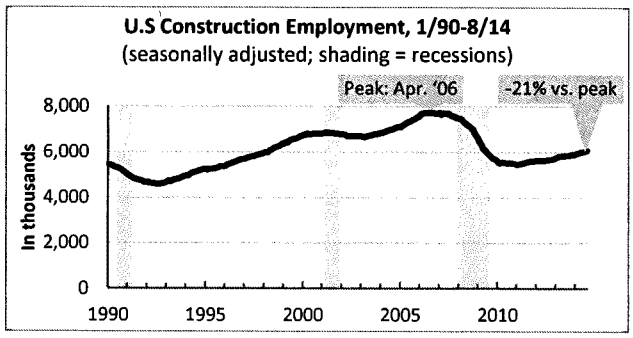
EXHIBIT #6
DATE Jan 28, 2015
HB #275

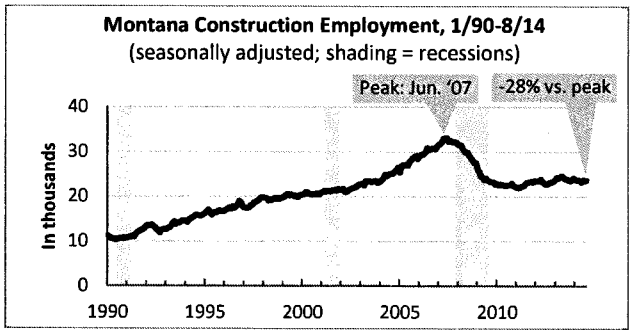
AGC of America
THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA
Quality People. Quality Projects.

The Economic Impact of Construction in the United States and Montana

Economic Impact of Investment in Nonresidential Construction:

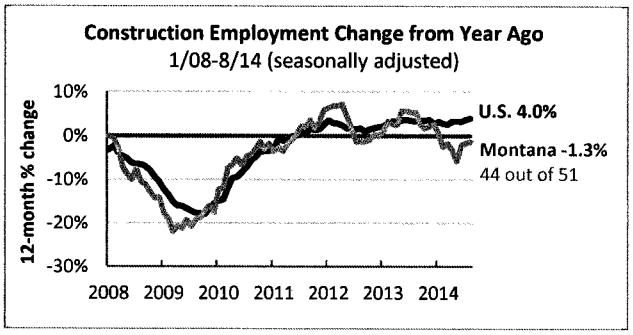
- An additional $1 billion invested in nonresidential construction would add $3.4 billion to Gross Domestic Product (GDP), $1.1 billion to personal earnings and create or sustain 28,500 jobs.
  - About one-third (9,700) of these jobs would be on-site construction jobs.
  - About one-sixth (4,600) of the jobs would be indirect jobs from supplying construction materials and services. Most jobs would be in-state, depending on the project and the mix of in-state suppliers.
  - About half (14,300) of the jobs would be induced jobs created when the construction and supplier workers and owners spend their additional incomes. These jobs would be a mix of in-state and out-of-state jobs. Conversely, investments elsewhere would support some indirect and induced jobs in the state.





Nonresidential Construction Spending:

- Nonresidential spending in the U.S. in 2013 totaled $569 billion ($305 billion private, $264 billion public).
- Private nonresidential spending in Montana totaled $558 million in 2012 and $650 million in 2013. (Public spending is not available by state.)
- Nonresidential starts in Montana totaled $946 million in 2013, according to Reed Construction Data.



Construction Employment (Seasonally Adjusted):

- Construction (residential + nonresidential) employed 6.1 million workers in August 2014, an increase of 232,000 (4.0%) from August 2013 and a decrease of 1.7 million (21%) from April 2006, when U.S. construction employment peaked.
- Construction employment in Montana in August totaled 23,600, a decrease of 1.3% from August 2013 and a decrease of 28% from the state's peak in June 2007.

Construction Industry Pay:

- In 2013, annual pay of all construction workers in the United States averaged $53,200, 7% more than the average for all private sector employees.
- Construction workers' pay in Montana averaged $44,800, 23% more than all private sector employees in the state.

Small Business:

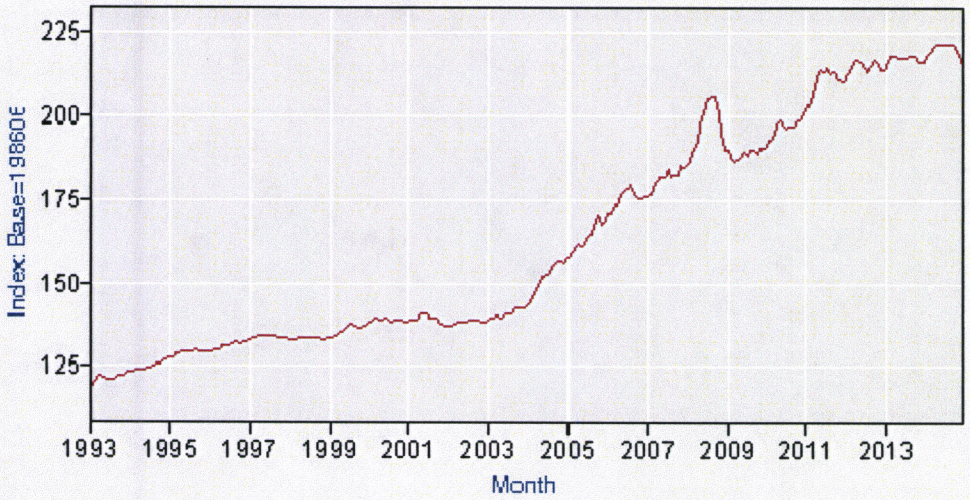
- The United States had 652,900 construction firms in 2012, of which 92% employed fewer than 20 workers.
- Montana had 4,900 construction firms in 2012, of which 97% were small (<20 employees).

