## Montana Department of Transportation



## Summary and Conclusions

## Final

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## Summary \& Conclusions

The US 2 / MT 16 TRED Study considered economic, regulatory, and operational changes that would result in traffic and safety conditions that would justify the expansion of the Montana section of the Theodore Roosevelt Expressway (TRE) to a four-lane highway.

Based on the results of this study, four key elements demonstrate a need for improvements for US 2 and MT 16: system continuity with adjoining highways; the importance of the corridor as part of the TRE and the local and regional economy; safety; and level of service. These items are discussed in more detail below.

Throughout the study process the importance of the TRED corridor was examined at three different geographic levels: local, regional, and national. The local level of the study area includes the Theodore Roosevelt Expressway in Montana which includes the area from the Montana/North Dakota border to Culbertson on US 2 and from Culbertson to the Canada/US border on MT 16, a distance of about 90 miles. The immediate study area includes Roosevelt and Sheridan Counties in northeast Montana. Exhibit 1 shows the immediate study area.

Exhibit 1. Study Area, Local Level


US 2 and MT 16 are two-lane highways on the National Highway Systems and the Theodore Roosevelt Expressway, which Congress named as a high-priority corridor in August of 2005.

Functionally, FHWA classifies US 2 and MT 16 as rural principal arterials. Montana has a posted speed limit for passenger vehicles of 70 miles per hour (mph) during the daylight hours and 65 mph at night. Trucks are limited to speeds of 60 mph during the daylight hours and 55 mph at night. The area along the highway is flat to rolling terrain and is primarily used for agriculture. Larger communities in the area include Culbertson and Plentywood.

Exhibit 2. Study Area, Regional Level
At the regional level, the US 2 and MT 16 sections of the Theodore Roosevelt Expressway are important because they provide regional connectivity and mobility with North Dakota and Saskatchewan. US 2 is the main east-west transportation corridor in northeast Montana and provides an important link for the communities in this area to larger urban areas in Montana and North Dakota. US 2 connects to north-south oriented MT 16 in the area which provides a connection to the international border and southern Saskatchewan. Some of the major metropolitan areas in the region include Great Falls and Billings in Montana, Williston in North Dakota, Rapid City in South Dakota, and Saskatoon and Regina in Canada, as illustrated in Exhibit 2, to the right.


On a national level, the study corridor affects the entire north central region of the United States and the southern area of Canada bordering Montana and North Dakota, as shown in Exhibit 3, below. In particular, the corridor affects travel and freight opportunities from Denver, Colorado and points south from Saskatchewan, Canada and from the West Coast to Minneapolis, Minnesota and beyond.

Exhibit 3. Study Area, National Level


Exhibit 4. Great Plains International Trade Corridor

## Importance of the Theodore

 Roosevelt ExpresswayUS 2 and MT 16 are also part of the Theodore Roosevelt
Expressway, a segment of the Great Plains International Trade Corridor. The Great Plains Trade Corridor consists of three segments (Theodore Roosevelt Expressway, Heartland Expressway; and the Ports to Plains Trade Corridor) which extend from Laredo, Texas at the Mexican border to the Port of Raymond, Montana at the Canadian border, a distance of 2,236 miles (Exhibit 4).


The Theodore Roosevelt Expressway totals about 445 miles in South Dakota, North Dakota, and Montana and is considered a National Highway System High Priority Corridor. High priority corridors support trade and primarily long distance interstate and intrastate freight movement that results in high volumes of truck traffic (North Dakota Department of Transportation, 2005).

A high volume of truck traffic is already occurring on US 2 and MT 16 with about $7 \%$ to $13 \%$ of the traffic attributed to trucks. The truck volume on US 2 and MT 16 is expected to grow to $30 \%$ by 2036 compared to a Montana state average on all highways of 5 percent.

This study finds that, as the truck traffic increases, the time spent following trucks and other vehicles is expected to increase by up to $15 \%$ which could decrease travel speeds by 5 miles per hour on average.

## Local and Regional Economic Importance

The quality of the TRE corridor is integral to the economic stability and growth futures of the area's people and communities. This corridor is the tie that binds the local communities with their broader economic setting, which extends into North Dakota and Canada. Both US 2 and MT 16 need to effectively and efficiently provide for the conveyance of goods, services, and people to connect and support the people and communities of the regional economy. The main economic components of the region are agriculture, energy, tourism, and retail trade.

