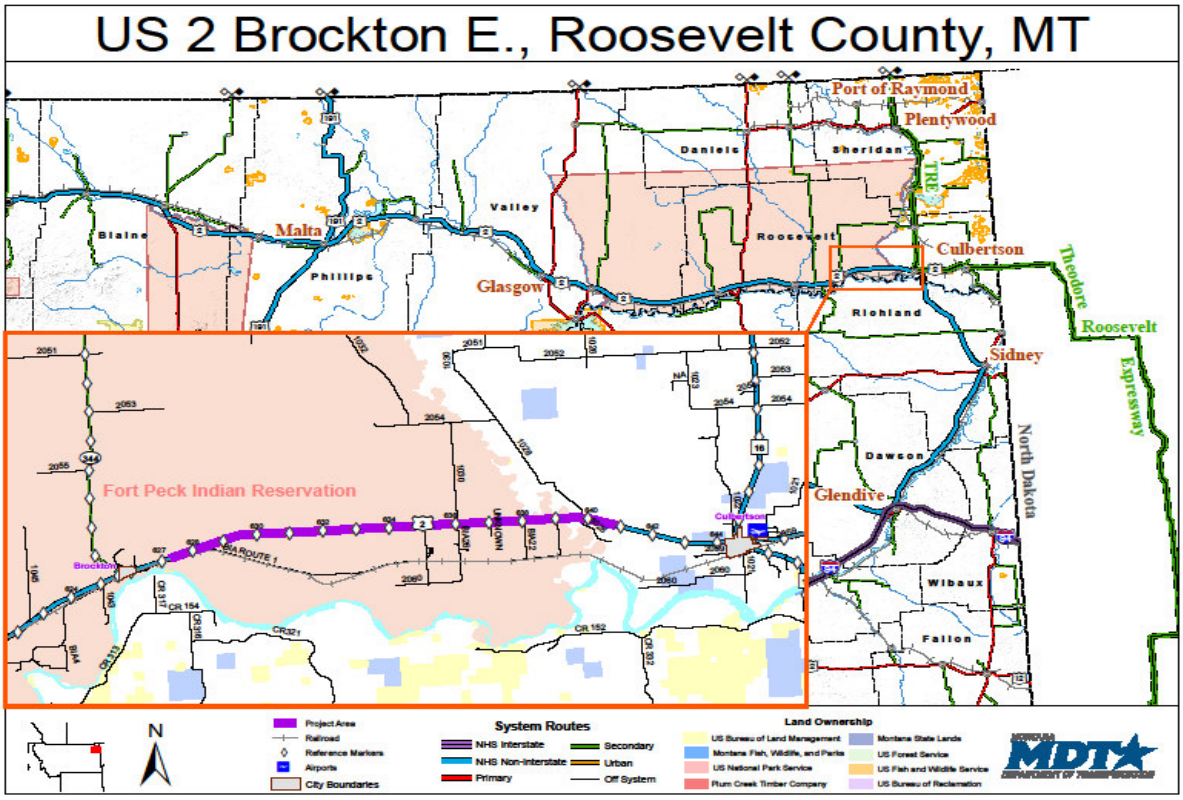
Transportation Investment Generating
Economic Recovery (TIGER)
Discretionary Grant



Montana
US 2 – Brockton East

Submitted by the Montana Department of Transportation

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Transportation Investment Generating Economic Recovery
US Highway 2, Reconstruction in Roosevelt County, Montana

APPLICATION FOR TIGER DISCRETIONARY GRANT
MONTANA DEPARTMENT OF TRANSPORTATION
September 15, 2009

1. PROJECT NAME

(i) Project Type: **Highway Reconstruction**
(ii) Location: **State of Montana, Roosevelt County, Congressional District : (MT-001)**
(iii) Rural or Urban: **Rural**
(iv) Requested Grant Funds: **$29 million**[1]
(v) DUNS **# 878557917**

2 CONTACT INFORMATION

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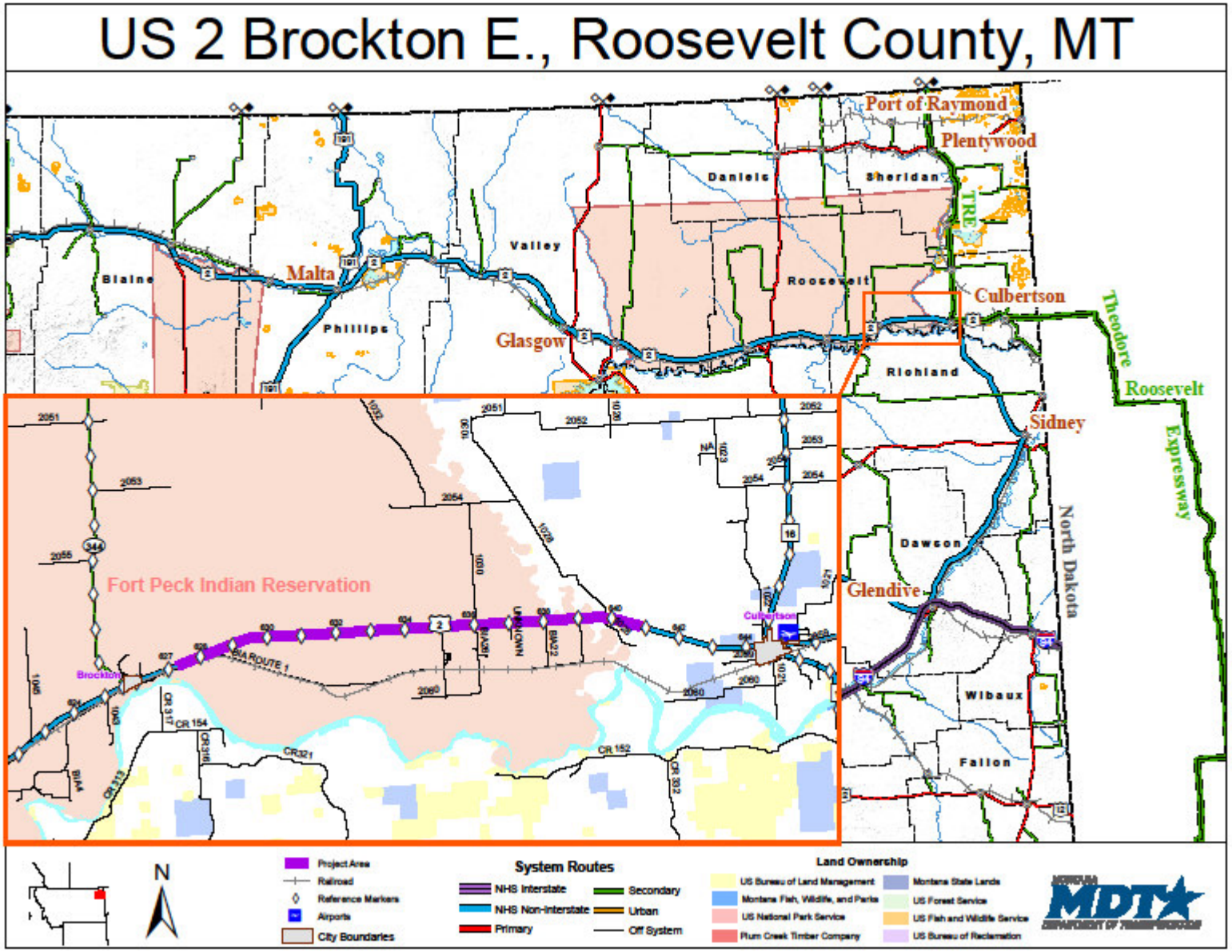
3 PROJECT DESCRIPTION