Source: Ken Simonson, Chief Economist, AGC of America, simonsonk@agc.org, from Prof. Stephen Fuller, George Mason University (investment); Census Bureau (spending); Reed Construction Data (starts); Bureau of Labor Statistics (jobs, pay); Small Business Administration (small business)

September 24, 2014

Producer Price Index Industry Data

Series Id: PCUBCON--BCON--
Industry: Inputs to construction industries
Product: Inputs to construction industries
Base Date: 198606



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1993	119.0	120.5	121.8	122.2	121.6	121.1	120.9	121.1	121.8	122.0	122.5	122.8	121.4
1994	123.6	123.7	124.0	123.8	123.9	124.7	124.8	125.4	125.8	126.0	126.8	126.9	125.0
1995	127.6	127.9	128.6	129.1	129.3	129.2	129.5	129.7	130.0	129.6	129.2	129.2	129.1
1996	129.4	129.4	129.8	130.3	131.3	131.5	131.2	131.6	132.3	132.0	132.6	132.5	131.2
1997	132.9	133.4	133.6	134.0	134.3	134.2	134.2	134.2	134.1	133.7	133.8	133.5	133.8
1998	133.2	133.3	133.3	133.6	133.6	133.5	133.8	133.9	133.8	133.5	133.3	133.1	133.5
1999	133.6	133.9	134.5	135.1	135.7	136.6	137.5	137.7	137.2	136.6	136.9	137.3	136.1
2000	138.0	138.7	139.4	139.3	138.9	139.5	139.1	138.7	139.2	139.0	138.8	138.5	138.9
2001	138.6	139.0	138.8	139.2	140.6	140.6	139.5	139.5	139.7	138.4	137.9	137.3	139.1
2002	137.5	137.4	137.9	138.4	138.4	138.5	138.6	138.9	138.9	138.8	138.4	138.3	138.3
2003	138.8	139.6	139.9	140.0	139.9	140.1	140.7	141.0	142.2	142.4	142.7	142.5	140.8
2004	143.8	145.6	147.6	150.0	152.0	151.9	152.6	154.4	155.4	156.6	156.2	155.5	151.8
2005	157.4	159.1	160.8	161.7	161.3	162.4	163.8	164.7	167.6	170.1	167.4	168.2	163.7
2006	170.7	170.6	172.2	174.8	176.5	177.8	178.7	179.4	176.9	175.6	175.4	175.9	175.4
2007	175.8	176.8	178.9	180.9	182.3	182.3	183.6	182.2	182.5	182.4	185.1	184.3	181.4
2008	185.5	186.6	190.1	193.0	197.4	201.1	205.4	205.0	206.1	200.4	194.3	189.5	196.2
2009	189.5	187.4	186.3	186.6	187.6	188.9	187.9	189.9	189.5	188.8	190.1	190.3	188.6
2010	192.9	192.7	195.1	197.4	198.6	196.9	196.5	197.2	196.9	198.0	199.0	200.3	196.8
2011	202.6	204.7	208.7	211.6	213.5	213.3	214.2	212.7	213.2	211.7	211.5	210.7	210.7
2012	212.1	213.3	215.8	216.6	215.8	214.2	213.1	215.0	216.9	216.0	213.8	213.6	214.7
2013	215.0	217.8	217.7	217.7	217.5	217.2	217.0	217.9	217.8	216.9	216.0	216.3	217.1
2014	217.8	219.3	220.4	221.2	221.4	221.4	221.6	221.7	221.2(P)	219.1(P)	217.3(P)	214.3(P)	219.7(P)

P : Preliminary. All indexes are subject to revision four months after original publication.

Montana's Top 20 Transportation Challenges and Improvements Needed to Address Them

January 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

Montana's extensive system of roads, highways and bridges provides the state's residents, visitors and businesses with a high level of mobility. As the backbone of the Treasure State's economy, Montana's surface transportation system plays a vital role in the state's economic well-being, and is an integral part of what makes Montana 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 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, Montana faces numerous challenges in providing a road, highway and bridge network that is smooth, well-maintained, as safe as possible, and that affords a level of mobility capable of supporting the state's economic goals.

Many segments of Montana's transportation system have significant deterioration, lack some desirable safety features, and do not have adequate capacity to provide reliable mobility needed to support economic development particularly on routes that support the state's growing energy extraction industry, creating challenges for Montana's residents, visitors, businesses and state and local governments. This report looks at the condition and use of Montana's system of roads, highways and bridges and provides information on the state's top 20 transportation challenges and the improvements needed to address these challenges.

The transportation challenges outlined in this report represent approximately $7.4 billion in needed improvements. However, at this time, only $1.2 billion in funding for improvements for these corridors is available, leaving a backlog of nearly $6.2 billion in needed improvements and upgrades.

The federal government is a significant source of transportation funding for Montana. 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, will now run 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 Montana 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 and bridges, 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 Montana's roads, highways and bridges would provide a significant boost to the state's economy by stimulating short and long-term economic growth.

Montana faces significant challenges on many of the state's most critical transportation routes, including the need to add capacity to support economic development, to improve roadway safety and to address pavement and bridge deterioration.

- This report identifies the top 20 transportation challenges in the state, including critical sections of the state's transportation system that have significant pavement deterioration, inadequate capacity, deficient bridges, or that need safety improvements.

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

- Addressing the transportation challenges outlined in this report will cost approximately $7.4 billion in needed improvements. However, at this time, funding for only $1.2 billion in needed improvements on these corridors is available, leaving a backlog of nearly $6.2 billion in needed improvements and upgrades.

- The following, ranked in order, are Montana's top transportation challenges. Further details about each challenge can be found in the body of the report, as well as the Appendix.