Agriculture depends on truck transportation to move production from farms to transportation hubs and intermediate value-added processors. Demand for truck transportation services is expected to increase with growth and change in agricultural production. Overall growth in agricultural production of the area has been consistent and significant. Changing demand (e.g., increasing markets for healthy oils and grains), transportation practices (e.g., consolidation of grain-rail loading facilities into larger facilities), and local processing opportunities (e.g., oil-seed processing) all suggest higher demand for truck travel within the region. Transportation improvements could support business expansion and market access, as well as facilitate the hauling of products from farms to value-added processing plants. Opportunities in this sector include different crops (e.g., pulse and oilseed) and new value-added processing (e.g., oil processing and dairy). The remoteness of many production areas and the large distances agricultural products must be shipped are key challenges facing local producers and are also obstacles to cost-effective transportation. In sum, general growth and change in this sector suggests greater use of the highway corridor can be expected. Several substantial opportunities appear to rely on the quality of the highway corridor.

Energy development, particularly in oil, has grown significantly in recent years, and best estimates suggest that this growth trend will continue. Northeastern Montana is the largest oil exploration area in Montana, and much of the exploration activity is concentrated within the study area. The oil industry depends on the highway system to get workers, equipment, and supplies to the fields. While the transportation mode of choice for oil output is via pipeline, the pipelines in the study area are running at capacity, so much of the oil produced in the region must
be trucked to domestic refineries. With the high value of oil production and the resulting expected high growth in the oil industry within the study area over time, the oil industry is poised to reap transportation cost savings from highway expansion. Moreover, oil development in the Canadian provinces is very rapid, and the prospect of heavy infrastructure investments there is expected to generate significant through-traffic along the oil-corridor spanning from Texas through Colorado, Montana, and into the provinces. Energy development, in both local activity and industry movements through the region, are expected to place increasing demands on the highway corridor.

Tourism is significant in the area and has growth potential. The main strengths of the area tourism industry include hunting, which is strong in the shoulder and winter seasons, and Fort Peck Lake, the region's premier attraction during summer, the region's peak highway-use season. Other tourism attractions are developing. Most visitors traveling to the area are from neighboring states, and road infrastructure plays a critical role in attracting them. Local population is low and tourist attractions are widely dispersed in the state. In order to have visitorship growth in the area, the growth market in tourism is expected to be drawn from a wide radius, necessitating travel over long distances along Montana roadways. Especially because there are readily substitutable activities in the Plains area, the safety and attractiveness of the highway system for individuals traveling to and through the corridor are noted as significant factors in travel market growth. Although tourism is expected to have marginal effects on overall travel demand, highway improvements would have positive effects on this industry.

Local retail and service functions are served by urban hubs in Sidney, Plentywood, Culbertson, and Williston. Billings is the major higher-order trade center serving the region today while Regina is by far the largest and closest higher-order trade center, suggesting latent advantages to the local economy of improved linkages in that direction. Local and regional agriculture and energy businesses rely on US 2 and MT 16 to transport their products to rail heads and markets. Inter-local traffic, within the regional economy, is expected to come into increasing conflict with international traffic on the continental scale.

Because of the rural nature of the project area, the smaller communities rely on the larger towns to provide goods and services and use US 2 and MT 16 as the major connecting routes. The largest trade center in the region is Williston, North Dakota (population 12,200) on US 2 which is the region's main center for retail, professional, and financial services.

Overall, truck traffic as a percent of overall traffic is expected to reach $30 \%$ of total traffic volumes by 2036.

Many stakeholders in the region stated that new business were unwilling to locate to the area because of the lack of a high-capacity four-lane roadway to quickly and safely transport products. This study demonstrates that a four-lane design along the TRE corridor would, by 2036, increase total traffic on the corridor by about 17 percent over levels forecasted for the existing two-lane configuration.

While four lane highway design options provide greater local and regional economic benefits, those benefits alone do not appear to be large or certain enough to alone justify the selection of a four lane highway design. Certain two lane designs, such as an improved two-lane with passing lanes, could provide most of the same benefits.