The project is to reconstruct a 13.5 mile segment of US Highway 2 (RP 626.16 to RP 639.67) in Roosevelt County, Montana (see location map). Except for the easterly 0.8 miles, the project is located on the Fort Peck Indian Reservation. It is wholly within a designated Economically Distressed Area. This highway segment is a principal arterial. The current configuration is 12-foot lanes with 3 foot shoulders that was designed and built circa 1956. This project would reconstruct the two-lane configuration to current standards. Given the age and condition of the roadway, the alternative is to widen and resurface the segment, which would only defer needed work and be inconsistent with growing needs of residents, commercial traffic, and the touring public.

The proposed project is a complete reconstruction of the existing two-lane roadway to 12 foot travel lanes and eight foot shoulders. The roadway surface will be offset approximately 36 feet north of the existing alignment, transitioning to a 59 foot offset at the Big Muddy Creek bridge. The project also includes a bridge and three drainage structures. The existing bridge over Big Muddy Creek (at RP 639.2)

[1] Best estimate of project cost, $28,975,130, reflects current PPMS estimates for projects 4058-000 and 4580-001. No indirect costs are included.

FIGURE 1: PROJECT LOCATION MAP



is critically in need of replacement. Three other small bridges (RP 626.5; 631.2; and 632.3) will be replaced by culvert structures. The area traverses rich wildlife habitat and the plan includes three wildlife crossings (at RP 630.7, 630.8, and 634.2). The terrain is rolling, and the proposal includes geometric improvements. All drainage structures will be replaced, slopes flattened, and snow slopes and sight distances improved to bring the design up to the present NHS criteria with a design speed of 60 mph.

US Highway 2, locally called "the Highline," is the principal arterial route serving east-west traffic across the 665 mile expanse of northern Montana. Nearby North-south connections are at Montana Highway 16 at Culbertson, three miles east of the project terminus, which heads north (about 60 miles)to the border at the Port of Raymond north and the city of Plentywood, Montana, or south to the city of Sidney and the intersection with Interstate 94. At Culbertson, US Highway 2 also intersects the Theodore Roosevelt Expressway (TRE), a national high-priority commercial corridor that originates at the Port of Raymond (a 24-hour commercial crossing). The TRE continues east on US Highway 2 from Culbertson into North Dakota then south into South Dakota where it joins the Ports to Plains corridor, a series of linked corridors running from Montana through Texas. Both TRE and US Highway 2 in this vicinity have been subjects of extensive corridor-level planning efforts by MDT. The present proposal is one of several projects to modernize US Highway 2 in this district to a modern two-lane standard to improve its safety, capacity, continuity and performance. The highway was designed and built to serve the needs of the post-World War II period, and it is aging.

This remote, rural area is reliant on basic highway systems for quality of life and economic functioning. People here routinely travel long distances for necessities – food, work, health care, emergency and other essential services.

The project area is almost entirely within the Fort Peck Reservation, home to Assiniboine and Sioux tribes, and it is entirely within a designated Economically Distressed Area. A good share of the construction jobs and economic activity this project would generate would benefit the local native and non-native populations.

The subject segment of US Highway 2 is a vital truck route for local agriculture, energy-related, regional and (inter)national freight headed east-west as well as north-south.

Notwithstanding its sparse and declining population, the area is highly productive. This is a national locus of durum wheat production. Legumes and oilseed production are increasing. Several high-capacity rail shuttle-loading facilities have been built in the area recently. Located within the Williston Geological Basin, energy exploration and development has been significant in recent years, with the industry's main employment loci in Sidney and in northwestern North Dakota. All these developments plus national and international traffic have increased freight flows in and through the region, and these trends are expected to persist.

The people of this remote region rely to an unusual degree on highway corridors for daily living. Though sparsely populated, the area plays a vital role in the production of food and energy. This project would contribute to long-term competitiveness in agriculture, energy, and tourism and improve freight flows across the northern U.S. and through nearby ports-of-entry to Canada. Traffic is not heavy, but truck traffic is expected to grow substantially faster than other vehicular traffic due mainly to agricultural change and energy development.

4 PROJECT PARTIES

The Montana Department of Transportation is the grant recipient, will conduct the project and maintain the facility. Letters of support are attached.[2] The project parties include:
Montana Department of Transportation (MDT)
Montana Division of the Federal Highway Administration
The Fort Peck Tribes are a cooperating agency.

5 GRANT FUNDS AND SOURCES AND USES OF PROJECT FUNDS

The Montana Department of Transportation requests $29 million of TIGER funds to complete the project. MDT has expended or obligated NHS funds needed for right-of-way acquisition, incidental construction, and preliminary engineering. The proposed project is a complete reconstruction of the existing 30 foot roadway to a two-lane standard with twelve foot lanes and eight foot shoulders (a 40 foot standard). The following table summarizes the funding situation.

