.

Traffic crashes in New Mexico imposed a total of $2.5 billion in economic costs in 2019.[27] TRIP estimates that roadway features, while not the primary cause of a crash, were likely a contributing factor in approximately one-third of all fatal traffic crashes, resulting in $847 million in economic costs in New Mexico in 2019.[28] According to a 2015 National Highway Traffic Safety Administration (NHTSA) report, the economic costs of traffic crashes includes work and household productivity losses, property damage, medical costs, rehabilitation costs, legal and court costs, congestion costs, and emergency services.[29]

Improving safety on New Mexico'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. The severity of serious traffic crashes could be reduced through roadway improvements, where appropriate, such as converting intersections to roundabouts; removing or shielding roadside objects; the addition of left-turn lanes at intersections; the signalization of intersections; adding or improving median barriers; improved lighting; adding centerline or shoulder rumble strips; providing appropriate pedestrian and bicycle facilities, including sidewalks and bicycle lanes; providing wider lanes, wider and paved shoulders; upgrading roads from two lanes to four lanes; providing better road and lane markings; and updating rail crossings.

The U.S. has a $146 billion backlog in needed roadway safety improvements, according to a 2017 report from the AAA Foundation for Traffic Safety. The report found implementing these cost-effective and needed 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.

TRAFFIC CONGESTION IN NEW MEXICO

Increasing levels of traffic congestion cause significant delays in New Mexico, particularly in its larger urban areas, choking commuting and commerce. Traffic congestion robs commuters of time and money and imposes increased costs on businesses, shippers and manufacturers, which are often passed along to the consumer. Increased levels of congestion can also reduce the attractiveness of a location to a business when considering expansion or where to locate a new facility.

Based on TTI methodology, TRIP estimates the value of lost time and wasted fuel in New Mexico is approximately $845 million a year. The chart below shows the number of hours lost to

congestion annually for each driver in the state's largest urban areas, the per-driver cost of lost time and wasted fuel due to congestion, and the gallons of fuel lost annually.

Chart 7. Annual hours lost to congestion and congestion costs per driver.

Location	Hours Lost to Congestion	Annual Cost Per Driver	Gallons of Fuel Wasted Per Driver
Albuquerque	45	$1,041	21
Las Cruces	19	$418	9
Santa Fe	29	$643	14

Source: TRIP analysis based on TTI Urban Mobility Report.

TRANSPORTATION AND ECONOMIC GROWTH

Today's culture of business demands that an area have well-maintained and efficient roads, highways and bridges if it is to remain economically competitive. Global communications and the impact of free trade in North America and elsewhere have resulted in a significant increase in freight movement, making the quality of a region's transportation system a key component in a business's ability to compete locally, nationally and internationally.

Businesses have responded to improved communications and the need to cut costs with a variety of innovations including just-in-time delivery, increased small package delivery, demand-side inventory management and e-commerce. The result of these changes has been a significant improvement in logistics efficiency as firms move from a push-style distribution system, which relies on large-scale warehousing of materials, to a pull-style distribution system, which relies on smaller, more strategic movement of goods. These improvements have made mobile inventories the norm, resulting in the nation's trucks literally becoming rolling warehouses.

Highways are vitally important to continued economic development in New Mexico. As the economy expands, creating more jobs and increasing consumer confidence, the demand for consumer and business products grows. In turn, manufacturers ship greater quantities of goods to market to meet this demand, a process that adds to truck traffic on the state's highways and major arterial roads.

The ability of the nation's freight transportation system to efficiently and safely accommodate the growing demand for freight movement could be hampered by inadequate transportation capacity, a lack of adequate safety features on some transportation facilities, institutional barriers to enhancing the nation's freight facilities, a lack of adequate funding for needed improvements to the freight network and a shortage of drivers.

The need to improve the U.S. freight network is occurring at a time when the nation's freight delivery system is being transformed by advances in vehicle autonomy, manufacturing, warehousing and supply chain automation, increasing e-commerce, and the growing logistic networks being developed by Amazon and other retail organizations in response to the demand for a faster and more responsive delivery and logistics cycle.