## System Continuity

The study findings revealed that the area shares many similarities with adjacent states and provinces that extend beyond political borders. The broader region is largely comprised of a comparable agriculture-based economy that is experiencing rapid expansion in the energy sector, and shares similar historical and cultural heritage. Owing to the rural character of the region and lack of larger trade centers in it, regional consumer trade and work-related traffic appears to flow quite readily across boundaries. Williston, North Dakota (pop. 12,200) is the nearest higher-order trade center to this part of Montana. Residents commonly travel interstate for consumer purchasing. Professional and financial services, too, are relatively concentrated in Williston, suggesting its central function for these services. Among major-order trade centers, Regina, Saskatchewan is by far the closest to the study region. If travel conditions improve, travel across the state and international borders can be expected to grow. The study survey also found that some neighboring states, including North Dakota, are progressing toward four-lane expansion of portions of the Theodore Roosevelt Expressway. In particular, NDDOT indicated that, while not having current plans relating to the US 85 segment of the TRE, NDDOT would advance to developing a project for a four lane road to the state border if Montana does so. Moreover, NDDOT and MDT are mutually disposed to coordinate efforts on future phases of improvements to the TRE corridor. The study, therefore, found that system continuity is critical from four main perspectives:

- Strategic: Four-lane continuity ensures speed, safety, and consistent design through the northern TRE corridor by linking to a planned four-lane extension of US 2 , west of Williston, ND to the Montana border. When completed, a four-lane US 2 will extend to Williston, then east through North Dakota and into Minnesota. Given unused capacity at the Port of Raymond and the growth of the region, four-lane continuity would strategically position the TRE corridor as a freight corridor and as a NAFTA corridor that handles long term growth.
- Competitiveness: Four-lane continuity positions the corridor as a true alternative, and therefore a competitor, to other roadways in the region. The competitiveness of the corridor will be reflected in induced traffic demand and eventually increasing economic development. Furthermore the analysis found that the level of service in the corridor will continue to be good, making it an increasingly attractive alternative as other roadways and ports, such as the Port of Portal, get more congested. This increased competitiveness can function both as a north-south segment and as a link between the east and west regions.
- User Perception: Four-lane continuity would play a significant role in drivers’ perception. Research in road pricing showed that driver's choice for roadway is based more on the
perceived level of service rather than the actual level of service. Accordingly, through the stakeholders interviews, we found that many perceived the existing roadway as less safe than the data shows and that they think that a four-lane roadway would provide safer travel and a better level of service for both personal vehicles and truck traffic. This perception should lead truck dispatchers as well as logistics and supply chains managers to make this corridor a segment of choice for their long-haul trucks in the region.
- Design Continuity: Four-lane continuity will also ensure design continuity and therefore a synergistic effect on traffic and freight growth along the corridor.


## US 2 and MT 16 Accident Rates

MDT provided 2001-2005 Montana accident data for the Montana section of the TRE corridor as well as other comparable rural two-lane roadways. The sections of roadways used for comparison to US 2 and MT 16 outside the study area corridor were selected because they exhibit similar traffic volumes and have similar percentages of overall traffic composed of large trucks. Accident rates and fatality rates for overall traffic and for large trucks were calculated and appear in Table 1.

Table 1. Accident and Fatality Rates for Various Rural Two-Lane Montana Roadways 2001-2005 (Per 100 Million VMT)

| Roadway Segment | Milepost Start | Milepost End | Description | Percent Trucks | Overall Accident Rate | Truck Accident Rate | Overall Fatality Rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| US 2 | 640 | 667 | Culbertson to North Dakota Border | 10.6\% | 152.5 | 113.6 | 3.4 |
| MT 16 | 0 | 15.2 | Saskatchewan Border to Plentywood | 12.6\% | 24.5 | 77.5 | 0.0 |
| MT 16 | 41 | 88.6 | Plentywood to Culbertson | 13.5\% | 90.5 | 93.3 | 2.1 |
| US 2 | 260 | 640 | West of Shelby to Culbertson | 9.6\% | 105.9 | 85.1 | 2.9 |
| MT 16 | 0 | 36.6 | Culbertson to Sidney | 12.1\% | 91.2 | 99.8 | 1.3 |
| MT 3 | 3.5 | 46.7 | Billings to Lavina | 13.0\% | 69.3 | 76.2 | 2.3 |
| MT 3 | 99 | 146 | Harlowton to Lavina | 19.1\% | 95.3 | 55.0 | 0.8 |