	ROUTE	CHALLENGE
1	I-90	Inadequate capacity, pavement deterioration and bridge replacement
2	I-15	Pavement deterioration, bridge repairs and inadequate capacity
3	I-94	Aging bridges, inadequate interchanges and deteriorated pavement
4	US-2	Deteriorated pavement, safety issues, bridge deterioration and inadequate capacity
5	US-12	Deteriorating pavement, safety issues and bridge deterioration
6	US-89	Deteriorated pavement, inadequate capacity and safety concerns
7	US-93	Inadequate capacity, operational issues and deteriorated pavements
8	Statewide	High rate of traffic fatalities
9	MT-200	Deteriorated pavement, needed bridge replacement and safety concerns
10	Billings Bypass	Needed construction of new bypass in Billings
11	US-191	Deteriorated pavement and safety issues
12	US-87	Deteriorated pavement, safety issues and deteriorated bridge conditions
13	US-212	Deteriorated pavement and safety issues
14	US-287	Deteriorated pavement, safety issues and needed bridge replacement
15	MT-16	Deteriorated pavement and safety issues
16	MT-86	Deteriorated pavement and bridges, safety issues
17	MT-1	Deteriorated pavement and bridges, safety issues and inadequate capacity
18	MT-41	Deteriorated pavement and bridges, safety issues and inadequate capacity
19	MT-69	Deteriorated pavement and bridges, safety issues and inadequate capacity
20	N-205	Deteriorated pavement, safety issues and congestion

Growth in population and vehicle travel has far outstripped the current capacity of Montana'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 2012, Montana's population increased by 26 percent, from approximately 800,000 residents to approximately one million.

- From 1990 to 2012, annual vehicle-miles-of-travel (VMT) in the state increased by 43 percent, from approximately 8.3 billion VMT to 11.9 billion VMT. Based on travel and population trends, TRIP estimates that vehicle travel in Montana will increase another 30 percent by 2030.

- Every year, $22 billion in goods are shipped from sites in Montana and another $38 billion in goods are shipped to sites in Montana, mostly by trucks. Fifty-nine percent of the goods shipped annually from sites in Montana are carried by trucks and another nine percent are carried by parcel, U.S. Postal Service or courier services, which use trucks for part of their deliveries.

Montana'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 and bridges to increase mobility and ease traffic congestion, make needed road and bridge repairs, and improve roadway safety.

- In 2012, 29 percent of Montana's major state and locally maintained urban roads were in poor condition, 37 percent were in mediocre or fair condition, and 33 percent were in good condition. Six percent of Montana's state and locally maintained rural roads were rated in poor condition in 2012, while 35 percent were rated in mediocre or fair condition and 59 percent were rated in good condition.

- Seven percent of Montana's bridges were rated structurally deficient in 2013. 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 2013, 10 percent of Montana'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 1,053 people died on Montana's highways from 2008 through 2012, an average of 211 annually.

- Montana's overall traffic fatality rate of 1.72 fatalities per 100 million vehicle miles of travel in 2012 is significantly higher than the national average of 1.13 and the third highest in the nation.

- The fatality rate on Montana's rural non-Interstate roads was 2.4 fatalities per 100 million vehicle miles of travel in 2012, more than two and a half times the 0.95 fatality rate on all other roads and highways in the state.

- 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. The cost of serious crashes includes lost productivity, lost earnings, medical costs and emergency services.

- 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.

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.

- In the eastern portion of the state, Bakken oil extraction and support activities have resulted in increased overall traffic volumes and considerably higher than usual truck traffic as a percentage of the overall traffic stream. This additional traffic places a high level of stress on roadways, many of which were not originally built to accommodate such heavy traffic volumes and large vehicles.

- 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, increased land prices 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.

In addition to state and local governments, the federal government is a critical source of funding for Montana'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.

- 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, will now run 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 Montana Department of Transportation (MDT), 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 and the U.S. Census Bureau. All data used in the report is the latest available.

Introduction

Montana's system of roads, highways and bridges 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 Montana'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 and bridges also enhances quality of life, making Montana 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 Montana'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 Montana Department of Transportation (MDT), 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 and the U.S. Census Bureau. All data used in the report is the latest available.

Population, Travel and Economic Trends in Montana

Montana residents rely on a high level of personal and commercial mobility. The state experienced population and economic growth, resulting in an increase in the demand for mobility and a large increase in vehicle miles of travel in the Treasure State. To maintain and improve the quality of life in Montana and support the state's economic growth, it will be critical that Montana invest in a well-maintained, modern transportation system that can accommodate future growth in population, tourism, vehicle travel and economic development.

Montana's population increased by 26 percent between 1990 and 2012, increasing from approximately 800,000 residents in 1990 to approximately one million residents in 2012.[1]

Population and economic growth in Montana have resulted in a significant increase in vehicle travel in the state. From 1990 to 2012, annual vehicle miles of travel (VMT) in Montana increased by 43 percent, from 8.3 billion miles traveled annually to 11.9 billion miles traveled annually.[2] Based on population and other lifestyle trends, TRIP estimates that travel on Montana's roads and highways will increase another 30 percent by 2030.[3]

Condition of Montana's Roads

Montana'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 Montana'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, 29 percent of Montana's major state and locally maintained urban roads were in poor condition, 37 percent were in mediocre or fair condition, and 33 percent were in good condition.[4] Six percent of Montana's state and locally maintained rural roads were rated in poor condition in 2012, while 35 percent were rated in mediocre or fair condition and 59 percent were rated in good condition.[5]

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.