TABLE 1: PROJECT FUNDING SUMMARY

Funding Summary	NHS funds	Requested TIGER funds	Total Funds
Right of Way	$182,000		$182,000
Incidental Construction	$570,000		$570,000
Preliminary Engineering	$2,357,000		$2,357,000
Construction		$26,457,000	$26,457,000
Construction Engineering		$2,518,000	$2,518,000
Total	**$3,109,000**	**$28,975,000**	**$32,085,000**

6 SELECTION CRITERIA

PRIMARY SELECTION CRITERIA

6.1 LONG-TERM OUTCOMES

i. STATE OF GOOD REPAIR:

The Montana Department of Transportation (MDT) utilizes an asset management strategy termed the Performance Programming (P3) Process to establish highway construction priorities within the state. The P3 Process utilizes management system outputs to determine the optimal project mix to maximize performance relating to pavements, bridges and congestion conditions.

[2] Letters of support are included on the project web site.

The project proposed here represents the preferred treatment strategies for the roadway and bridges with regard to increased performance in the areas of pavement life, bridge condition and congestion relief. The proposed project will improve the condition of the existing transportation facilities and systems and minimize lifecycle costs.

Several projects have been planned and/or completed in recent years along US Highway 2 in this area in an effort to bring the highway up to current design standards. Work planned and completed to date in this district, including this proposal, totals 69.5 miles of improvements. An additional 60 miles of the highway already meet current standards and has been resurfaced in the last decade.

Lacking this project, a major rehabilitation would be performed in 2011. The road would be resurfaced and minor widening would be made to accommodate that. The cost of this project would be $5 to 7 million and would result in a section of road that is non-standard and lacks continuity of design. The reconstruction project would be deferred to a later date.

The long-term potential for this and similar improvements along US Highway 2 to improve agricultural competitiveness, encourage energy development, and enable tourism growth, particularly in bicycle touring, may be significant. This is further discussed below and in the benefit-cost analysis.

The proposed improvements would yield near-term benefits in operating and maintenance costs, and would avoid the need for resurfacing/widening project of deferring this needed project into the future. The net operating and maintenance costs of the 30 and 40 foot paved surface are similar, and the project would move a major resurfacing work beyond 20 years into the future. In sum, project completion would be net positive in terms of future maintenance costs. MDT will maintain the highway.

The Overall Performance Index (OPI) for the subject pavement condition is Fair. Detailed indices are scaled on an index (ratings below 60 are poor, above 80 good). Pavement Management System data for weighted average indices on this 13.5 mile segment are: Ride: 62.3, fair; Rut: 46.8, poor; Alligator Cracking: 87, good; Miscellaneous Cracking: 60.1, fair. The existing bridge over Big Muddy Creek (at RP 639.2) has a bridge sufficiency rating of 57 and is critically in need of replacement.

ii. ECONOMIC COMPETITIVENESS:

Long term efficiency. All but the easterly 0.8 miles of the project is within the Fort Peck Reservation, and it is wholly within a federally designated Economically Distressed Area. Modernization of the highway is consistent with, and contributes to long-term performance of industries that are critically important to employment and productivity in this region and to the nation as a whole. Modernizing rural corridors is vital to maintaining the basic function of the US transportation system and promoting long-term, national competitiveness. Rural

transportation arterials can be transformative at the corridor and system levels. Lacking systematic improvements to keep national corridors performing, the nation cannot develop to its potential. (The National Highway System is itself a good illustration of this, as are the transcontinental railroads.)

Several developments in the local economy illustrate the significance of the project to regional and national competitiveness.

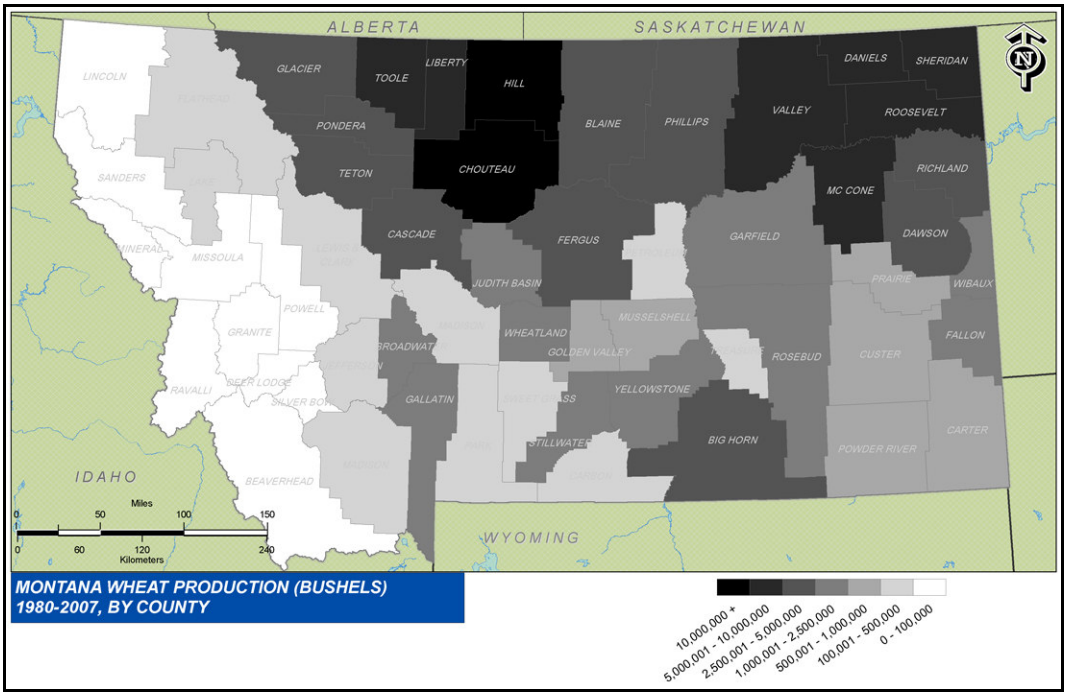
Agriculture. Agricultural efficiency gains and crop diversification have put burdens on local roads by increasing the distance, volume, and weight that the region's production is trucked from farm-to-railhead and farm-to-market. Here are two illustrations.

