New Mexico’s Top 25 Transportation Challenges and Improvements Needed to Address Them

February 2015

TRIP
a national transportation research group
202-466-6706
tripnet.org

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.
Executive Summary

New Mexico’s extensive system of roads, highways, bridges and transit provides the state’s residents, visitors and businesses with a high level of mobility. As the backbone of the Land of Enchantment’s economy, New Mexico’s surface transportation system plays a vital role in the state’s economic well-being, and is an integral part of what makes New Mexico an attractive place to live, work and do business.

However, roadway and bridge deterioration, traffic safety concerns, and a lack of adequate capacity on some roadway and transit corridors to support economic development opportunities, threaten to stifle economic growth and negatively impact the quality of life of the state’s residents. Due to insufficient transportation funding at the federal, state and local level, New Mexico faces numerous challenges in providing a transportation network that is well-maintained, as safe as possible, and that affords a level of mobility capable of supporting the state’s economic goals.

Many segments of New Mexico’s transportation system have significant deterioration, lack some desirable safety features, and do not have the capacity necessary to provide reliable mobility to support economic development, particularly on routes that support the state’s growing energy extraction industry, creating challenges for New Mexico’s residents, visitors, businesses and state and local governments. This report looks at the condition and use of New Mexico’s transportation system and provides information on the state’s top 25 transportation challenges and the improvements needed to address these challenges.

The federal government is a significant source of transportation funding for New Mexico. Signed into law in July 2012, MAP-21 (Moving Ahead for Progress in the 21st Century Act), has improved several procedures that in the past had delayed projects. MAP-21 does not address long-term funding challenges facing the federal surface transportation program. In July 2014 Congress approved the Highway and Transportation Funding Act of 2014, an eight-month extension of the federal surface transportation program, on which states rely for road, highway, bridge and transit funding. The program, initially set to expire on September 30, 2014, now runs through May 31, 2015. Congress will need to pass new legislation prior to the May 31 extension expiration to ensure prompt federal reimbursements to states for road, highway, bridge and transit repairs and improvements.

As New Mexico works to build and support a thriving and diverse economy, it will need to modernize its transportation system by improving the physical condition of its roads, highways, bridges and transit systems, and enhancing the system’s ability to provide efficient, safe and reliable mobility to the state’s residents, visitors and businesses. Making needed improvements to New Mexico’s roads, highways, bridges and transit systems could provide a significant boost to the state’s economy by stimulating short and long-term economic growth.
New Mexico faces significant transportation challenges, including the need to add roadway and transit capacity to support economic development, improve roadway safety and address pavement and bridge deterioration.

- This report identifies the top 25 transportation challenges in the state, including critical sections of the state’s highway and transit systems that have significant deterioration, inadequate capacity, or that need safety improvements.

- A lack of adequate transportation funding is the constraining factor in developing and delivering needed improvements.

- The following, ranked in order, are New Mexico’s top transportation challenges. Details on each of the state’s top 25 transportation challenge can be found in the body of the report, as well as the Appendix.

1. **Need for construction of US 82 as a two-lane enhanced highway in Eddy & Lea Counties.** This $180 million project would construct 86 miles of four-lane roadway (including frontage roads) in Eddy and Lea Counties. This route would help accommodate the growing heavy oil field traffic in the area.

2. **The Reconstruction and widening of I-25 in Bernalillo County.** This $26 million project would reconstruct and widen 1.6 miles of I-25 in Bernalillo County (including the existing bridges) from NM 314 to Isleta Pueblo.

3. **New bridge construction on US 70 in Las Cruces.** This $30 million project would include new bridge construction on US 7-0 in Las Cruces, as well as expanding the roadway to six-lanes and improving lighting, signalization and intersections. These improvements would ease the heavy congestion on this major connector between East Mesa, NASA, White Sands Missile Range and Las Cruces.

4. **US 64 reconstruction in San Juan County.** This $50 million project would reconstruct four miles of US 64 to enhance safety, add capacity and improve access control.

5. **US 54 bridge replacement near Logan.** This $25 million project would replace the Canadian River Bridge Crossing on US 54. The existing bridge has reached the end of its design life and has significant rust and corrosion. US 54 carries significant heavy truck travel and is the only direct route to Logan and Ute Lake State Park from Tucumcari. The detour route around this bridge is over 100 miles in length.

6. **Need for Rapid Transit Study along Paseo del Norte corridor in Albuquerque.** This study would evaluate a Rapid Transit System, which could possibly be a Bus Rapid Transit System, along the Paseo del Norte corridor in order to link the northwestern portion of the Albuquerque metro area with the Journal Center and other activity centers east of the Rio Grande. This could help to alleviate congestion, making travel times more predictable for private automobiles as well as transit. This project could meet the region’s
growing demand for river crossing trips, serve the large number of commuters, and accommodate projected population growth.

7. **Reconstruction and intersection improvements to NM 136 in Dona Ana County.** This $40 million project would include a full reconstruction and intersection improvements to nine miles of NM 136. This route is the only direct connection between Santa Teresa Port of Entry and I-10. The improvements are needed to accommodate industrial and commercial growth in the area.