Every year, $120 billion in goods are shipped to and from sites in New Mexico.[30] Sixty-seven percent of the goods shipped annually to and from sites in New Mexico are carried by truck and another 12 percent are carried by courier services or multiple-mode deliveries, which include trucking.[31] The value of freight shipped to and from sites in New Mexico, in inflation-adjusted dollars, is expected to increase 110 percent by 2045 and by 126 percent for goods shipped by trucks.[32]

Investments in transportation improvements in New Mexico play a critical role in the state's economy. A report by the American Road & Transportation Builders Association found that the design,

construction and maintenance of transportation infrastructure supports the equivalent of approximately 26,000 full-time jobs across all sectors of the state economy, earning these workers approximately $802 million annually.[33] These jobs include approximately 13,000 full-time jobs directly involved in transportation infrastructure construction and related activities. Spending by employees and companies in the transportation design and construction industry supports an additional 13,000 full-time jobs in New Mexico.[34] Transportation construction in New Mexico contributes an estimated $146.3 million annually in state and local income, corporate and unemployment insurance taxes and the federal payroll tax.[35]

Approximately 349,000 full-time jobs in New Mexico in key industries like tourism, retail sales, agriculture and manufacturing are dependent on the quality, safety and reliability of the state's transportation infrastructure network. These workers earn $12.1 billion in wages and contribute an estimated $2.2 billion in state and local income, corporate and unemployment insurance taxes and the federal payroll tax.[36]

Local, regional and state economic performance is improved when a region's surface transportation system is expanded or repaired. This improvement comes as a result of the initial job creation and increased employment created over the long-term because of improved access, reduced transport costs and improved safety.

Increasingly, companies are looking at the quality of a region's transportation system when deciding where to re-locate or expand. Regions with congested or poorly maintained roads may see businesses relocate to areas with a smoother, more efficient and more modern transportation system. Highway access has a significant impact on the competitiveness of a region's economy. Not surprisingly, highway accessibility was ranked the number two site selection factor in the 2021 survey of corporate executives by Area Development Magazine, behind only skilled labor.[37]

IMPROVING TRANSPORTATION SAFETY, RESILIENCY AND EFFICIENCY

Recognizing that extreme weather, sea level change, and changes in environmental conditions may threaten the condition and longevity of the nation's transportation infrastructure, transportation agencies have begun to assess vulnerabilities and consider the resilience of their transportation assets during the transportation planning process. Transportation agencies across the country have begun to incorporate resilience in asset management plans, addressing resilience in project development and design and optimizing operations and maintenance practices.[38]

Based on the importance of maximizing the level and safety of mobility provided by its transportation system, transportation agencies are adopting Transportation Systems Management and Operations (TSMO) practices and incorporating improved resiliency into their transportation network. While a TSMO program does not eliminate the need for capacity expansions along some routes, it helps enhance the mobility of an existing corridor as much as possible.

A TSMO program adopts an integrated set of strategies to improve traffic flow and safety on a portion of a roadway, including work zone management, traffic incident management, freight management, traveler information, traffic signal coordination, ramp management, transit management and improved bicycle and pedestrian crossings.[39] The benefits of TSMO can include reduced traffic congestion, reduced fuel consumption and reduced emissions.

TRANSPORTATION FUNDING IN NEW MEXICO

Investment in New Mexico'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.

NMDOT has identified nearly $5.1 billion in needed but unfunded transportation projects throughout the state, as detailed in the chart below.

Chart 8. Needed but unfunded New Mexico transportation projects.