The area economy is most specialized in **grain** production (see figure). Today, high capacity grain shuttle-train loading facilities are replacing the system of smaller, more dispersed grain-rail elevators. These rail loading efficiencies bring transportation efficiencies to rail companies and result in lower shipping costs to producers *at the elevator*, but producers must truck their produce farther to reach them. Shuttle loading facilities have increased the distance, volume and weight of farm-to-railhead trucking in an area that is a one of our nation's most productive for durum wheat and barley. [3]

Agricultural production in the area is also diversifying, notably into **legumes and oilseeds**. Legume production has grown to a level that commercial 110-railcar shuttle facilities are planned for peas alone. Oilseed production, particularly in Camalina and Montola, are used in food and biofuels, and that processing is centered in Culbertson (at this project's eastern terminus). While these developments have improved agricultural competitiveness, these developments, too, have increased the trucked volume, weight, and distance as producers drive their more specialized crops to specific railheads and processing centers.

[3]. An analysis of grain facility impacts is included in the Montana Rail Plan, 2009 (draft) at http://www.mdt.mt.gov/pubinvolve/docs/railplan/railplan_sect5.pdf . (The full draft rail plan may be viewed at http://www.mdt.mt.gov/pubinvolve/railplan/).

FIGURE 2 MONTANA WHEAT PRODUCTION BY COUNTY



Energy. Significant development activity in **oil and natural gas** is generating traffic flows of equipment, labor, and infrastructure. Energy-related traffic within the local area is substantial, but the related traffic impulse extends to a far larger region. Activity in this geological basin – the Williston Basin – is centered in Sidney and over 200 miles to the east in North Dakota, with specialized work crews fanning out over a large region from there. Moreover, the tar sands developments of Alberta and Saskatchewan are north of this territory, and heavy movements of processing equipment through the broader region are growing. The MDT is currently fielding requests for high-wide-long (e.g., 25’ x 25’ x 150’) load permits needed to move vehicles carrying massive processing components to the Canadian energy developments. **Wind energy** developments are also growing, but these appear to have relatively modest surface transportation impacts.

Energy development in the Williston Basin and beyond are consistent with national policy aims to achieve greater energy independence. For many communities in the immediate area, the direct employment impacts of such developments are not large. Because exploration and development work involves specialized firms and workers these days, the greatest immediate benefits flow to those firms and localities that have prior specialization in them. Investments in plant and equipment will be needed because transmission and refining capacity in the broader region are, in general, oversubscribed, so there are opportunities for economic growth in processing and transportation facilities that may benefit local areas that can compete for these new investments. The broadest and most certain benefits are at the national scale. Moving workers, equipment, supplies, and outputs to and from domestic production sites is critical

making such developments economically viable. The local employment impacts are mostly from secondary and tertiary effects. The transportation system impacts are, however, local.

None of the aforementioned industrial developments hinges on the reconstruction of a 13.5-mile segment of highway, but they do rely on a national highway network that has the capacity to develop beyond World War II standards. Rail transportation developments and economic diversification are placing ever-greater demands on this area's highway network. The larger economic benefits are cumulative and at the national system level.

Tourism in this area has two main streams. The largest of these flows is destined for the area in shoulder seasons, hunters who come for the abundant pheasant, duck, goose, deer, antelope, fish and other wildlife. This visitor population is long-standing and consistent with local values to maintain wild qualities of the environment held by Assiniboine and Sioux tribal members and by non-natives alike. The need to protect and enhance environmental quality while improving highway function is reflected in the project design.

A second main tourism stream is through-going travelers who select travel along the US Highline as a destination in itself. US Highway 2 is a popular travel route for interstate car/camper touring, which will also grow. Local boosters target destination visitors to paleological attractions and the nearby Forth Peck Reservoir.

In particular, US Highway 2 is noted as a **bicycle touring** route by the Adventure Cycling Association and AASHTO.[4] Interstate bicycle touring is significant along the corridor now and, it is expected to grow (there are no systematic counts of bicycle traffic). Under current conditions, riders face a dangerous way, as the shoulders are a maximum of 3 feet and rough. With reconstruction, bicycle use is expected to grow steadily. No good data exists to enable baseline or projection of this population, but the role of facility investments in attracting bicycle tourism can be significant.[5]

The route is also used as a detour route by Amtrak when passenger rail service through the area is blocked due to conditions on the host (BNSF Railway) line.

With corridor-level improvements, tourism is anticipated to grow at 2.5% per year over baseline, with main impacts to restaurants and hotels, with the main growth in bicycle touring. With corridor-level improvements, auto-tourism is expected to grow modestly above baseline.

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[4] U.S. Bicycle Route Corridor Plan, 2005. http://atfiles.org/files/pdf/usbrcorridorplan.pdf

[5] For instance, see Meletiou et al.'s 2005 case study economic impacts in North Carolina, TRR http://trb.metapress.com/content/f511nk3g705230p2/fulltext.pdf

These are only some sector-specific examples. The US Highway 2 corridor is significant to all manner of freight movement across the nation's northern tier and to trade across the Canada border.

iii. LIVABILITY:

Highways are amenities for people in this remote, rural area. People here routinely travel long distances to get basic necessities of life – food, work, health care and other essential services. The area is extraordinarily reliant on transportation systems for the basic quality of life and economic functioning. Roosevelt County in 2008 had a population density is 4.3 people per mile, which is more than its neighboring counties (Daniels County at 1.5 per square mile, or Sheridan at 1.9 per square mile). Main nearby trade centers include Sidney, MT (located 56 miles southeast of Brockton), Glasgow (84 miles west), and Williston, ND (60 miles east). The nearest metropolitan areas are Billings, MT (327 miles southwest) and Regina, SK (185 miles north). The area economy is dependent on highways for employment, health and emergency services.

Substantial recent investments in area transit services have expanded alternatives to personal vehicle use. Since passage of SAFETEA-LU in 2005, public transit capacity in the greater area has expanded through the addition of eight buses/vans; ARRA alone will enable the purchase of six additional buses/vans, further expanding services in the area. As noted, bicycle transportation is growing in the area, aided by the corridor's identification as a national interstate bicycle corridor, and updating the highway configuration may be essential to improving the safety and quality of the ride and provide safer passage for bicycles.

iv. SUSTAINABILITY:

The proposed reconstruction is expected to increase average travel speed by five miles per hour, from 60 to 65 miles per hour, and enable greater steadiness of travel. Current AADT is 1,130 with about 10 percent of that in trucks. For purposes of the cost-benefit analysis, the small effects are considered offsetting.