8. **Reconstruction of I-25/Rio Bravo Interchange in Albuquerque.** This $37 million project would reconstruct the I-25/Rio Bravo Interchange in Albuquerque to address deterioration and relieve traffic congestion by improving the efficiency of the interchange.

9. **Development of Santa Fe Transit Center.** This project would construct a multi-modal center for the southern hub of the Santa Fe Trails Transit System in Santa Fe, which carries more than 1,000,000 riders annually. As the metro area continues to grow to the south and west, the transit center would create a formal multi-modal center that is positioned to connect important transit routes to the south and north.

10. **Bus Rapid Transit Study along Central Avenue in Albuquerque.** This project would provide a combination of dedicated busway and mixed flow lanes within the current right-of-way on the Central Corridor from I-40 and Tramway Boulevard to I-40 and Artisco Vista. This corridor is a key connector of transit destinations.

11. **Shoulder widening and passing lanes on NM 529 in Eddy and Lea Counties.** This $41.5 million project would widen the shoulders and add passing lanes on 22 miles of NM 529 in Eddy and Lea Counties. These improvements would accommodate the heavy oil field traffic in the area.

12. **Reconstruction and improvements to NM 285 from NM/Tx state line to Loving.** This $22 million project would include shoulder widening, reconstruction and enhancements on 12 miles of NM 285 from the New Mexico/Texas state line to Loving in order to accommodate heavy oil field traffic in the area.

13. **Reconstruction of NM 6 in Laguna.** This $30 million project would reconstruct 18.3 miles of NM 6 from I-40 to Sandoval County in order to provide a more efficient bypass from I-40 to I-25.

14. **Reconstruction of US 54 in Lincoln County.** This $30 million project would reconstruct 17 miles of US 54 in Lincoln County in order to accommodate the heavy truck traffic in the area.

15. **Development of Uptown Transit Center in Albuquerque.** This project would include a transit center on 1.6 acres at the intersection of Uptown Loop Road and Uptown Boulevard in order to serve multiple transit routes in the heart of the urban center.
Growth in population and vehicle travel has far outstripped the current capacity of New Mexico’s transportation system. The state’s population and economy will continue to grow, bringing mounting challenges for the existing network of roads and bridges.

- From 1990 to 2013, New Mexico’s population increased by 38 percent, from approximately 1.5 million residents to approximately 2.1 million.

- From 1990 to 2013, annual vehicle-miles-of-travel (VMT) in the state increased by 55 percent, from approximately 16.1 billion VMT to 25.1 billion VMT. Based on travel and population trends, TRIP estimates that vehicle travel in New Mexico will increase another 25 percent by 2030.

- Every year, $31.4 billion in goods are shipped from sites in New Mexico and another $46.6 billion in goods are shipped to sites in New Mexico, mostly by trucks. Sixty-five percent of the goods shipped annually from sites in New Mexico are carried by trucks and another 18 percent are carried by parcel, U.S. Postal Service or courier services, which use trucks for part of their deliveries.

Transportation projects that improve the efficiency, condition or safety of a highway provide significant economic benefits by reducing transportation delays and costs associated with a deficient transportation system.

- Improved business competitiveness due to reduced production and distribution costs as a result of increased travel speeds and fewer mobility barriers.

- Improvements in household welfare resulting from better access to higher-paying jobs, a wider selection of competitively priced consumer goods, additional housing and healthcare options, and improved mobility for residents without access to private vehicles.

- Gains in local, regional and state economies due to improved regional economic competitiveness, which stimulates population and job growth.

- Increased leisure/tourism and business travel resulting from the enhanced condition and reliability of a region’s transportation system.

- A reduction in economic losses from vehicle crashes, traffic congestion and vehicle maintenance costs associated with driving on deficient roads.

- Transportation projects that expand roadway or bridge capacity produce significant economic benefits by reducing congestion and improving access, thus speeding the flow of people and goods while reducing fuel consumption.
Transportation projects that maintain and preserve existing transportation infrastructure also provide significant economic benefits by improving travel speeds, capacity, load-carry abilities and safety, and reducing operating costs for people and businesses. Such projects also extend the service life of a road, bridge or transit vehicle or facility, which saves money by either postponing or eliminating the need for more expensive future repairs.

The Federal Highway Administration estimates that each dollar spent on road, highway and bridge improvements results in an average benefit of $5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs, and reduced emissions as a result of improved traffic flow.

According to a recent national report, improved access as a result of capacity expansions provides numerous regional economic benefits. Those benefits include higher employment rates, higher land value, additional tax revenue, increased intensity of economic activity and additional construction as a result of the intensified use.

The 2012 report, “Interactions Between Transportation Capacity, Economic Systems and Land Use,” prepared by the Strategic Highway Research Program for the Transportation Research Board, reviewed 100 projects, costing a minimum of $10 million, which expanded transportation capacity either to relieve congestion or enhance access.

The projects analyzed in the report were completed no later than 2005 and included a wide variety of urban and rural projects, including the expansion or addition of major highways, beltways, connectors, bypasses, bridges, interchanges, industrial access roads, intermodal freight terminals and intermodal passenger terminals.