Montana Bridge Conditions

In addition to deteriorated pavement condition, a total of 17 percent of Montana's bridges are in need of repair or replacement.[6] The state's bridges form key links in Montana's highway system, providing communities and individuals access to employment, schools, shopping and medical facilities, and facilitating commerce and access for emergency vehicles.

In 2013, 17 percent of Montana's bridges (20 feet or longer) were rated as structurally deficient or functionally obsolete.[7] Approximately seven percent of Montana's bridges were rated structurally deficient.[8] 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.

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.

Ten percent of Montana's bridges were rated functionally obsolete in 2013.[9] 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 Montana

In addition to deteriorated and congested roads and bridges, some segments of Montana'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. 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.

A total of 1,053 people died on Montana's highways from 2008 through 2012, an average of 211 annually.[10] Montana's overall traffic fatality rate of 1.72 fatalities per 100 million vehicle miles of travel in 2012 is significantly higher than the national average of 1.13 and the third highest in the nation.[11] The fatality rate on Montana's non-Interstate rural roads was 2.4 fatalities per 100 million vehicle miles of travel in 2012, more than two and a half times the fatality rate of 0.95 on all other roads and highways in the state.[12]

Improving safety on Montana'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.

Roads with poor geometry, with insufficient clear distances, without turn lanes, having inadequate shoulders for the posted speed limits, or poorly laid out intersections or interchanges, pose greater risks to motorists, pedestrians and bicyclists.

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.[13]

Montana's Top 20 Transportation Challenges

Deteriorated roads, deficient bridges, roads that lack desirable safety features and highways 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 Montana's top 20 transportation challenges, including critical routes that have a multitude of needs ranging from addressing pavement deterioration, inadequate 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.

The 20 transportation challenges outlined in this report represent approximately $7.4 billion in needed improvements. However, at this time, only $1.23 billion in improvements are planned for these corridors, leaving a backlog of nearly $6.2 billion in needed improvements and upgrades.

To determine which portions of the state's transportation system pose the biggest challenges in Montana, TRIP gathered information from the Montana Department of Transportation about sections of roadways. Information requested by TRIP for each section of road, highway or bridge 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 following are Montana's top 20 transportation challenges. Further details about each challenge can be found in the body of the report, as well as the Appendix.

Challenge #1: Inadequate capacity, pavement deterioration and bridge replacement on sections of Interstate 90

Interstate 90 (I-90) is a heavily traveled freight corridor that links the country's west coast ports to the population centers in the northeast. In Montana, I-90 enters the state at the Idaho border and runs 554 miles east through Montana into Wyoming. Because of the cross country connectivity, I-90 carries a substantial amount of long haul freight traffic. I-90 through Montana currently operates at an acceptable level of service, but forecasts of increased traffic predict expanding congestion through the urban areas and operational issues in the mountainous western parts of the state. There are also a variety of environmental concerns associated with major improvements in western segments due to threatened and endangered species in the region.

- **Idaho to Missoula** – The pavement between De Borgia and Saint Regis, and near Frenchtown is deteriorating, in addition to a variety of bridge deck preservation and rehabilitation needs.
- **Through Missoula MPO** - Major improvements are needed at several Missoula interchanges to address congestion and safety issues.
- **Missoula to Butte** - Deteriorating pavement east of Missoula and near Goldcreek creates safety issues and negatively impact operations.
- **Butte to Bozeman** –Pavement conditions near Homestake Pass is an ongoing issue due to heavy snow and freeze thaw cycles.
- **Bozeman to Laurel** - Deteriorating pavement near Big Timber needs major rehabilitation. The rest area at Columbus is aging and needs improvement/updating to accommodate increasing use.
- **Laurel /Billings Area** The heavily used segment of I-90 near Laurel through the Pinehills interchange east of Billings needs capacity enhancing improvements, including interchange modifications, to address congestion and safety issues. In this segment, there are ten functionally obsolete bridges. There are also two fracture-critical bridges on I-90 over the Yellowstone River, which require replacement. Project development phases are initiated for some of the needs in this segment, with funding being a driving factor in how and when these improvements will be made. The estimated cost for the total improvements in this segment is $119.4 million.
- **Billings to Wyoming** - Major pavement rehabilitation is needed near Hardin to address deteriorating condition and safety. Upgrades to rest areas are needed in this segment to address aging facilities and accommodate increased use.

Challenge #2: Pavement deterioration, bridge repairs and inadequate capacity on sections of Interstate 15

Interstate 15 (I-15) extends approximately 1,400 miles across several states. I-15 carries a significant amount of long haul freight traffic and forms a portion of the CANAMEX Corridor. Interstate 15 enters Montana at Monida and travels north for nearly 400-miles through the state to the Port of Sweetgrass at the Canadian border. I-15 supports and promotes international, regional, and statewide economic development and movement of goods and services.

- **Idaho to Butte** – This segment of I-15 has several bridges that require seismic upgrades, and interchange improvements are needed near the intersection of I- 90 and I-15. Other needs in this segment include truck climbing lanes at Rocker (where I-15 and I-90 are concurrent routes) for safety and congestion, and improvements to the Divide Rest area for traveler safety.
- **Butte to Helena** - A variety of bridge project are needed in this segment, including deck rehabilitation projects to address structural deficiencies and three major projects including the replacement of the Neversweat Railroad Bridge, Silverbow Creek Structures, and Capitol/ Cedar Interchange Bridge. In addition to the bridge needs, there are long sections of deteriorating pavement sections in need of rehabilitation.
- **Helena to Great Falls** - Similar to the previous segment, there are a number of deficient bridges between Helena and Great Falls in need of deck preservation. Wolf Creek Canyon, the narrow segment that I-15 follows from Seiben Flats to Cascade, has long sections of deteriorating pavement, poor horizontal alignment, and issues with clear zones and major rock fall. Much of the I-15 alignment between Helena and Great Falls has physical constraints that make horizontal alignment, rock fall, and clear zone improvements challenging.
- **Great Falls to Canada** – Deteriorating pavement near Great Falls, south of Dutton, and Shelby north to the Canadian border need major rehabilitation in addition to capacity enhancing projects to address congestion from freight movements.