The movement of wheat by through highly efficient 110-car grain loading facilities is expected to place a somewhat greater burden on area roadways. The development, however, of shuttle operations in the vicinity will be incented by this project and may result in fewer grain trucks being hauled longer distances to farther facilities. Therefore, the project will tend to discourage less energy efficient, long distance trucking by encouraging the "thickening" of and competition among rail loading facilities in the area.

Refinements to the preliminary design that have improved the environmental performance include reducing the offset from current road footprint to minimize wetlands impacts and disturbance, and adding three wildlife crossings.

v. SAFETY:

In the previous five years, this 13.5 mile segment has seen ten preventable accidents involving two fatalities, three incapacitating injuries, eight non-incapacitating injuries, two possible injuries, and four PDO. The analysis of economic benefits and costs suggests that preventable accidents are by far the largest benefit stream, and that their value alone is sufficient to warrant the project. This is high for a road segment with 1,130 AADT. MDT analysis indicates that the proposed improvements would address 10 of these crashes. The accidents involved two fatalities, 13 injuries, and five PDO crashes.

There were also four animal-vehicle collisions, which are not counted in the benefit-cost analysis. FHWA has estimated the average cost of animal-vehicle collisions at $6,126, and in the range of $8,400 to 30,800 for accidents involving larger animals that are common in this area.[6]

From the guidelines provided in the "Treatment of the Economic Value of a Statistical Life in Departmental Analyses – 2009 Revision" there would be a total cost savings of $34,292,500 for the 5-year data period. This results in a cost savings of $6,858,500/year in 2009 dollars.

[6] Economic Impacts of Wildlife-Vehicle Collisions, Western Transportation Institute for FHWA, August 2008, http://www.tfhrc.gov/safety/pubs/08034/03.htm

6.2 EVALUATION OF EXPECTED PROJECT COSTS AND BENEFITS:

MDT discounted costs and benefits to 2009 dollars at a rate of 7 percent for the period 2010 to 2030. The B/C ratio is in the range of 2.6 to 11.7 (an NPV of $43.8 to $59.9 million). The range depends on whether the cost of the needed reconstruction is included within the 20 year horizon of this analysis. Table 2, below, shows summary findings for the more conservative of these estimates. Following that is a review of underlying assumptions.

TABLE 2: SUMMARY OF PROJECT BENEFITS AND COSTS

Discount rate: 0.07			
	Discounted costs		
COSTS	**2010 - 2012**	**2010 - 2030**	
Proposed project costs	$27,079,561	$27,079,561	
Alternative scenario	($5,607,477)	($5,607,477)	
PV of Costs	**$21,472,084**	**$21,472,084**	
	Discounted benefits		**Benefit share (%)**
BENEFITS	**2012**	**2010 - 2030**	
Vehicle hours travelled savings	$87,024	$1,041,478	1.6%
Economic competitiveness	$196,464	$2,185,424	3.4%
Safety	$5,598,579	$61,915,172	95.0%
PV of Benefits	**$5,882,066**	**$65,142,074**	100.0%
Net Present Value		**$43,669,990**	
Benefit-Cost Ratio		**2.03**	

TABLE 3: SUMMARY OF BENEFITS & COSTS BY EVALUATIVE CRITERIA

Long-Term Outcomes	Benefits
State of Good Repair	The baseline assumption would entail significant near-term costs in resurfacing and widening and would only defer the proposed reconstruction. If the proposed reconstruction is completed in 2024 (i.e., within the analysis period), net project costs fall from $21.5 to $5.6 million.
Economic Competitiveness	This analysis projects benefits to three key industries – agriculture, energy, and tourism – in a four county area.
Livability	Time savings of increased speed and reliability account for a small share of benefits, about 1.6 percent. Other more general transportation benefits (e.g., emergency services, access to work, commerce, services) are not monetized.
Sustainability	The emissions and other environmental impacts of this project are expected to be insignificant and are not monetized here.
Safety	Analysis indicates several severe crashes would be addressed by design, and this short segment has several of them, resulting in an total benefit $65 million, by far the largest share of total benefits.

State of Good Repair

The alternative to this $29 million project is $6 million in resurfacing/widening work, and that would only put off the $29 million cost of needed reconstruction. The table above contemplates putting off the reconstruction until after the 2030 horizon of this analysis. Placing this work within the 20 year period is likely, and that changes the results dramatically. For instance, if proposed project is completed in 2025 at its current cost (inflated at MDT's inflation projection of 3.16 percent annually), the net cost of the project drops from $21.5 to to $5.6 million. As a result, the NPV increases to $65 million and the BC ratio increases to 10.5.

Annual operating and maintenance costs for the two configurations are similar and they are counted as net $0. The operational differences, from the perspective of routine maintenance, include increased costs from the enlargement of the shoulders from three to eight feet and reduced costs due to less need for responsive-maintenance for the aging highway and bridges. Costs of maintenance are set aside here.

These projections for asset management costs are general but probably conservative. For instance, deferring the reconstruction work could add significant costs of re-rebuilding the bridge at Big Muddy Creek, which is now badly in need of replacement.

Safety

Safety performance would improve significantly, and this accounts for about 95 percent of the projected benefits. A five-year accident study, August 31, 2003 to September 1, 2008, identified 10 accidents on this segment that would be addressed by design improvements. These preventable accidents involved 2 fatalities, 3 incapacitating injuries, 10 non-incapacitating injuries, and 5 property damage only accidents. Using the valuations prescribed in the NOFA, the annual benefit from safety improvements, savings from safety improvements are estimated at $6.86 million per year.

Four preventable vehicle-wildlife accidents were excluded from the analysis. Recent FHWA studies value them in the range of about $6,000 to $30,000 (i.e., $1,500 to 6,000 per year in preventable costs per year).

Economic Competitiveness.

This analysis attributes about 3.4 percent of the benefit to this source. The impact on regional and national economic competitiveness of reconstructing a single 13.5 mile segment of highway in a remote, rural area is quite speculative. The analysis treated the quantification of this impact lightly. The more substantial assessment is in the discussion above.