The expanded capacity provided by the projects resulted in improved access, which resulted in reduced travel-related costs, faster and more reliable travel, greater travel speeds, improved reliability and increased travel volume.

The report found that improved transportation access benefits a region by: enhancing the desirability of an area for living, working or recreating, thus increasing its land value; increasing building construction in a region due to increased desirability for homes and businesses; increasing employment as a result of increased private and commercial land use; and increasing tax revenue as a result of increased property taxes, increased employment and increased consumption, which increases sales tax collection.

The report found that benefits of a transportation capacity expansion unfolded over several years and that the extent of the benefits were impacted by other factors including: the presence of complimentary infrastructure such as water, sewer and telecommunications; local land use policy; the local economic and business climate; and whether the expanded capacity was integrated with other public investment and development efforts.
• For every $1 million spent on urban highway or intermodal expansion, the report estimated that an average of 7.2 local, long-term jobs were created at nearby locations as a result of improved access. An additional 4.4 jobs were created outside the local area, including businesses that supplied local businesses or otherwise benefited from the increased regional economic activity.

• For every $1 million spent on rural highway or intermodal expansion, the report estimated that an average of 2.9 local, long-term jobs were created at nearby locations as a result of improved access. An additional 1.6 jobs were created outside the local area, including businesses that supplied local businesses or otherwise benefited from the increased regional economic activity.

• The report found that highway and intermodal capacity projects in urban areas created a greater number of long-term jobs than in rural areas, largely due to the more robust economic environment and greater density in urban communities.

New Mexico’s extensive transportation system has some road and bridge deficiencies, lacks some desirable safety features, and experiences severe congestion in key areas. Improvements to the condition and efficiency of the state’s transportation system would enhance quality of life, roadway safety and economic development.

• The state will need to expand and modernize key roads, highways, bridges and transit systems to increase mobility and ease traffic congestion, make needed road and bridge repairs, and improve roadway safety.

• In 2012, 23 percent of New Mexico’s major state and locally maintained urban roads were in poor condition, 41 percent were in mediocre or fair condition, and 36 percent were in good condition. Twenty-one percent of New Mexico’s state and locally maintained rural roads were rated in poor condition in 2012, while 33 percent were rated in mediocre or fair condition and 46 percent were rated in good condition.

• Seven percent of New Mexico’s bridges were rated structurally deficient in 2014. A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Structurally deficient bridges are often posted for lower weight or closed to traffic, restricting or redirecting large vehicles, including commercial trucks, school buses and emergency services vehicles.

• In 2014, nine percent of New Mexico’s bridges were rated as functionally obsolete. Bridges that are functionally obsolete no longer meet current highway design standards or are inadequate to accommodate current traffic levels, often because of narrow lanes, inadequate clearances or poor alignment.
Several factors are associated with vehicle crashes that result in fatalities, including driver behavior, vehicle characteristics and roadway features. TRIP estimates that roadway features are likely a contributing factor in approximately one-third of fatal traffic crashes. A total of 1,735 people died on New Mexico’s highways from 2009 through 2013, an average of 347 annually.

New Mexico’s overall traffic fatality rate of 1.24 fatalities per 100 million vehicle miles of travel in 2013 is significantly higher than the national average of 1.09.

Where appropriate, highway improvements can reduce traffic fatalities and crashes while improving traffic flow to help relieve congestion. Such improvements include removing or shielding obstacles; adding or improving medians; improved lighting; adding rumble strips, wider lanes, wider and paved shoulders; upgrading roads from two lanes to four lanes; and better road markings and traffic signals.

Investments in rural traffic safety have been found to result in significant reductions in serious traffic crashes. A 2012 report by the Texas Transportation Institute (TTI) found that improvements completed recently by the Texas Department of Transportation that widened lanes, improved shoulders and made other safety improvements on 1,159 miles of rural state roadways resulted in 133 fewer fatalities on these roads in the first three years after the improvements were completed (as compared to the three years prior). TTI estimates that the improvements on these roads are likely to save 880 lives over the next 20 years.

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

Signed into law in July 2012, MAP-21 (Moving Ahead for Progress in the 21st Century Act), has improved several procedures that in the past had delayed projects. MAP-21 does not address long-term funding challenges facing the federal surface transportation program.

From 2008 to 2012, the federal government provided $1.39 for road improvements in New Mexico for every dollar the state paid in federal motor fuel fees.

In July 2014 Congress approved the Highway and Transportation Funding Act of 2014, an eight-month extension of the federal surface transportation program, on which states rely for road, highway, bridge and transit funding. The program, initially set to expire on September 30, 2014, now runs through May 31, 2015. In addition to extending the current authorization of the highway and public transportation programs, the legislation will transfer nearly $11 billion into the Highway Trust Fund (HTF) to preserve existing levels of highway and public transportation investment through the end of May 2015.
• If Congress decides to provide additional revenues into the federal Highway Trust Fund in tandem with authorizing a new federal surface transportation program, a number of technically feasible revenue options have been identified by the American Association of State Highway and Transportation Officials (AASHTO).