Challenge #3: Aging bridges, inadequate interchanges and deteriorated pavement on sections of Interstate 94

Interstate 94 (I-94) is a heavily traveled corridor that originates near Billings Montana and travels east through North Dakota, Minnesota, Wisconsin, Indiana and ends in Michigan. In Montana, I-94 extends from the intersection of I-90 near Billings and runs east for approximately 250 miles to the Montana/North Dakota state line. I-94 carries a significant amount of freight traffic, and recent developments in the Bakken formation have dramatically increased traffic volumes; in particular with large vehicle volumes along I-94.

- **Billings to Miles City** – Vertical alignments and aging bridge decks are safety and reliability concerns along this section. Major improvements are needed near Miles City interchanges to address increasing traffic volumes due to the natural resource extraction activity.
- **Miles City to North Dakota** - Vertical alignments, aging bridge decks, and deteriorating pavement are concerns along this segment. Pavement rehabilitation is needed near the Bad Route Interchange to address deteriorating pavements issues that are accelerating due to natural resource extraction activities.

Challenge #4: Deteriorated pavement, safety issues, bridge deterioration and inadequate capacity on sections of US-2

US Highway 2 is a predominantly two-lane highway running east-west and spanning 667 miles across Montana. US-2 is an interregional corridor with a heightened need for a high degree of reliability and mobility as it supports and promotes international, national, regional and statewide trade and economic activity. Movements on this highway are primarily long-distance, interstate and intrastate traffic.

- **Idaho to Kalispell** –There are long sections of deteriorating pavement in this segment of US-2. In addition, there are safety issues due to geometric and visibility concerns throughout this heavily wooded segment that passes through the Kootenai National Forest. Improvements on US-2 south of Libby have been a particular challenge due to soft soils that limit conventional

building methods. In addition, there is also a need for bridge replacement near Kalispell, pavement upgrades, and safety issues due to aging designs and increasing traffic volumes.

- **Kalispell to Shelby** - In this segment of US-2, there are long sections of deteriorating pavement. There are also safety issues due to geometric and visibility concerns near Glacier National Park and across the Blackfeet Reservation. There is a need for major bridge replacement near the Hungry Horse Reservoir and West Glacier due to structural deficiencies. Pavement upgrades near Cut Bank and safety improvements in Browning are needed in this segment.
- **Shelby to Malta** – There are long segments of pavement in deteriorating condition near Galata and east of Havre that require treatment to address safety and reliability concerns.
- **Malta to North Dakota** –Increasing heavy truck traffic from the Bakken formation has dramatically accelerated the deterioration of pavement condition, operations and safety of this segment. Spot pavement and capacity enhancing improvements are needed to improve level of service east of Culbertson near MT-16. Limited clear zone and the proximity to the BNSF railroad is a challenge for capacity expanding projects.

Challenge #5: Deteriorating pavement, safety issues and bridge deterioration on sections of US-12

US Highway 12 runs along portions of the National Highway System (NHS) Non-Interstate, NHS-Interstate and State Primary highways systems through Montana from Idaho to North Dakota. This corridor provides supports and promotes regional and statewide activity as a supplement to I-90 and I-94.

- **Idaho to I-90** - Deteriorating pavement contributes to reduced traffic speeds, operation issues, and safety concerns throughout this segment.
- **I-90 to Helena** - Deteriorating pavement from Garrison Junction to MacDonald Pass along this narrow section creates safety issues and platooning due to limited passing opportunities. Horizontal alignment along the creek bottom and narrow shoulder create safety concerns with reduced traffic speeds and operations.
- **Helena to White Sulphur Springs** – US-12 travels through narrow Deep Creek Canyon in this segment. The topography and proximity to Deep Creek are significant challenges. Deteriorating pavement and rock fall mitigation is constant through the narrow segments of Deep Creek Canyon. US-12 through the Canyon has geometric and safety concerns, which, combined with the poor pavement condition, result in slow travel speeds and poor operations.
- **White Sulphur Springs to Forsyth** – Deteriorating pavement and sub-pavement near the Wheatland/Meagher and Musselshell/Rosebud county lines, combined with narrow shoulders, result in reduced level of service in sections.
- **Miles City to North Dakota** – A significant increase in heavy trucks from the Bakken region has dramatically accelerated the deterioration of pavement condition, roadway function, and safety. Major bridge rehabilitation is needed near Miles City, and deteriorating pavement near Baker requires treatment to address safety and reliability concerns.

Challenge #6: Deteriorated pavement, inadequate capacity and safety concerns on sections of US-89

US Highway 89 runs along portions of the NHS Non-Interstate, NHS-Interstate and State Primary highways systems through Montana from Yellowstone National Park to Canada. This corridor supports and promotes regional and statewide activity through tourism and trade. Portions of the US Highway 89 corridor provide access to Yellowstone and Glacier National Parks, which promotes statewide economic development.

- **Wyoming to Livingston** - Deteriorating pavement from north of Gardiner to Yankee Jim Canyon requires treatment to address safety and reliability concerns. Heavy seasonal traffic volumes traveling to Yellowstone National Park create reduced traffic speeds and operations.
- **I-90 to White Surphur Springs** - Major improvements are needed near the I-90 Interchange to improve access, deteriorating pavement, and to address safety concerns.
- **White Sulphur Springs to US-87** - Deteriorating pavement north of White Sulphur Springs and Kings Hill requires treatment. Major improvements are needed near Belt to address congestion and deteriorating pavement near the intersection with US-87. Challenging terrain intensifies the difficulty of future improvements.
- **I-15 to Canada** - Deteriorating pavement between the Bynum Reservoir to five miles north of Pendroy and between Browning to north of Kiowa are in need of reconstruction to address safety, level of service and capacity issues. US-89 north of Browning experiences large volume increases during the tourist season due to Glacier National Park. These volume increases accelerate pavement deterioration and intensify safety concerns.