The analysis projects growth due to increased competitiveness from this project at 0.1 percent annually for farm income, and 0.05 percent each for energy and tourism. This approach results in a large first-year benefit and slow growth in following years. This is rationalized by the potential of this action to incent one-time investments. For instance, a grain shuttle

loading facility costs about $5 million to build and employs about six permanent workers. This analysis allocates a fraction of one such investment to growth to agriculture and does so similarly for all affected industries, agriculture, mining (energy development), and tourism. It is a rough but conservative estimate of aggregate competitiveness impacts.

Estimates for agriculture and mining income are $66.8 and 58.9 million, according to the REIS database, 2008 income figures. The agricultural income figure combines proprietor and employment income.

Estimates of the tourism economy are from survey research by the Montana Institute for Tourism and Recreation Research and include figures only for travelers from out-of-state, which is a cautious assumption for this analysis.[7] That source estimates tourism-related spending in fuel, restaurant, retail, lodging, groceries, and other travel spending currently total $25 million per year in the four-county region (Roosevelt, Daniels, Sheridan and Richland Counties).

IMPLAN income multipliers of 2.37, 1.77, and 2.40 were applied to agriculture, energy, and tourism respectively.

Livability

The alternative to the proposed project is to invest in resurfacing and minor widening in 2011 at a cost of $6 million. The result of that action would be a smooth ride, and therefore vehicle wear-and-tear impacts are assumed at net $0 impact.

Annual O&M costs are similar between the alternatives, and these costs are assumed at net $0 impact. Both alternatives are two-lane configurations of the same highway segment and would have similar maintenance requirements.

Generalized transportation benefits include better access to work, commerce, and services that are critical to daily living in this remote, rural area. Emergency services such as emergency medical care will also benefit. Quantification of these benefits is beyond the capacity of MDT for projects of this small magnitude.

Sustainability

As for VHT-related savings, our research suggests that average speed would increase from 60 to 65. The baseline AADT is 1130 in 2009, with 10.2 percent truck traffic. MDT projects that non-truck traffic will increase at the historic rate of 1.1 percent, and vehicles class 5 and over will increase at 5 percent (lower than the 10 to 12 percent estimate anticipated in a recent study). VHT benefits contribute about 1.6 percent to the total estimated benefits.

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[7] Ag and energy industry incomes are BEA data obtained from the REIS database for 2008 at http://www.bea.gov/regional/reis/action.cfm. Tourism spending in the county includes out-of-state visitors only and is from surveys of the Institute for Tourism and Recreational Research, University of Montana at http://www.itrr.umt.edu/reportBuilder.htm .

As for emissions, traffic flow is expected to be slightly faster but steadier, small positive and negative effects. The aggregate economic value of emissions savings attributable to this project are offsetting and negligible. This analysis does not estimate them.

The environmental analysis concluded no significant impact. The project is designed to minimize negative impacts. Evolutions in the design include tightening the offset from existing roadway and adding wildlife crossings (both described above) that further lighten the environmental impact of this project.

6.3 EVALUATION OF PROJECT PERFORMANCE:

The Montana Department of Transportation has developed a data gathering and reporting process for all American Recovery and Reinvestment Act of 2009 funded projects. The process complies with Office of Management and Budget and Management (OMB), Transportation & Infrastructure Committee, Federal Highway Administration (FHWA), and the Montana State Governor's Office reporting requirements. If the TIGER Discretionary Grant funds are received for this project, full data collection and reporting will be implemented on this project. The reporting will evaluate the success of the project and measure the short- and long-term performance, specifically with respect to the economic recovery measures and long-term outcomes specified in this notice.

6.4 JOB CREATION & ECONOMIC STIMULUS:

At the jobs-per-spending multipier of one job-year per $92,000 of government spending, the project would generate 315 job-years – about 157 jobs in each construction year, 2010 and 2011. (These figures set aside the 10 percent of funds already committed to the project. Adding other committed funds yields an additional 33 job-years. Most of this impact is historic.)

COMPLIANCE AND USE OF BEST PRACTICES

MDT understands and will comply with federal requirements listed in the notice of funding availability listed in the Federal Register (V74, N115 pp 28755-28767), including federal wage requirements, NEPA requirements, environmentally related federal, state and local actions, and protection of confidential business information.

JOB OPPORTUNITIES FOR LOW-INCOME WORKERS

The work would have a substantial impact on people in need – the project is in a federally designated Economically Distressed Area. Because the project is on the Fort Peck Indian Reservation, a significant percent of the employment effects would directly benefit the native populations that are much in need of it. BIA statistics (2005) for the Fort Peck Reservation show a native workforce of 3,322 people and 53.5 percent unemployment.[8] The construction activity would have a substantial impact on the economic well being of these people.

[8] Demographic and Economic Information for Fort Peck Reservation, Montana Census and Economic Information Center: http://www.ourfactsyourfuture.org/admin/uploadedPublications/2691_Ft_Peck_RF08_Web.pdf .

The project will promote the creation of job opportunities for low-income workers by utilizing best practice hiring and apprenticeship (including pre-apprenticeship) programs. The State of Montana, Department of Transportation has MEMORANDUMS OF UNDERSTANDING with all seven Tribal Governments throughout the state. In accordance with these MOU's, a negotiated number of trainees will be hired for the project, as will any qualified tribal members. These MOU's emphasizes Montana's commitment to Indian employment as a means of strengthening tribal communities and increasing employment opportunities for Native Americans residing on or near the reservation. Each Tribal Employment Rights Office works with contractors and sub-contractors to ensure technically qualified and reasonably priced employees are available. Goals are set in each contract for Indian employment in those trades where there are qualified Indian workers available. Firms that are 100% Indian owned, operated and managed also receive the highest employment preference from the Tribe. These rules ensure the local economy will benefit, provide for increased benefits from employment, and promote a stable labor force to insure the steady growth of commerce on the reservation.

MAXIMUM PRACTICABLE OPPORTUNITIES FOR SMALL BUSINESSES & DBE'S:

The MDT Disadvantaged Business Enterprise program encourages and supports the participation of companies owned and controlled by socially and economically disadvantaged individuals in transportation contracts. MDT's supportive Services Program also provides business assistance to contribute to the self-sufficiency of DBE companies though skill development, training, and assistance with bonding and financing. There are currently seventy-seven (77) Disadvantaged Business Entities certified throughout the state of Montana. MDT, prime contractors and the TERO officer have pledged to work together to promote Disadvantaged Business Enterprise contractors. Given available opportunities, additional firms may develop. Small business entities are common in rural Montana areas and any construction activity will have a beneficial financial impact.