• A significant boost in investment on the nation’s roads, highways, bridges and public transit systems is needed to improve their condition and to meet the nation’s transportation needs, concluded a new report from the American Association of State Highway and Transportation Officials.

• The 2015 AASHTO Transportation Bottom Line Report found that annual investment in the nation’s roads, highways and bridges needs to increase from $88 billion to $120 billion and from $17 billion to $43 billion in the nation’s public transit systems, to improve conditions and meet the nation’s mobility needs.

• The 2015 AASHTO Transportation Bottom Line Report also found that the current backlog in needed road, highway and bridge improvements is $740 billion.

Sources of data for this report include the New Mexico Department of Transportation (NMDOT), the U.S. Department of Transportation (USDOT), the Federal Highway Administration (FHWA), the U.S. Bureau of Transportation Statistics (BTS), the American Association of State Highway & Transportation officials (AASHTO), the Strategic Highway Research Program (SHRP) and the U.S. Census Bureau. All data used in the report is the latest available.
Introduction

New Mexico’s system of roads, highways, bridges and transit forms a vital transportation network for the state’s residents, visitors and businesses, providing daily access to homes, employment, shopping, recreation, natural resources and customers. The modernization of New Mexico’s transportation system could play an important role in the state’s economic well-being by providing critically needed jobs in the short term and by improving the productivity and competitiveness of the state’s businesses in the long term. Improving the state’s roads, bridges and transit networks also enhances quality of life, making New Mexico a more attractive place to live, work, visit and do business.

Deteriorated roads, highways and bridges, a lack of adequate roadway safety features, and highways that lack adequate capacity to support economic development opportunities are a detriment to the state’s residents, visitors and businesses because they hamper mobility and cause delays, reduce economic productivity and competitiveness, and increase costs of operating vehicles for individuals and businesses because of the increased wear and tear caused by deficient pavements.

This report looks at New Mexico’s greatest transportation challenges in providing a transportation system that is well-maintained, safe and that supports economic growth and quality of life in the state. Sources of data for this report include the New Mexico Department of Transportation (NMDOT), the U.S. Department of Transportation (USDOT), the Federal Highway Administration (FHWA), the U.S. Bureau of Transportation Statistics (BTS), the American Association of State Highway & Transportation officials (AASHTO), the Strategic Highway Research Program (SHRP) and the U.S. Census Bureau. All data used in the report is the latest available.
New Mexico residents rely on a high level of personal and commercial mobility. Population and economic growth in the Land of Enchantment have resulted in an increase in the demand for mobility and a large increase in vehicle miles of travel. To maintain and improve quality of life in New Mexico and support the state’s economic growth, it will be critical that New Mexico invest in a well-maintained, modern transportation system that can accommodate future growth in population, tourism, vehicle travel and economic development.

New Mexico’s population increased by 38 percent between 1990 and 2013, increasing from approximately 1.5 residents in 1990 to approximately 2.1 million residents in 2013.\(^1\) From 1990 to 2013, annual vehicle miles of travel (VMT) in New Mexico increased by 55 percent, from 16.1 billion miles traveled annually to 25.1 billion miles traveled annually.\(^2\) Based on population and other lifestyle trends, TRIP estimates that travel on New Mexico’s roads and highways will increase another 25 percent by 2030.\(^3\)

**New Mexico’s Top 25 Transportation Challenges**

Deteriorated roads, deficient bridges, roads that lack desirable safety features and highways and transit systems that lack adequate capacity to support economic development create challenges for a state’s residents, visitors, businesses and local and state governments.

This report identifies New Mexico’s top 25 transportation challenges, including the need to provide improvements to critical routes that have a multitude of needs ranging from
addressing pavement deterioration, inadequate roadway or transit capacity, deficient bridges, and a lack of adequate safety features. A lack of adequate transportation funding is the constraining factor in developing and delivering these needed improvements.

To determine which portions of the state’s transportation system pose the biggest challenges, TRIP gathered information from the New Mexico Department of Transportation (NMDOT) about sections of roadways and transit systems. Information requested by TRIP for each section of road, highway, bridge or transit system included the severity of the problem, the improvement needed to resolve the problem, and the level of importance of the facility to regional, interstate and international travel patterns.

The need to make the following transportation improvements in New Mexico are the state’s top 25 transportation challenges. Further details about each challenge can be found in the report’s Appendix.

1. **Need for construction of US 82 as a two-lane enhanced highway in Eddy & Lea Counties.** This $180 million project would construct 86 miles of four-lane roadway (including frontage roads) in Eddy and Lea Counties. This route would help accommodate the growing heavy oil field traffic in the area.

2. **The Reconstruction and widening of I-25 in Bernalillo County.** This $26 million project would reconstruct and widen 1.6 miles of I-25 in Bernalillo County (including the existing bridges) from NM 314 to Isleta Pueblo.

3. **New bridge construction on US 70 in Las Cruces.** This $30 million project would include new bridge construction on US 7-0 in Las Cruces, as well as expanding the roadway to six-lanes and improving lighting, signalization and intersections. These improvements would ease the heavy congestion on this major connector between East Mesa, NASA, White Sands Missile Range and Las Cruces.