Route or Corridor	Project Description	Estimated Cost +/-
Southwest New Mexico and Border Region (District 1)		
I-25, MP 3.0 to 9.5	Reconstruction of six-lane corrridor with added capacity	$75M
I-25 at Nogal Canyon	Bridge replacement	$30M
US 180 at Deming to Bayard	Reconstruction with four-lane or alternating passing lanes	$145M
I-10 Corridor	Reconstruct pavement and infrastructure to current design standards	$850M
I-25, MP 0 to 1	Expand to six lanes	$30M
	DISTRICT ONE TOTAL COST	**$1.130 BILLION**
Southeast New Mexico and Permian Basin (District 2)		
US 380/NM 157-242, Roswell to Tatum to State Line	Capacity improvements including alternating passing lanes throughout corridor. Roadway Reconstruction and Pavement Rehabilitation	$190M
NM 31/NM 128 Corridors MP 0.5 to 22.67 and MP 0 to 59.9	Reconstruction with four-lane and alternating passing lanes, bridge replacement and major intesections improvements	$300M
NM 18, MP 58 to 71 Lovington to Hobbs	Minor pavement rehabilitation	$25M
US 62/180 MP 36 to 104	Minor pavement rehablilitation	$55M
NM 18, MP 0 to 58 Hobbs to Jal	Major pavement rehabilitation	$75M
US 54, MP 0 to 55 South of Alamogordo	Minor pavement rehabilitation	$40M
US 82, MP 139 to 171 West of Lovington	Roadway reconstruction with addition of shoulders, passing lanes and drainage improvement	$65M
US 60, MP 328 to 378 Clovis to Ft. Sumner Corridor	Roadway reconstruction, rehabilitation, additions of passing lanes and drainage improvements	$150M
	DISTRICT TWO TOTAL COST	**$900 MILLION**
Albuquerque Metro Area and Central Rio Grande Corridor (District 3)		
I-25 Montgomery and Commanche Interchanges	Reconstruction of Montgomery, Commanche, Interstate	$175M
NM 109 Jarales Overpass MP 5.25 to 6 over BNSF	Construction of bridge over BNSF tracks in Jarales	$46M
NM 500 Rio Bravo Bridge over Rio Grande	Replace NM 500 Bridges over Rio Grande	$53M
I-25 Gibson Interchange MP 223	Reconstruction Gibson I-25 interchange improvements of I-25	$125M
I-25 Mesa Del Sol Interchange	Design and Construction of new I-25 Interchange at Mesa Del Sol	$45M
I-40 Paseo Del Vulcan Cooridor I-40 to Unser	New PDV Cooridor and Interchange ROW Design Construction	$160M
I-40 6 Lane and Frontage Roads MP 133 to 153	Design and Reconstruction I-40 3 Lanes each way and Frontage Roads	$380M
NM 500 MM 4.75 to 7.5 from NM45 Coors to 118th street	Roadway reconstruction, addition of shoulders, turn lanes and drainage improvement, bridge widening	$40M
I-25 Cesar Chavez to Central	Reconstruction to correct S-Curve I-25	$500M
	DISTRICT THREE TOTAL COST	**$1.524 BILLION**

Northeastern Quadrant of New Mexico, Bordering Texas, Oklahoma and Colorado (District 4)		
NM 419, MP 17 and MP 17.42	Bridge Replacement (#6253, #6257)	$6M
NM 104, MP 71.35, MP 81.83, MP 87.12	Bridge Replacement (#5254, 5257, 5995)	$11M
I-40, MP 272.38	Bridge Replacement (#7184, #7185)	$7M
I-25, MP 412.36	Bridge Replacement (#7288, #7289,#7290, #7291)	$13M
NM 237, MP 1-2.4	Roadway Rehabilitation, ADA, Drainage Improvements.	$20M
NM 39, MP 14.6- MP 30-50	Roadway Reconstrucion/Rehabilitation, ADA, Lighting	$50M
I-25 MP 299-309	Roadway Reconstrucion/Rehabilitation	$35M
I-40, MP 270-276	Roadway Reconstrucion/Rehabilitation	$11M
I-40, MP 308- MP 313	Roadway Reconstrucion/Rehabilitation	$10M
I-40, MP 339- MP 351	Roadway Reconstrucion/Rehabilitation	$22M
I-40, MP 291-300	Roadway Reconstrucion/Rehabilitation	$17M
I-40, MP 317- MP 328	Roadway Reconstrucion/Rehabilitation	$20M
I-40, MP 360-MP 370	Roadway Reconstrucion/Rehabilitation	$20M
US 64/87, MP 349.4 to MP 404	Rehabilitation from Raton to Clayton.	$150M
BL-15, MP 2.37 to MP 3.06	Roadway Rehabilitation, ADA	$15M
US 54, MP 306.1 to MP 356.2	Reconstruction or major rehabilitation	$100M
	DISTRICT FOUR TOTAL COST	**$507 MILLION**
Northwest New Mexico and Northern Rio Grande Corridor (District 5)		
US 550, MP 99 to MP 150 (51 mi.)	Roadway centerline wall barrier	$56.6M
NM 76, NM 68 to NM 503, MP 0 to MP 10 (10 mi.)	Roadway rehabilitation and drainage improvements	$27.1M
NM 96, NM 512 to US 84 (35.5 mi)	Roadway rehabilitation / widening to add shoulders	$38.4M
Cerrillos Road in Santa Fe / St. Michael's to St. Francis	Roadway Reconstruction	$25M
NM 599 at Via Vetaranos in Santa Fe	Interchange construction	$15M
US 550 Aztec to Colorado State Line	Full depth reclamation	$28M
US 64 Shiprock Bridge	Bridge Reconstruction	$35M
US 64 Taos to Tres Piedras (37 miles)	Roadway rehabilitation / widening to add shoulders	$100M
US 550 Aztec to Colorado State Line	Full depth reclamation	$28M
	DISTRICT FIVE TOTAL COST	**$353.1 MILLION**
West-Central New Mexico, Gallup and Grants Area (District 6)		
Allison Corridor - NM 118, BNSF and I-40 overpasses and connection	Phase 2 and Phase 3	$51.3M
NM 547, MP 4 to 13.6	Widening, drainage improvements, design and construction	$54.4M
I-40 MP 0 -133	Design & addition of third lane & frontage roads	$450M
NM 264, MP 0 to 16	Design and reconstruction	$67.2M
I-40 MP 35 to 36.3, NM 118 MP 30.1 to 35.7	Phases 2-5, Drainage and flood mitigation project	$52.8M
	DISTRICT SIX TOTAL COST	**$675.7 MILLION**
	TOTAL STATEWIDE COST	**$5.090 BILLION**