Shaded cell indicates US 2 and MT 16 segments being evaluated in the corridor study.
As can be seen in Table 1, the study area corridor's section of US 2 from Culbertson to the Montana/North Dakota state line has the highest accident rates, both for trucks alone and for overall vehicle traffic. The US 2 section of the study area corridor's accident rates are the highest of all the road segments examined and are much higher than those for the longer section of US 2
from Culbertson to just west of Shelby. Overall, the accident rate on the US 2 portion of the study area corridor is about $31 \%$ greater than the US 2 section from Culbertson to just west of Shelby that lies outside of the study area corridor. Moreover, the truck accident rate is $25 \%$ greater within the study area corridor than the US 2 section outside the corridor. It should also be noted that the truck accident rate on US 2 is higher than most of the other roadways evaluated even though the percentage of trucks that use the roadway is lower. These differences are very important and point to the conclusion that the segment of US 2 from Culbertson to the Montana/North Dakota state line performs poorly compared to other similar roadways within Montana with regards to safety.

In addition to accident rates, the fatality rate for US 2 from Culbertson to the North Dakota state line is 3.4 per 100 million vehicle miles traveled which is higher than the state average of 2.5 per 100 vehicle miles traveled and higher than any of the similar roadway segments shown in Table 1 above. MT 16 accident and fatality rates are lower than other comparable two-lane roads outside the project area.

## Level of Service

Congestion levels are evaluated using a measure called level of service (LOS). Level of service is a method of measuring vehicle capacity on a highway. When the capacity of a highway is exceeded, this condition results in congestion and a poor level of service. On rural highways, lower levels of service mean that traffic tends to stack up behind slow moving vehicles.
Predictable travel speeds decline and driver frustrations lead to more risks and accidents.
Table 2. Level of Service Criteria for Two-Lane Rural Principal Arterial

| Level of Senvice (LOS) | Level of Service Definitions | Percent of Time Spent Following Other Vehic les | Average Vehicle Speed (mph) |
| :---: | :---: | :---: | :---: |
| A | Motorists can travel at their desired speed. No more than $35 \%$ of the time is spent following other vehicles. | 35\% | 55 |
| B | Average speed of $50-55 \mathrm{mph}$. Demand for passing is high. $50 \%$ of the time is spent following other vehicles. | 35-50\% | 50-55 |
| C | Average speed of 45-50 mph. Noticeable increase in following traffic with reduction in passing opportunities. | 50-65\% | 45-50 |
| D | Unstable traffic flow. Passing demand is high but passing opportunities approach zero. Vehicle following length of 5 to 10 vehicles and average speeds of 40-45 mph. | 65-80\% | 40-45 |
| E | Average speed below $40 \mathrm{mph} .80 \%$ of the time is spent following other vehicles. Passing is virtually impossible. | 80\% | 40 |
| LOS F applies whenever the number of vehicles traveling on the highway exceeds the roadway capacity. Source: Transportation Research Board 2000 |  |  |  |

Drivers that can do so choose alternate routes and local traffic may opt for back-roads while interregional traffic - trucks and visitors - may avoid the area altogether. Six levels of service ranging from A to F are used to define congestion and the operating conditions on roadways, with LOS A representing the best operating conditions (free-flowing traffic) and LOS F the worst operating conditions (extremely congested, stop-and-go traffic). For rural roadways such as US 2 and MT 16 , level of service is based on the time spent following other vehicles. Table 2 illustrates level of service for a two-lane rural principal arterial according to highway capacity standards.

## Planning Goals

According to Table 2 above, level of service on two-lane rural principal arterials is largely defined by speed and percent of time spent following other vehicles. As traffic levels increase, particularly through areas with grades and with the presence of trucks and heavy vehicles, the amount of time vehicles spend following other vehicles increases. Speeds begin to decline slightly, the freedom to maneuver within the traffic stream is more noticeably limited, and drivers often experience reduced physical and psychological comfort. This decrease in speed and increase in time spent following other vehicles leads to both a decreased level of service and a possible increase in accident rates as drivers seek opportunities to pass. Departments of transportation set goals for level of service for their roadways. For principal arterials in level to rolling terrain, such as US 2 and MT 16, MDT has set a level of service objective of LOS B.