4. **US 64 reconstruction in San Juan County.** This $50 million project would reconstruct four miles of US 64 to enhance safety, add capacity and improve access control.

5. **US 54 bridge replacement near Logan.** This $25 million project would replace the Canadian River Bridge Crossing on US 54. The existing bridge has reached the end of its design life and has significant rust and corrosion. US 54 carries significant heavy truck
travel and is the only direct route to Logan and Ute Lake State Park from Tucumcari. The detour route around this bridge is over 100 miles in length.

6. **Need for Rapid Transit Study along Paseo del Norte corridor in Albuquerque.** This study would evaluate a Rapid Transit System, which could possibly be a Bus Rapid Transit System, along the Paseo del Norte corridor in order to link the northwestern portion of the Albuquerque metro area with the Journal Center and other activity centers east of the Rio Grande. This could help to alleviate congestion, making travel times more predictable for private automobiles as well as transit. This project could meet the region’s growing demand for river crossing trips, serve the large number of commuters, and accommodate projected population growth.

7. **Reconstruction and intersection improvements to NM 136 in Dona Ana County.** This $40 million project would include a full reconstruction and intersection improvements to nine miles of NM 136. This route is the only direct connection between Santa Teresa Port of Entry and I-10. The improvements are needed to accommodate industrial and commercial growth in the area.

8. **Reconstruction of I-25/Rio Bravo Interchange in Albuquerque.** This $37 million project would reconstruct the I-25/Rio Bravo Interchange in Albuquerque to address deterioration and relieve traffic congestion by improving the efficiency of the interchange.

9. **Development of Santa Fe Transit Center.** This project would construct a multi-modal center for the southern hub of the Santa Fe Trails Transit System in Santa Fe, which carries more than 1,000,000 riders annually. As the metro area continues to grow to the south and west, the transit center would create a formal multi-modal center that is positioned to connect important transit routes to the south and north.

10. **Bus Rapid Transit Study along Central Avenue in Albuquerque.** This project would provide a combination of dedicated busway and mixed flow lanes within the current right-of-way on the Central Corridor from I-40 and Tramway Boulevard to I-40 and Artisco Vista. This corridor is a key connector of transit destinations.

11. **Shoulder widening and passing lanes on NM 529 in Eddy and Lea Counties.** This $41.5 million project would widen the shoulders and add passing lanes on 22 miles of NM 529 in Eddy and Lea Counties. These improvements would accommodate the heavy oil field traffic in the area.

12. **Reconstruction and improvements to NM 285 from NM/TX state line to Loving.** This $22 million project would include shoulder widening, reconstruction and enhancements on 12 miles of NM 285 from the New Mexico/Texas state line to Loving in order to accommodate heavy oil field traffic in the area.
13. **Reconstruction of NM 6 in Laguna**. This $30 million project would reconstruct 18.3 miles of NM 6 from I-40 to the Valencia County line in order to provide a more efficient bypass from I-40 to I-25.

14. **Reconstruction of US 54 in Lincoln County**. This $30 million project would reconstruct 17 miles of US 54 in Lincoln County in order to accommodate the heavy truck traffic in the area.

15. **Development of Uptown Transit Center in Albuquerque**. This project would include a transit center on 1.6 acres at the intersection of Uptown Loop Road and Uptown Boulevard in order to serve multiple transit routes in the heart of the urban center.

16. **Central and Unser Transit Center Expansion**. This project would expand the platform of the Central and Unser Transit Center in order to create more bus docks and create more customer amenities. This Center serves multiple routes and is located in a quickly developing area.

17. **Construction of auxiliary lane on I-25 in Las Cruces**. This $40 million project would construct a six mile auxiliary lane on I-25 in order to accommodate the high traffic volumes and relieve traffic congestion on the primary north-south route in Las Cruces.

18. **Reconstruction of US 54 in Carrizozo**. This $21 million project would reconstruct 11 miles of US 54 in order to accommodate the heavy truck traffic in the area.

19. **NM 1 reconstruction in Socorro County**. This $35 million project would reconstruct 12 miles of NM 1 in order to provide a bypass for oversize and overweight vehicles traveling on I-25 Nogal Canyon.

20. **US 64/87 rehabilitation and reconstruction**. This $25 million project would reconstruct a total of 30 miles of US 64/87 from Raton to Clayton. This corridor is part of the Port to Plains Route, which is a 2,300 mile economic development corridor between Mexico and Canada.

21. **Bridge replacement on US 64 near Shiprock**. This $25 million project would replace the truss bridge on US 64 near Shiprock.

22. **Reconstruction of NM 118 near Gallup**. This $15 million project would reconstruct nine miles of NM 118 from Gallup to Churchrock in order to provide for an increase in public development and economic development.

23. **Reconstruction of NM 68**. This $27 million project would reconstruct ten miles of NM 68 from Espanola to Velarde.