Source: New Mexico Department of Transportation.

Revenue from New Mexico's motor fuel tax – a critical source of state transportation funding -- is likely to erode as a result of increasing vehicle fuel efficiency and the increasing use of electric vehicles. The average fuel efficiency of U.S. passenger vehicles increased from 20 miles per gallon in 2010 to 24.5 miles per gallon in 2020. Average fuel efficiency is expected to increase another 31 percent by 2030, to 32 miles per gallon, and increase 51 percent by 2040, to 37 miles per gallon.[40] The share of electric vehicles of total passenger vehicle sales in the U.S. is expected to increase to five percent by 2023 and 60 percent by 2040, by which time electric vehicles will represent approximately 30 percent of the passenger vehicle fleet.[41]

In addition to state funds, the federal government is a critical source of funding for New Mexico's roads, highways, bridges and transit systems and provides a significant return in road and bridge funding based on the revenue generated in the state by the federal motor fuel tax.

Most federal funds for highway and transit improvements in New Mexico are provided by federal highway user fees, largely an 18.4 cents-per-gallon tax on gasoline and a 24.4 cents-per-gallon tax on diesel fuel.

The level of highway investment is likely to increase as a result of the five-year federal Infrastructure Investment and Jobs Act (IIJA), signed into law in November 2021, which will provide

$2.7 billion in road, highway and bridge funding from 2022 to 2026 resulting in a 35 percent increase in federal funding in 2022.[42]

Highway and bridge spending multiplies through the economy by stimulating additional output. A 2021 macroeconomic analysis by IHS Markit found that that every dollar spent on highway and bridge improvements results in $3.4 dollars in combined direct, indirect and induced output from industries throughout the economy, resulting in a multiplier for highway and bridge investment of 3.4.[43]

According to the Status of the Nation's Highways, Bridges, and Transit, 23rd Edition, submitted to Congress by the United States Department of Transportation (USDOT) in 2019, the nation faces a $786 billion backlog in needed repairs and improvements to the nation's roads, highways and bridges.[44] This backlog includes $435 billion for highway rehabilitation; $125 billion for bridge rehabilitation; $120 billion for system expansion and $106 billion for system enhancement.[45] The USDOT report found that the nation's current $105 billion investment in roads, highways and bridges by all levels of government should be increased by 29 percent to $136 billion annually to improve the conditions of roads, highways and bridges, relieve traffic congestion and improve traffic safety.

CONCLUSION

As New Mexico works to enhance its thriving, growing and dynamic state, it will be critical that it is able to address the most significant transportation issues by providing a 21st century network of roads, highways, bridges and transit that can accommodate the mobility demands of a modern society.

New Mexico will need to continue to modernize its surface transportation system by improving the physical condition of its transportation network and enhancing the system's ability to provide efficient, safe and reliable mobility for residents, visitors and businesses. Making needed improvements to the state's roads, highways, bridges and transit systems would provide a significant boost to the economy by creating jobs in the short term and stimulating long-term economic growth as a result of enhanced mobility and access. Numerous projects to improve the condition and expand the capacity of New Mexico's roads, highways, bridges and transit systems will not proceed without a substantial boost in federal, state or local transportation funding. If New Mexico is unable to complete needed transportation projects it will hamper the state's ability to improve the condition and efficiency of its transportation system or enhance economic development opportunities and quality of life.

# # #

ENDNOTES

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