## Existing and Future Level of Service

The existing and future level of service analysis for this study used traffic volumes, peak-hour travel percentages, and directional split data, and also included truck and recreational vehicle (RV) percentages, road grades/slopes, percent of passing zones, base or free-flow travel speed, and lane and shoulder widths. One of the important factors on US 2 and MT 16 that decreases the level of service is that truck traffic is expected to grow from about $10 \%$ currently to about $30 \%$ in 2036 as a result of increased regional freight movement and trade between Canada, the US, and Mexico. Table 3 illustrates the results of the analysis of existing (2006) and future (2036) level of service conditions.

Table 3. US 22006 and 2036 Level of Service, No-Action Alternative

| Roadway Segment | LOS Guidelines | 2006 LOS | 2036 LOS |
| :--- | :---: | :---: | :---: |
| MT 16 - Port of Raymond to <br> Plentywood | B | A | B |
| MT 16 - Plentywood to Culbertson | B | A | B |
| US 2 - Culbertson to <br> Montana/North Dakota state line | B | A | B |

Table 3 provides the level of service based on existing and 2036 No-Action Alternative conditions. As shown, the study segments of US 2 and MT 16 will still meet MDT Guidance of LOS B for a rural principal arterial. However, it should be noted that the decrease in level of
service from A to $B^{1}$ could reduce overall travel speeds by 5 miles per hour and increase the amount of time spent following trucks and other vehicles by $15 \%$.

## Environmental Impacts

This study includes an analysis of environmental issues in the study area that could influence future highway improvements. This analysis, as documented in the "Environmental Scan", indicates there are relatively few potential environmental issues along the corridor. However, based on a review of aerial photographs of communities along the corridor, there would be some impacts to commercial and residential properties with four-lane undivided improvement configurations. These impacts would have to be addressed in the development of future projects.

## Conclusions

- Economic development may incrementally increase if the infrastructure expands from two-lanes to four-lanes.
- Opportunities related to the agriculture and energy sectors in the region have a higher likelihood of being realized with a four-lane configuration than with a two-lane configuration.
- An improved two-lane configuration would provide a reasonably adequate future level of service but would not address system continuity issues.
- Four-lane continuity with adjoining segments of the Theodore Roosevelt Expressway would provide regional interconnectivity by better positioning the corridor from the strategic, competitive, user expectation, and design continuity perspectives.
- With the estimated future $30 \%$ in truck traffic and the associated speed differential, a four-lane facility will help address passing conflicts throughout the segment.
- US 2 from Culbertson to the North Dakota state line has crash and severity rates that exceed statewide averages. Although improved two-lane configurations would improve safety, four-lane configurations would provide incrementally more safety benefits.
- As the corridor approaches the design year, the existing two-lane configuration will be approaching LOS "C" conditions. Four-lane configurations would maintain a higher level of service for a longer period.

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## Relationship of Study Results to Future Improvements

Based on the results of this study, future improvements to the Montana segment of the Theodore Roosevelt Expressway should address the following primary purposes:
$>$ Provide system continuity and roadway consistency with adjoining segments of the Theodore Roosevelt Expressway.
> Enhance the function of US 2 and MT 16 as a high priority corridor by improving travel conditions for long distance interstate and intrastate and international freight movement.
$>$ Support economic growth in the multi-jurisdictional area.
$>$ Improve the safety of the corridor.
> Address roadway design deficiencies to meet current MDT standards.
Following is an evaluation of potential highway improvement alternatives for the corridor based on their relationship to the above purposes:
> Improved Two-Lane Highway - Two travel 12 foot travel lanes with eight foot shoulders (in urban areas curb, gutter and sidewalk would be provided)
> Improved Two-Lane with Passing Lanes Highway - Two travel 12 foot travel lanes with eight foot shoulders (in urban areas curb, gutter and sidewalk would be provided). In passing lane areas an additional 12 foot travel lane would be provided.
> Four-Lane Undivided Highway - Four 12 foot travel lanes with eight foot shoulders (in urban areas curb, gutter and sidewalk would be provided).
> Four-Lane Divided Highway - Four 12 foot travel lanes, eight foot shoulders and a 35 foot median (in urban areas the median would be eliminated and curb, gutter and sidewalk would be provided)

Note: All alternatives assume use of the existing highway alignment including through communities due to Montana law that prohibits MDT from bypassing incorporated cities without the approval of the local government.