COMMUNITY –BASED ORGANIZATIONS:

The project will make effective use of community-based organizations in connecting disadvantaged workers with economic opportunities. There are a variety of community and economic development corporation throughout the state. These partner with MDT to promote development in the area by assisting in training and job skills and connecting workers with employment.

LABOR PRACTICES AND COMPLIANCE:

The project will support entities that have a sound track record on labor practices and compliance with federal laws ensuring that American workers are safe and treated fairly. The Director of the Montana Department of Transportation signed the STATE ASSURANCE WITH REGARD TO EQUAL EMPLOYMENT OPPORTUNITY AS REQUIRED BY THE FEDERAL-AID HIGHWAY ACT OF 1968 on April 15, 2009. This agreement assures that employment in connection with all proposed projects will be provided without regard to race, color, creed, or national origin. It also includes the requirements for a system to ascertain whether contractors and sub-contractors

are complying with their equal employment opportunity contract obligations and the degree to which such compliance is producing substantial progress on the various project sites in terms of minority group employment.

BEST PRACTICES:
The project implements best practices, consistent with our nation's civil rights and equal opportunity laws, for ensuring that all individuals— regardless of race, gender, age, disability, and national origin—benefit from the Recovery Act. Montana has a high minority population. There are firms throughout Montana capable of taking on this level of work and many low-income individuals actively seeking work.

6.5 PROJECT SCHEDULE. The project is ready and ahead of schedule for letting in the spring of 2010, construction in the building seasons of 2010 and 2011, and full completion by February 2012. Right of way acquisition, incidental construction, and design work are underway and ahead of schedule.

MDT anticipates that the construction work and jobs will be evenly divided between the two construction years and that the job generation will be concentrated in June-October of 2010 and May-October of 2011.

6.6 ENVIRONMENTAL APPROVALS

The Categorical Exclusion for this project was signed by FHWA on October 18, 2001 and is included on the submission website.[9]

6.7 LEGISLATIVE APPROVALS

None necessary.

6.8 STATE AND LOCAL PLANNING

The project is programmed in the TIP. Construction of an eastern split of the project (Big Muddy Creek West) is programmed in the STIP, and incidental construction and right of way for the whole project is in the STIP. (The split project is recombined in this proposal.) Plan-in-hand approvals are complete. Right of way acquisition, incidental construction, and final design are underway. Final design is ahead of schedule on the entire length of the project. These preliminary stages total 10 percent of project costs. This work has been funded through National Highway program funds.

TIGER grant funding would enable contract letting in spring 2010 and the project could be complete and in use by February 2012. The subject highway has been subject to extensive planning studies through the P3 Process, the 2007 TRED corridor study, and the Montana

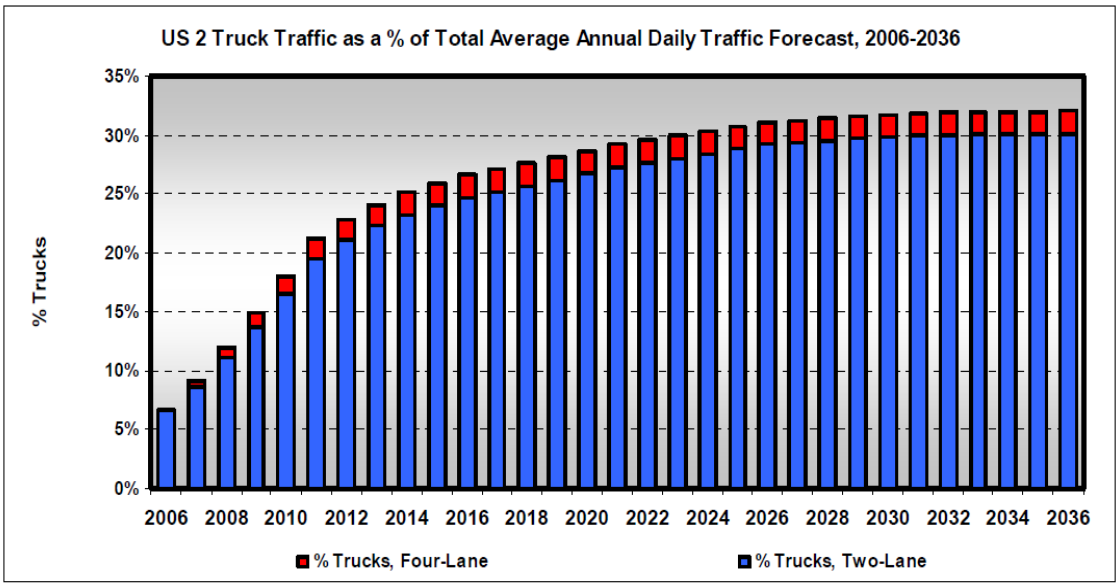
[9] NEPA Categorical Exclusion is listed on the project web site.

Highway Reconfiguration Study and the associated Highway Economic Analysis Tool, all of which are discussed above. All these support the proposed reconstruction of this highway segment to a contemporary two-lane standard.

Projects in this district have similarly improved 50.9 miles of highway to a current 2-lane standard. (These projects are referred to as Nashua East and West, Oswago East and West, Dodson East.) The proposed project would maintain continuity of design and bring the segment up to current standards and would complete an additional 13.5 miles of improvements. Another scheduled project (Big Muddy Creek East) would bring the total to 69.5 miles of reconstruction, of the 220 miles in this district.

Several planning studies have examined needs and led to the recommended design. The **Theodore Roosevelt Expressway Development (TRED**, 2007) study[10] examined north-south flows along this federally designated high priority corridor and concluded that, with a modern 2-lane design, truck traffic may grow substantially faster than the historic trend (Figure 2). The incremental truck-traffic effects of four-lane improvements (shown in red) are relatively modest.