Challenge #7: Inadequate capacity, operational issues and deteriorated pavements on sections of US-93

US-93 is a heavily traveled NHS corridor that extends from the Idaho border and runs north through western Montana to Canada. This corridor provides north-south connectivity and supports regional and statewide economic development. There are a host of issues along the US-93 corridor, including deficiencies in the horizontal and vertical alignments, narrow shoulders and aging design, congestion during summer months, and operation issues as a result of a mix of single occupancy vehicles with large, slow moving recreational and commercial vehicles. In order to provide an acceptable level of service, needed improvements along the corridor include bringing the roadway up to current design standards, improving pavement conditions, adding through lanes, widening shoulders, and/or adding lanes for passing or turning.

Southern Portion

- **Idaho to Missoula** – The southern portion of this corridor is in one of the fastest growing areas in Montana, with much of the population commuting to Missoula for employment. In order to reduce the peak A.M. and P.M. congestion associated with commuting, needs include additional travel lanes, dedicated turn lanes and intersection improvements. In addition to the congestion needs, deteriorating pavement north and south of Connor and safety improvements are needed near Hamilton to address congestion and reduced level of service (LOS).

Northern Portion

- **Missoula to Kalispell** - There are considerable needs in this segment, including improvements at Post Creek Hill, Ninepipes, Ronan Urban, and Whitefish Urban to address safety needs, horizontal and vertical alignment problems, capacity/mobility issues, and environmental concerns.
- **Kalispell to Canada** - A bypass is partially constructed around Kalispell, which will ultimately provide an alternative to the US 93 alignment through the Kalispell City Center. The bypass is intended to reduce travel time and urban congestion. Additional phases of the

bypass are planned for completion within the five-year plan, but full build out of the bypass is beyond MDT's current fund plan. Deteriorating pavement near Kalispell north to Whitefish and the Canadian border will require full reconstruction. Reconstruction of these segments to current design standards would also improve safety and congestion issues.

Challenge #8: High rate of traffic fatalities on Montana's entire transportation system

Montana's overall traffic fatality rate of 1.72 fatalities per 100 million vehicle miles of travel in 2012 is significantly higher than the national average of 1.13 and the third highest in the nation. The fatality rate on Montana's non-Interstate rural roads was more than two and a half times the fatality rate on all other roads and highways in the state in 2012. Various routes throughout the state require safety improvements to reduce the number of crashes and fatalities. 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.

Challenge #9: Deteriorated pavement, needed bridge replacement and safety concerns on sections of MT-200

Montana 200 runs along portions of the NHS Non-Interstate, NHS-Interstate and State Primary highways systems from Idaho to North Dakota. This corridor supports and promotes regional and statewide connectivity and economic development.

- **Idaho to I-90** - This segment of MT 200 has large sections of deteriorating pavement north and south of Thompson Falls, safety issues due to geometric and visibility concerns throughout the Kaniksu and Lolo National Forests, and major bridge replacement needed near the Thompson River. These issued combined significantly reduce the level of service and reliability. US-93/MT-200 between Ravalli to I-90 has sections of deteriorating pavement and there are improvements needed north of the Desmet Interchange to address congestion and safety concerns.
- **Bonner to I-15** - There is deteriorating pavement near Lincoln along this narrow winding section of MT-200. In addition, the horizontal alignment along the Blackfoot River and narrow shoulders create safety concerns, reduced traffic speeds, and decreased level of service. Major bridge rehabilitation is needed south of Ovando to address structural deficiencies.
- **US-87 to MT-200S** - Deteriorating pavement near Belt, Hobson, Eddie's Corner, Lewistown, and east of Jordan creates safety issues and reduced level of service. Several locations throughout this section exhibit horizontal/vertical curves and clear zones that do not meet current design standards, which create additional safety and level of service issues.
- **MT-200S to North Dakota** – There is deteriorating pavement along the majority of this section. Pavement deterioration is due to age and a dramatic increase in heavy truck use due to Bakken region activity. Pavement conditions reduce level of service and add to safety concerns.

Challenge #10: Needed construction of new bypass in Billings

The Billings Bypass project consists of constructing new roadway between I-90 and Old Highway 312 on the eastside of Billings. The intent of the bypass project is to reduce congestion within the City of Billings by allowing the north/south freight and through traffic to bypass constrained intersections within downtown Billings. The Billings Bypass would provide both regional and local system operational improvement by separating through traffic from local

commuter and business traffic. Currently, two NHS routes travel north from I-90 through the city center, resulting in eleven intersections experiencing significant delays. It is projected that with the bypass, only four intersections will continue to experience delays for local traffic. The bypass would reduce physical barrier (land, infrastructure characteristics) impacts on traffic operations. A Phased Record of Decision (ROD) was signed for Phase 1 of the preferred alternative in July 2014. With the ROD signed, funding availability remains the greatest challenge for the bypass project.

Challenge #11: Deteriorated pavement and safety issues on sections of US-191

US Highway 191 runs along portions of the NHS Non-Interstate, NHS-Interstate and State Primary highways systems through Montana from Wyoming to Canada. This corridor supports and promotes regional and statewide economic development, tourism, and freight movement. The US Highway 191 corridor provides access to Yellowstone National Park and promotes statewide economic development by supplementing I-15.

- **West Yellowstone to Bozeman** - Deteriorating pavement north of West Yellowstone and extending 30 miles through Yellowstone National Park creates safety issues and results in reduced level of service. Gallatin Canyon poses additional challenges due to its proximity to the Gallatin River. This segment of US 191 has narrow shoulders, limited sight distance, and inadequate passing opportunities, with reduced level of service and safety concerns.
- **Big Timber to Lewistown** - This segment of US-191 has deteriorating pavement north of Big Timber, near the Wheatland County Line, north of Harlowton, and Eddie's Corner. These pavement conditions create safety issues and reduced level of service.
- **Lewistown to Canada** – Deteriorating pavement north and south of Malta create safety issues and reduced level of service.

Challenge #12: Deteriorated pavement, safety issues and deteriorated bridge conditions on sections of US-87

US Highway 87 runs north and south through Montana from Havre to Billings. This corridor supports and promotes regional and statewide connectivity and economic development.

- **Havre to Great Falls** - Deteriorating pavement near Box Elder and north of Great Falls and horizontal/vertical curves and clear zones that do not meet current design standards create safety and level of service issues.
- **Great Falls to Lewistown** - Deteriorating pavement near Belt, Hobson and Eddie's Corner, horizontal/vertical curves and clear zones that do not meet current design standards create safety and level of service issues.
- **Lewistown to Billings** - Deteriorating pavement near Malta, horizontal/vertical curves and clear zones that do not meet current design standards, and bridge rehabilitation needed near Billings significantly reduce reliability and create safety and level of service issues.

Challenge #13: Deteriorated pavement and safety issues on sections of US-212

US Highway 212 runs along portions of the NHS Non-Interstate, NHS-Interstate and State Primary highways systems through Montana from Wyoming to South Dakota. This corridor supports and promotes international, regional and statewide connectivity and economic development and provides access to Yellowstone National Park and passage for oversized commercial vehicles.

- **Cooke City to Laurel** - Extreme elevations, frequent rock slides, and large amounts of snow accumulation create difficulties along the seasonal Beartooth Highway. Large

sections of deteriorating pavement from Red Lodge to Roberts, safety issues due to deficient horizontal alignments, and narrow shoulders reduce level of service and reliability.

- **I-90 to Broadus** - Large sections of deteriorating pavement east of Ashland and west of Broadus, safety issues due to deficient horizontal alignments and narrow shoulders reduce level of service and reliability.
- **Broadus to Wyoming** - Deteriorating pavement, horizontal/vertical curves and clear zones that do not meet current design standards create safety and level of service issues. Additional strain on pavement surface and subgrade is experienced due to the increase in High/Wide Truck traffic through this section.

Challenge #14: Deteriorated pavement, safety issues and needed bridge replacement on sections of US-287

US Highway 287 runs along portions of the NHS Non-Interstate, NHS-Interstate and State Primary highways systems through Montana from West Yellowstone to Choteau Montana. This corridor supports and promotes regional and statewide connectivity and economic development, and provides access to Yellowstone National Park.

- **West Yellowstone to I-90** - Deteriorating pavement near Ennis, horizontal/vertical curves and clear zones that do not meet current design standards create safety and level of service issues.
- **I-90 to Townsend** - Deteriorating pavement 10 miles north of I-90, horizontal/vertical curves and clear zones that do not meet current design standards, and major bridge replacement needed near Toston significantly reduce reliability and create safety and level of service issues.
- **I-15 to Choteau** – Pavement on this segment is in fair condition for its age, however horizontal/vertical curves and clear zones that do not meet current design standards create safety and level of service issues.

Challenge #15: Deteriorated pavement and safety issues on sections of MT-16

Montana 16 runs north and south from Glendive to Canada. This corridor supports and promotes regional and statewide connectivity and economic development, in particular for Bakken formation activity.

- **Glendive to Sidney** - This segment of MT-16 has deteriorating pavement, horizontal/vertical curves and clear zones that do not meet current design standards, which create safety and level of service issues. Crashes involving large vehicles, fatigued drivers, impaired drivers, head-on and single vehicle run-off-the-road collisions are of heightened concern on this segment of MT-16 due to the dramatic traffic volume increase in recent years. Observed traffic volumes from Glendive to Sidney increased from 2009 to 2010 and from 2010 to 2011 by 33 percent and 21 percent, respectively. And, large truck traffic comprised 16 percent of the total traffic volume from Glendive to Sidney in 2011, an 82 percent increase from 2010. In addition, major bridge rehabilitation is needed near Glendive.
- **Sidney to Culbertson** - Deteriorating pavement near Culbertson, horizontal/vertical curves and clear zones that do not meet current design standards create safety and level of service issues. Crashes involving large vehicles, fatigued drivers, impaired drivers, head-on and single vehicle run-off-the-road collisions are of heightened concern due to the dramatic traffic volume increase in recent years.
- **Culbertson to Canada** - Deteriorating pavement, horizontal/vertical curves and clear zones that do not meet current design standards create safety and level of service issues.

Challenging terrain and proximity to the Medicine Lake National Wildlife Refuge increase the challenge of future improvements.

Challenge #16: Deteriorated pavement and bridges, safety issues on sections of MT-86
MT-86 is a Montana State Primary route beginning in Bozeman at the intersection with US-191 (Main Street) and travels northeast to an intersection with MT-89 north of Wilsall. MT-86 supports local and regional travel and promotes economic development. MT-86 has deteriorating pavement and bridge surfaces, vertical/horizontal alignment issues, and rock fall mitigation needs that create safety, congestion, and level of service issues.