24. **Reconstruction of I-25 from Raton to the Colorado state line**. This $11 million project would reconstruct six miles of I-25 from Raton to the Colorado state line. This portion of
I-25 is part of the Port to Plains Route and is critical to the economic development of Raton and Northeast New Mexico.

25. **Construction of climbing lane on I-40 west of Top of the World.** This $20 million project would construct an additional climbing lane on nine miles of I-40 to the west of Top of the World. This corridor carries high traffic volumes of interstate travel.

**Condition of New Mexico’s Roads and Bridges**

New Mexico’s extensive network of roads and highways has some deficiencies and experiences congestion in key areas. Improvements to the condition and efficiency of the state’s transportation system would enhance quality of life and support economic development.

The life cycle of New Mexico’s roads is greatly affected by the state's ability to perform timely maintenance and upgrades to ensure that road and highway surfaces last as long as possible. The pavement condition of the state's major roads is evaluated and classified as being in poor, mediocre/fair or good condition.

In 2012, 23 percent of New Mexico’s major state and locally maintained urban roads were in poor condition, 41 percent were in mediocre or fair condition, and 36 percent were in good condition.² Twenty-one percent of New Mexico’s state and locally maintained rural roads were rated in poor condition in 2012, while 33 percent were rated in mediocre or fair condition and 46 percent were rated in good condition.³

Roads rated poor may show signs of deterioration, including rutting, cracks and potholes. In some cases, poor roads can be resurfaced but often are too deteriorated and must be reconstructed. Most pavements in mediocre condition can be repaired by resurfacing, but some may need more extensive reconstruction to return them to good condition.
In addition to deteriorated pavement condition, a total of 16 percent of New Mexico’s bridges are in need of repair or replacement.\(^6\) Seven percent of New Mexico’s bridges were rated structurally deficient in 2014.\(^7\) A bridge is 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. Nine percent of New Mexico’s bridges were rated functionally obsolete in 2014.\(^8\) Bridges that are functionally obsolete no longer meet current highway design standards, often because of narrow lanes, inadequate clearances or poor alignment or lack adequate capacity to accommodate current traffic levels.

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. However, most bridges will eventually require more costly reconstruction or major rehabilitation to remain operable.

**Roadway Safety in New Mexico**

In addition to deteriorated and congested roads and bridges, some segments of New Mexico’s transportation system lack needed safety improvements that would make the driving environment safer and reduce the occurrence of crashes and fatalities.

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.
A total of 1,735 people died on New Mexico’s highways from 2009 through 2013, an average of 347 annually.\textsuperscript{9} New Mexico’s overall traffic fatality rate of 1.24 fatalities per 100 million vehicle miles of travel in 2013 is higher than the national average of 1.09.\textsuperscript{10}

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 adding turn lanes, removing or shielding obstacles, adding or improving medians, widening lanes, widening and paving shoulders, improving intersection layout, and providing better road markings and upgrading or installing traffic signals.

Investments in rural traffic safety have been found to result in significant reductions in serious traffic crashes. A 2012 report by the Texas Transportation Institute (TTI) found that improvements completed recently by the Texas Department of Transportation that widened lanes, improved shoulders and made other safety improvements on 1,159 miles of rural state roadways resulted in 133 fewer fatalities on these roads in the first three years after the improvements were completed (as compared to the three years prior). TTI estimates that the improvements on these roads are likely to save 880 lives over the next 20 years.\textsuperscript{11}

**Study on Impact of U.S. Highway Capacity Additions**

A national report that studied the economic results of 100 recent highway capacity expansion projects has provided significant new insights into how enhancing regional mobility provides long-term economic benefits. The 2012 report, “Interactions Between Transportation
Capacity, Economic Systems and Land Use,” was prepared by the Strategic Highway Research Program for the Transportation Research Board, which is a program of the National Academy of Sciences. The report reviewed 100 projects, costing a minimum of $10 million, which expanded transportation capacity either to relieve congestion or enhance access.

The projects were carefully selected to ensure a wide range of project types and land use settings. The projects, completed no later than 2005, included a wide variety of urban and rural projects, including the provision or expansion of intercity highways, local access roads, interchanges, bridges, bypasses and intermodal facilities. The projects expanded or added major highways, beltways, connectors, bypasses, bridges, interchanges, industrial access roads, intermodal freight terminals and intermodal passenger terminals. The expanded capacity provided by the projects resulted in improved access, which resulted in reduced travel-related costs, faster and more reliable travel, greater travel speeds, improved reliability and increased travel volume.

The report found that the improved access as a result of capacity expansions provided numerous regional economic benefits, including increased employment, increased land value, increased tax revenue, increased intensity of economic activity, increased land prices and additional construction as a result of the intensified use.12

The report further noted that improved transportation access benefits a region by: enhancing the desirability of an area for living, working or recreating, thus increasing its land value; increasing building construction in a region due to increased desirability for homes and businesses; increasing employment as a result of increased private and commercial land use; and increasing tax revenue as a result of increased property taxes, increased employment and increased consumption, which increases sales tax collection.13
According to the report, “transportation projects lead to multifaceted forms of economic
development impact, which may include effects on employment, income, land use, property
values or business construction.”