In Table 4 below, improvement alternatives were evaluated against the improvement purposes. As shown, only the four-lane alternatives meet all of the improvement purposes. The improvement of US 2 from the Montana/North Dakota border to Culbertson to four-lane divided standards would address the maximum number of improvement purposes and the improved twolane alternative would address the minimum number of improvement purposes.

Table 4. US 2/MT16 TRED Conidor Improvement Altemative Evaluation Summary

| Improvement Purpose | Improvement Altematives |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Improved Two-Lane | Improved <br> Two-Lane with Passing Lanes | Four-Lane Undivided | Four-Lane Divided |
| Provide system continuity and roadway consistency with adjoining segments of the Theodore Roosevelt Expressway. |  |  | $\sqrt{ }$ | $\sqrt{+}$ |
| Enhance the function of US 2 and MT 16 as a high priority corridor by improving travel conditions for long distance interstate and intrastate and international freight movement. | $\sqrt{ }$ | $\sqrt{ }$ | $\sqrt{+}$ | $\sqrt{+}$ |
| Support economic growth in the multijurisdictional area. | $\sqrt{ }$ | $\sqrt{ }$ | $\sqrt{+}$ | $\sqrt{+}$ |
| Improve the safety of the corridor | $\sqrt{ }$ | $\sqrt{+}$ | $\sqrt{+}$ | $\sqrt{++}$ |
| Address roadway design deficiencies to meet current MDT standards. | $\sqrt{ }$ | $\sqrt{ }$ | $\sqrt{ }$ | $\checkmark$ |

## Cost Estimates and Financial Considerations

As shown in Appendix A, construction cost estimates for the two-lane and four-lane design configurations for the study corridor range from $\$ 179$ million to $\$ 319$ million. MDT has reserved $\$ 2$ million from a SAFETEA-LU earmark to move forward into next steps on US 2 if the US 2/MT 16 TRED Study justifies reconsideration of planned improvements on the Theodore Roosevelt Expressway corridor. If reconsideration is justified, the non-federal match is approximately $\$ 310,000$ and would not jeopardize any future highway project, and thus would not violate MCA 60-2-133. MDT would also continue to seek additional federal funds that do not require a state funding match for future phases including construction.

# Appendix A: Cost Estimates for Corridor Improvements \& Potential Funding Sources 

## Cost Estimates

MDT has one major reconstruction and widening project planned on the study corridor during the next five years. The Bainville East and West Project will reconstruct approximately 11 miles of US 2 from the North Dakota State Line to approximately three miles west of Bainville. The environmental analysis for the project supports an improved two-lane configuration with eightfoot shoulders, improved side slopes, and minor changes in alignment to improve safety. The estimated construction cost of the Bainville East and West Project is approximately $\$ 18.8$ million with an additional $\$ 2.9$ million in preliminary engineering, right-of-way, construction engineering, and incidental costs for a total cost of $\$ 20.7$ million, or an average of $\$ 1.84$ million per mile. This project was planned so an additional two lanes could be added in the future.

Although factors such as the number of structures and right-of-way costs could affect actual improvement costs, the estimated average costs per mile for the Bainville East and West Project provide a reasonable basis for estimating the costs for improving the remainder of the study corridor to similar two-lane standards as shown in the following table. Four-lane improvement costs are from the cost estimation module of MDT's Highway Economic Analysis Tool (HEAT). These estimates are summarized in Table 1. The costs in this table include construction, construction engineering, contingency, and right-of-way costs inflated out five years. Note that the cost estimates for the four lane alternatives assume the construction of a four-lane crosssection. In many locations, including the location of the Bainville East and West Project, it would be possible to add two lanes to the existing two lanes, depending on the condition of the roadway. Consequently, these costs are a high estimate. More detailed design work will be needed to determine where and if existing two-lane sections can serve as two lanes of a four lane cross-section.

These estimates also assume that within cities, the four-lane configuration would be undivided with curb, gutter, and sidewalks to reduce impacts on the communities. Under Montana law, local officials must approve any bypass of an incorporated community.

Table 1: Estimated Study Corridor Improvement Costs (Millions)

| Segment | Two-Lane Improved | Four-Lane Undivided | Four-Lane Divided |
| :--- | :---: | :---: | :---: |
| US 2, ND State Line <br> to Culbertson | $\$ 48$ | $\$ 77$ | $\$ 87$ |
| MT 16, Culbertson to <br> Plentywood | $\$ 99$ | $\$ 154$ | $\$ 175$ |
| MT 16, Plentywood to <br> Port of Raymond | $\$ 32$ | $\$ 50$ | $\$ 57$ |
| Total | $\$ 179$ | $\$ 281$ | $\$ 319$ |

## Potential Funding Sources

As part of the National Highway System, the primary source of funding for highway projects on the study corridor is Federal National Highway System funds, with the required 13\% in State matching funds, provided to Montana annually. The Montana Transportation Commission directs these funds to eligible projects based on policy goals established in TranPlan 21, Montana's Federally-required statewide multimodal transportation plan, and MDT's Performance Programming Process, which ensures that funding decisions are consistent with overall system goals.

Funding decisions on the US 2 portion of the study corridor are also subject to the requirements of MCA 60-2-133, as amended by Senate Bill 3 in the 2001 Legislative Session. This statute directs MDT to "construct a four-lane highway generally along the present route of U.S. highway 2 from the North Dakota border to the Idaho border in order to increase tourism and to bring economic development to Montana." In addition, the statute directs that MDT "shall seek additional federal funding that does not require a state funding match for the U.S. highway 2 project." This statute also states that MDT may "not expend any resources on the U.S. highway 2 project that would jeopardize any future highway projects."

The statutory language associated with the potential four-laning of US 2 may be viewed as limiting MDT's ability to use National Highway System (NHS) funds. This is because NHS funds are fully allocated to construction projects and including a four-lane project into the future construction program may appear to "jeopardize" other future highway projects, and thus FHWA
asked if further steps could be viewed as consistent with MCA 60-2-133. MDT reviewed this issue and concluded that, should the department proceed to environmental assessment and preliminary engineering that would be within the law. The uses of State matching funds would not jeopardize any future highway project, and that federal-aid highway funds have been earmarked specifically for review of a four-lane design in the area.

The 2005 Safe Accountable \& Flexible Transportation Efficiency Act-A Legacy for Users (SAFETEA-LU) included funding earmarks for US 2 improvements in Eastern Montana, shown in Table 2. These earmarks are being allocated to the first eligible US 2 project moving into construction. These projects include full reconstructions of US 2 in the following areas: Bainville, Havre, Nashua, and Cut Bank. MDT has reserved $\$ 2$ million from project \#239 (see Table 2 below) to move forward into next steps on US 2, if the US 2/MT 16 TRED Study justifies augmenting already scheduled improvements on the US 2 segment of the Theodore Roosevelt Expressway corridor. If reconsideration is justified, the non-federal match is estimated at about $\$ 310,000$. Should the project advance to detailed design and construction, MDT would also continue to seek additional federal funds that do not require a state funding match for these future phases. We conclude that such action would be consistent with MCA 60-2-133. A letter to that effect is included in Environmental Scan, Appendix C.

Table 2: SAFETEA-LU Directed Funding for US 2
Section 1702
High Priority Projects

| No. | State | Project Description | Amount |
| :---: | :---: | :--- | :---: |
| 4417 | MT | Transportation improvements for Havre--East Project, <br> including Glasgow to Poplar, U.S. 2 | $\$ 10,000,000$ |
| 4420 | MT | U.S. 2 transportation improvement projects between <br> North Dakota State line and Browning | $\$ 20,000,000$ |


|  |  | Section 1934 <br> No. |  |
| :--- | :--- | :--- | :---: |
| State | $\underline{\text { Project Description }}$ | $\underline{\text { Amount }}$ |  |
| MT | U.S. 2, corridor feasibility study, environmental review <br> and construction, which may include construction of a <br> 4-lane highway, for roadway sections from Glasgow <br> east to the North Dakota State line, provided that all <br> currently programmed highway improvement projects <br> move forward | $\$ 10,000,000$ |  |


[^0]:    ${ }^{1}$ According to MDT LOS calculations future LOS will be a low "B", almost reaching "C" level by 2036.