Challenge #17: Deteriorated pavement and bridges, safety issues and inadequate capacity on sections of MT-1
MT-1 is a Montana state Primary route beginning at the intersection with I-90 east of Anaconda and travels west and then north to intersect with I-90 again at Drummond. MT-1 from Anaconda to Georgetown Lake supports local travel and tourism and promotes regional economic development. This segment of MT-1 has deteriorating pavement and bridge surfaces, vertical/horizontal alignment issues, and rock fall mitigation needs that create safety, congestion and level of service issues. MDT completed a corridor study for this segment of MT 1 in 2011 and has initiated some of the recommended improvements.

Challenge #18: Deteriorated pavement and bridges, safety issues and inadequate capacity on sections of MT-41
MT-41 is a Montana state Primary route beginning at the intersection with I-15 in Dillon and travels northeast through Twin Bridges, ending at an intersection with MT-2 southeast of Butte. MT-41 supports local and regional traffic and promotes economic development. The segment of MT-41 between Dillon and Twin Bridges has deteriorating pavement and bridge surfaces, vertical/horizontal alignment issues, and rock fall mitigation needs that create safety, congestion and level of service issues.

Challenge #19: Deteriorated pavement and bridges, safety issues and inadequate capacity on sections of MT-69
MT-69 is a Montana State Primary route beginning at the intersection with MT-55 in Whitehall and travels north through Boulder to an intersection with I-15. MT 69 supports local and regional traffic and promotes economic development. The segment of MT-69 between Cardwell (I-90 undercrossing) and Boulder has deteriorating pavement and bridge surfaces, vertical/horizontal alignment issues, and rock fall mitigation needs that create safety, congestion and level of service issues.

Challenge #20: Deteriorated pavement, safety issues and congestion on sections of N-205
N-205 is a two-lane rural route that parallels Interstate 90 between Belgrade and Bozeman in Gallatin County. N-205 carries heavy commuter traffic volumes between these two communities and supports local and regional connectivity and economic development. The two lane rural section exhibits deteriorating pavement and vertical/horizontal alignments, which are concerns for safety, congestion, and level of service.

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.[14]

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.[15]

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."[16]

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.[17]

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.[18]

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.[19] 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.[20]

Transportation Funding in Montana

Montana 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, Montana will not be able to address many of its top transportation challenges.

Investment in Montana'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 Montana's roads, highways, bridges and transit systems and provides a significant return to Montana 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 $2.95 for road improvements in Montana for every dollar the state paid in federal motor fuel fees.[21]

Federal funds for highway and transit improvements in Montana 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.[22]

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, will now run 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.[23]

The 2015 AASHTO Transportation Bottom Line Report also found that the current backlog in needed road, highway and bridge improvements is $740 billion.[24] 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.[25]

Importance of Transportation to Montana'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.

In the eastern portion of the state, Bakken oil extraction and support activities have resulted in increased overall traffic volumes and considerably higher than usual truck traffic as a percentage of the overall traffic stream. This additional traffic places a high level of stress on Montana's roadways, many of which were not originally built to accommodate such heavy traffic volumes and large vehicles.

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.

Montana'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.

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 ande-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.[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.[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.[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.[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.[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.[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.[34]

Conclusion

Montana'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 Montana 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 Montana adequately fund its system of roads, highways and bridges in order to address the transportation challenges currently faced by the state's residents and businesses.

As Montana 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.

[2] U.S. Department of Transportation - Federal Highway Administration: Highway Statistics 2012, 1990. www.fhwa.dot.gov.

[3] TRIP calculation based on U.S. Census and Federal Highway Administration data.
[4] Federal Highway Administration (2013). Pavement condition data is for 2012.
[5] Rural Connections: Challenges and Opportunities in America's Heartland. TRIP. July 2014.
[6] U.S. Department of Transportation - Federal Highway Administration: National Bridge Inventory 2013.
[7] Ibid.
[8] Ibid.
[9] Ibid.
[10] TRIP analysis of National Highway Traffic Safety Administration and Federal Highway Administration data (2013).
[11]. Ibid.
[12] Ibid.
[13] Adding Highway Shoulders, Width, Reduce Crash Numbers and Save Lives (August 9, 2012). Texas Transportation Institute.
[14] Strategic Highway Research Program (2012). Transportation Research Board. "Interactions Between Transportation Capacity, Economic Systems and Land Use." P. 6
[15] Ibid. P. 17.
[16] Strategic Highway Research Program (2012). Transportation Research Board. "Interactions Between Transportation Capacity, Economic Systems and Land Use." P. 1.
[17] Strategic Highway Research Program (2012). Transportation Research Board. "Interactions Between Transportation Capacity, Economic Systems and Land Use." P. 11.

[18] Strategic Highway Research Program (2012). 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.

[19] Strategic Highway Research Program (2012). Transportation Research Board. "Interactions Between Transportation Capacity, Economic Systems and Land Use." P. 8.

[20] Strategic Highway Research Program (2012). 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.

[21] TRIP analysis of Federal Highway Administration data. 2008 to 2012 Highway Statistics sf-1.
[22] "Surface Transportation Reauthorization and the Solvency of the Highway Trust Fund," presentation by Jim Tyson, American Association of State Highway and Transportation Officials (2014).
[23] 2015 AASHTO Bottom Line Report (2014) AASHTO. P. 2.
[24] 2015 AASHTO Bottom Line Report (2014) AASHTO. P. 3.
[25] Ibid.
[26] National Cooperative Highway Research Program. Economic Benefits of Transportation Investment (2002). p. 4.
[27] The Transportation Challenge: Moving the U.S. Economy (2008). National Chamber Foundation. p. 10.
[28] Ibid.
[29] Ibid.
[30] Ibid.
[31]The Transportation Challenge: Moving the U.S. Economy (2008). National Chamber Foundation. p. 5.
[32] Ibid.
[33] Ibid.

[34] 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.