The report found that benefits of a transportation capacity expansion unfolded over several years and that the extent of the benefits were impacted by other factors including: the presence of complimentary infrastructure such as water, sewer and telecommunications; local land use policy; the local economic and business climate; and whether the expanded capacity was integrated with other public investment and development efforts. “In some cases, an area with a higher growth trend may tend to be better positioned to take advantage of new highway connections or capacity,” the report found.

The report provided estimates on the average number of long-term jobs created as a result of increased transportation capacity, both within the local area and also outside of the immediate area of the improved access. For every $1 million spent on increased transportation capacity, the report estimated that an average of seven local, long-term jobs were created at nearby locations as a result of improved access. An additional 4.2 jobs outside the local area were created, including businesses that supplied local businesses or otherwise benefited from the increased regional economic activity.

Highway and other intermodal capacity projects in urban areas created a greater number of long-term jobs than in rural areas, largely due to the more robust economic environment and greater density in urban communities. Every $1 million spent on urban highway or intermodal expansion projects was found to result in an additional 7.2 local long-term jobs and an additional 4.4 non-local, long-term jobs, while every $1 million spent on rural highway or intermodal
expansion projects was found to result in an additional 2.9 local, long-term jobs and an additional 1.6 non-local, long-term jobs.¹⁸

**Transportation Funding in New Mexico**

New Mexico faces a significant funding shortfall in the amount needed just to maintain the transportation system in its current condition, let alone make needed expansions or undertake new projects. Unless transportation funding is increased at the local, state and federal level, New Mexico will not be able to address many of its top transportation challenges.

Investment in New Mexico’s roads, highways and bridges is funded by local, state and federal governments. The federal government provides funding for the state’s transportation system largely as part MAP-21 (Moving Ahead for Progress in the 21st Century Act), the current two-year federal surface transportation program, which expires on May 31, 2015.

The federal government is a critical source of funding for New Mexico’s roads, highways, bridges and transit systems and provides a significant return to New Mexico in road and bridge funding based on the revenue generated in the state by the federal motor fuel tax. From 2008 to 2012, the federal government provided $1.39 for road improvements in New Mexico for every dollar the state paid in federal motor fuel fees.¹⁹

Federal funds for highway and transit improvements in New Mexico are provided through the federal Highway Trust Fund, which raises revenue through federal user fees, largely an 18.4 cents-per-gallon tax on gasoline and a 24.4 cents-per-gallon tax on diesel fuel. Since 2008 revenue into the federal Highway Trust Fund has been inadequate to support legislatively
set funding levels so Congress has transferred approximately $53 billion in general funds and an additional $2 billion from a related trust fund into the federal Highway Trust Fund.\textsuperscript{20}

Signed into law in July 2012, MAP-21, has improved several procedures that in the past had delayed projects. MAP-21 does not address long-term funding challenges facing the federal surface transportation program. In July 2014 Congress approved the Highway and Transportation Funding Act of 2014, an eight-month extension of the federal surface transportation program on which states rely for road, highway, bridge and transit funding. The program, initially set to expire on September 30, 2014, now runs through May 31, 2015. In addition to extending the current authorization of the highway and public transportation programs, the legislation will transfer nearly $11 billion into the Highway Trust Fund (HTF) to preserve existing levels of highway and public transportation investment through the end of May 2015.

If Congress decides to provide additional revenues into the federal Highway Trust Fund in tandem with authorizing a new federal surface transportation program, a number of technically feasible revenue options have been identified by the American Association of State Highway and Transportation Officials (AASHTO).

A significant boost in investment on the nation’s roads, highways, bridges and public transit systems is needed to improve their condition and to meet the nation’s transportation needs, concluded a new report from the American Association of State Highway and Transportation Officials. The 2015 AASHTO Transportation Bottom Line Report found that annual investment in the nation’s roads, highways and bridges needs to increase from $88 billion to $120 billion and from $17 billion to $43 billion in the nation’s public transit systems, to improve conditions and meet the nation’s mobility needs.\textsuperscript{21}
The 2015 AASHTO Transportation Bottom Line Report also found that the current backlog in needed road, highway and bridge improvements is $740 billion.\textsuperscript{22} The backlog includes a $392 billion backlog for road and highway rehabilitation, a $112 billion backlog in needed bridge rehabilitation and a $237 billion backlog in needed highway capacity additions.\textsuperscript{23}

**Importance of Transportation to New Mexico’s Economy**

The condition and efficiency of a region’s transportation system can be a critical factor in the extent and rate of a region’s economic growth. The level of mobility provided by a region’s network of roads, bridges and highways has a significant impact on the productivity of local businesses. The physical condition of an area’s transportation infrastructure also has a significant impact on the cost of transportation to individuals and businesses and provides an important signal to potential employers of a region’s commitment to maintaining its local transportation system.

Because it impacts the time it takes to transport people and goods, as well as the cost of travel, the level of mobility provided by a transportation system and its physical condition play a significant role in determining a region’s economic effectiveness.

New Mexico’s businesses are dependent on an efficient, safe and modern transportation system. Today’s business culture demands that an area have a well-maintained and efficient system of roads, highways, bridges and public transportation if it is to be 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.