FIGURE 3: US HIGHWAY 2, PROJECTED TRUCK TRAFFIC GROWTH UNDER 2 AND 4-LANE SCENARIOS



Public interest in improving US Highway 2 and other major corridors in the state to four lane configurations led MDT to conduct the **Montana Highway Reconfiguration Study** (2005). The analysis considered the impacts of improving the entire 666 miles of the US Highway 2 corridor in Montana, to either a four lane standard or "super-two" (enhanced two-lane with passing

[10] Theodore Roosevelt Expressway Development Study, April 2007, Montana Department of Transportation, http://www.mdt.mt.gov/pubinvolve/us2tred/

lanes) design.[11] Montana's **Highway Economic Analysis Tool** (HEAT) was developed to assess these options in comparison with bringing US Highway 2 in Montana up to a modern in two-lane standard. (Several segments of the highway continue to have a post-WWII era design with a 30 foot paved surface.) Analysis included assessment of potential business location effects, tourism impacts, safety, and VHT. Impacts were modeled using a five-district state REMI model. The analysis found a large negative NPV for both alternatives, supporting the conclusion that a basic modernization of the corridor was most cost-beneficial.

Congestion is negligible in this remote area. MDT data shows a congestion index of 80. Needs to flow improvement needs are better described in terms of large loads, accidents, and unsuitability for contemporary demands of commercial and bicycle users. Current AADT on the subject route is 1,130, with 10.2 percent of the traffic in vehicles class five and over. The historic trend of non-commercial traffic growth is 1.1 percent annually. Commercial (truck) traffic may grow by as much as 10 percent annually.[12]

6.9 TECHNICAL FEASIBILITY.

The Brockton E. project is technically feasible with substantial preliminary engineering being completed. The final design will be completed by early 2010. All reports are complete, the right-of-way purchases are currently being finalized, incidental construction is underway, the wetland mitigation has been developed, and the preliminary coordination on the environmental permits is complete. Once final design is complete, the project may go to construction.

6.10 FINANCIAL FEASIBILITY

The project has viability and completeness assuming the availability of the TIGER Discretionary Grant funds. The grant funds will accelerate the completion of the project. MDT has expended federal and state highway funds to complete the design, right-of-way purchases, and utility moves. These preliminary steps have been completed through the NHS program. MDT has a history of successful management of federal transportation projects.

When the project is let for construction, MDT commits to funding any excess above the grant request by other funding allocations.

7 SECONDARY SELECTION CRITERIA

7.1 INNOVATION

[11] Montana Highway Reconfiguration Study, May 2005, Montana Department of Transportation, http://www.mdt.mt.gov/research/docs/reconfig/final_report.pdf

[12] Theodore Roosevelt Expressway Development (TRED) Study, April 2007, http://www.mdt.mt.gov/pubinvolve/us2tred/

This is a basic, needed reconstruction project for an aging highway segment. MDT's practices of sound asset management through the P3 Process, the Montana Comprehensive Highway Safety Plan, our work in wildlife crossings, and in Context Sensitive Design have all been subjects of national awards. MDT is confident that this project will provide value to the area, state, and nation.

7.2 PARTNERSHIP

MDT has coordinated this project with the affected tribal and local governments. Coordination with state and federal offices is further discussed below, in the "environmentally related actions" section.

8 PROGRAM-SPECIFIC CRITERIA

None of the project-specific criteria apply as the proposed project is neither a bridge, transit, port, nor TIFIA project. The project meets the design standards outlined in 23 CFR 625 – Design Standards of Highways. This is a highway reconstruction to bring the present facility to current standards. Included with the project is a large stream restoration that will benefit threatened species.

9 FEDERAL WAGE REQUIREMENT

The project implements best practices, consistent with our nation's civil rights and equal opportunity laws, for ensuring that all individuals— regardless of race, gender, age, disability, and national origin—benefit from the Recovery Act. Montana has a high minority population. There are firms throughout Montana capable of taking on this level of work and many low-income individuals actively seeking work.

MDT certifies it complies with the requirements of subchapter IV of chapter 31 of title 40 U.S. code regarding federal wage rate requirements in relation to the Recovery act. MDT requires contractor training certification, payroll monitoring, and a formal complaint process to assure contractor compliance with Davis-Bacon ways rates and fringe benefits.

10 NATIONAL ENVIRONMENTAL POLICY ACT REQUIREMENT

The project will not significantly impact the natural, social, and/or economic environment. The Montana division of the Federal Highway Administration (FHWA) has concurred with all the documents in compliance with 23 CFR 771. The Categorical Exclusion for this project was signed on October 18, 2001, which can be found on this project's web site.

11 ENVIRONMENTALLY RELATED FEDERAL, STATE, AND LOCAL ACTIONS

The Categorical Exclusion outlined above includes information concerning the coordination with the US Army Corps of Engineers (Corps) regarding wetland impacts and stream crossings as required by the Clean Water Act 404 permitting process. The 401 certification is coordinated through the Corps as this project is located within the Fort Peck Tribes Reservation.

There has been coordination with the Montana State Historic Preservation Office (SHIP) and the Tribal Cultural Coordinator concerning 106 and 4(f) concerns for historic structures and cultural sites. There are multiple historic bridge replacements with the project. The Historic Bridge Programmatic agreement was agreed to.

There are multiple Threatened and Endangered (T&E) species within the project area. MDT has consulted with the US FWS to determine that there would be no affect to the black-footed ferret, not likely to adversely affect the pallid sturgeon, whooping crane, interior least tern or the piping plover, and would not likely jeopardize the proposed threatened mountain plover. There are Bald Eagles and migratory birds in the area, there are provision with the plans to protect these species.

There has been and will continue to be coordination with the floodplain administrator and the contractor must comply with both the state and federal requirements for stormwater runoff control.

12 PROTECTION OF CONFIDENTIAL BUSINESS INFORMATION

All information submitted is publicly available data and the methodologies presented herein are accepted by industry practice and standards. No data in this application contains confidential business information.

13 SUMMARY

MDT is committed if the requested TIGER Discretionary Grant funds on the US 2 – Brockton E. project are received to obligate and expend the funds according to grant requirements. If when the project is let additional funds are necessary, MDT commits to funding the remainder due to actual costs coming in above estimated costs. The US Highway 2 Brockton E. project will:

- meet the requirements of the grant by delivering programmatic results.
- achieve economic stimulus by optimizing economic activity and the number of jobs created or saved in relation the Federal dollars obligated,
- achieve long-term public benefits by improving the quality of life, investing in transportation, improving the environment, protection of the environment, that provides for long-term economic benefits, and
- satisfy the Recovery Act's transparency and accountability objectives.