Every year, $31.4 billion in goods are shipped from sites in New Mexico and another $46.6 billion in goods are shipped to sites in New Mexico, mostly by trucks.24 Sixty-five percent of the goods shipped annually from sites in New Mexico are carried by trucks and another 18 percent are carried by courier services or multiple-mode deliveries, which include trucking.25

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.

The economic benefits of a well-maintained, efficient and safe transportation system can be divided into several categories, including the following.

Improved competitiveness of industry: An improved transportation system reduces production and distribution costs by lowering barriers to mobility and increasing travel speeds. Improved mobility provides the agriculture, manufacturing, retail and service sectors improved and more reliable access to increased and often lower-cost sources of labor, inventory, materials and customers.26 An increase in travel speeds of 10 percent has been found to increase labor markets by 15 to 18 percent. A 10 percent increase in the size of labor markets has been found to increase productivity by an average of 2.9 percent.27

Improved household welfare: An improved transportation system gives households better access to higher-paying jobs, a wider selection of competitively priced consumer goods,
and additional housing and healthcare options. A good regional transportation system can also provide mobility for people without access to private vehicles, including the elderly, disabled and people with lower incomes.\textsuperscript{28}

**Improved local, regional and state economies:** By boosting regional economic competitiveness, which stimulates population and job growth, and by lowering transport costs for businesses and individuals, transportation improvements can bolster local, regional and state economies. Improved transportation also stimulates urban and regional redevelopment and reduces the isolation of rural areas.\textsuperscript{29}

**Increased leisure/tourism and business travel:** The condition and reliability of a region’s transportation system impacts the accessibility of activities and destinations such as conferences, trade shows, sporting and entertainment events, parks, resort areas, social events and everyday business meetings. An improved transportation system increases the accessibility of leisure/tourism and business travel destinations, which stimulates economic activity.\textsuperscript{30}

**Reduced economic losses associated with vehicle crashes, traffic congestion and driving on deficient roads:** When a region’s transportation system lacks some desirable safety features, is congested or is deteriorated, it increases costs to the public and businesses in the form of traffic delays, increased costs associated with traffic crashes, increased fuel consumption and increased vehicle operating costs. Transportation investments that improve roadway safety, reduce congestion and improve roadway conditions benefit businesses and households by saving time, lives and money.

Needed transportation projects that expand capacity and preserve the existing transportation system generate significant economic benefits. Transportation projects that provide additional roadway lanes, expand the efficiency of a current roadway (through improved
signalization, driver information or other Intelligent Transportation Systems), or provide additional transit capacity, produce significant economic benefits by reducing congestion and improving access, thus speeding the flow of people and goods.\textsuperscript{31}

Similarly, transportation projects that maintain and preserve existing transportation infrastructure also provide significant economic benefits. The preservation of transportation facilities improves travel speed, capacity, load-carry abilities and safety, while reducing operating costs for people and businesses.\textsuperscript{32} Projects that preserve existing transportation infrastructure also extend the service life of a road, bridge or transit vehicle and save money by postponing or eliminating the need for more expensive future repairs.\textsuperscript{33}

The Federal Highway Administration estimates that each dollar spent on road, highway and bridge improvements results in an average benefit of $5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs and reduced emissions as a result of improved traffic flow.\textsuperscript{34}

Conclusion

New Mexico’s residents, visitors and businesses are faced with numerous transportation challenges every day as they travel to work, go to school, shop, or move products. Eliminating these challenges by improving the condition and efficiency of the state’s roads, highways and bridges will be an effective step in boosting the state’s economy, enhancing quality of life and making New Mexico an attractive place to live, work and play.
However, without additional local, state and federal transportation funding, many of the projects needed to support economic development by improving access, to improve road and bridge conditions, and to improve safety will not be completed. It is imperative that New Mexico adequately fund its system of roads, highways, bridges and transit in order to address the transportation challenges currently faced by the state’s residents and businesses.

As New Mexico works to build a thriving, growing and dynamic state, it will be critical that it is able to provide a 21st century network of roads, highways and bridges that can accommodate the mobility demands of a modern society.

###
Endnotes

1 U.S. Census Bureau. www.census.gov.


3 TRIP calculation based on U.S. Census and Federal Highway Administration data.


5 Rural Connections: Challenges and Opportunities in America’s Heartland. TRIP. July 2014.


7 Ibid.

8 Ibid.


10 Ibid.

11 Adding Highway Shoulders, Width, Reduce Crash Numbers and Save Lives (August 9, 2012). Texas Transportation Institute.


13 Ibid. P. 17.


18 Ibid. Transportation Research Board. “Interactions Between Transportation Capacity, Economic Systems and Land Use.” P. 22. Additional employment estimates were provided in response to a TRIP request.


23 Ibid.


25 Ibid.


28 Ibid.

29 Ibid.

30 Ibid.

Ibid.

Ibid.

FHWA estimate based on its analysis of 2006 data. For more information on FHWA’s cost-benefit analysis of highway investment, see the 2008 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance.