

ENVIRONMENTAL ASSESSMENT

for

NH 57-3(31)83

Lewistown to Grass Range Environmental Corridor Study (P.M.S. Control #4067)

in

Fergus County, Montana

This document is prepared in conformance with the Montana Environmental Policy Act (MEPA) requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with National Environmental Policy Act (NEPA) requirements for an Environmental Assessment under 23 CFR 771.119.

Submitted pursuant to 42 U.S.C. 4332(2)(c), 49 U.S.C. 303, Sections 75-1-201 & 2-3-104, M.C.A.,
and Executive Orders 11990, 11988, and 12898, by the

U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION

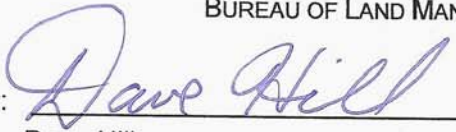
the

MONTANA DEPARTMENT OF TRANSPORTATION

and the following Cooperating Agencies:

U.S. ARMY CORPS OF ENGINEERS
BUREAU OF LAND MANAGEMENT

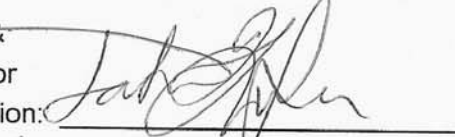
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EA Summary

The Montana Department of Transportation (MDT) is proposing to reconstruct and widen US 87 in Fergus County, Montana. The purpose of the proposed action is to provide a highway that meets Montana's current standards for a rural principal arterial roadway.

The western terminus of the proposed project lies just west of the intersection of Meadowlark Lane and US 87 at the east city limits of Lewistown. The eastern terminus of the project is at the intersection of US 87 with MT 19 (National Highway System N-61), just north of Grass Range. The total length of the project is 47.5 km (29.5 mi). This Environmental Assessment (EA) has been prepared to identify potential environmental impacts resulting from this action, consider alternatives, and to recommend measures that would mitigate the impacts.

US 87 was constructed between the late 1930s and early 1950s. This segment was overlain in the early 1980s, and most of it received a pavement preservation treatment in the year 2000. The roadway is narrow (7.3 m [24 ft] to 8.5 m [28 ft]) with shoulder widths ranging from zero to 0.6 m (2 ft), has steep cut and fill slopes in the western segment, sixteen timber stringer structures, and three chain-up areas. The sixteen timber stringer bridges (mostly 8.5 m [28 ft] wide) vary from one to four spans within the US 87 corridor. There are also numerous irrigation crossings along the project corridor.

The alternatives that are evaluated in this EA include a No-Build Alternative, a Preferred Alternative, and several other alternatives that were considered but ultimately eliminated. The No-Build Alternative is a non-construction alternative that would maintain the existing conditions along the entire length of the project corridor. This alternative would include routine maintenance projects on US 87.

The Preferred Alternative involves the reconstruction of US 87 to MDT's current standard for this type of facility. The standard is a 12.2 m (40 ft) paved width, including 2.4 m (8.0 ft) shoulders for safety and to accommodate bicycle travel. The Preferred Alternative generally follows the existing alignment of US 87, but would depart from this alignment in two areas to achieve specific objectives. The first departure starts at RP 88.5± (just past the Phillips Hill curve), this alternative runs easterly of and parallel to existing US 87 for about 2.3 km (1.4 mi), terminating at RP 90.0±. This departure from the existing alignment is intended to reduce snow-drift impacts across this portion of roadway. The second area that departs from the existing alignment is approximately 6.2 km (3.8 mi) in length and starts at RP 94.0±. This alternative was developed to minimize impacts to prime farmland. Starting at RP 94.0± the alternative's centerline is at its furthest point 750 m (2,460± ft) away from, but parallel to the current US 87 alignment.

The Preferred Alternative was developed during an extensive public involvement process that included four public meetings in Lewistown and four public meetings in Grass Range, as well as stakeholder interviews in both communities. Impacts to the physical and human environment were also considered in selecting the alignment for the Preferred Alternative.

Three other alignment alternatives were considered during a preliminary evaluation phase and presented to the public. These alignments would also use the existing US 87 alignment for the most part, but then depart at different locations, for various lengths. Two of the alternatives,

Railroad Grade at Divide and New Alignment at Divide, leave the existing alignment in the Divide area in an attempt to flatten curves and improve sight distances along the Divide. The third alternative, Railroad Grade East of Cheadle, leaves the existing alignment at Cheadle Road and parallels the existing highway to the north up to the project's eastern terminus. The purpose of this alternative is to minimize farmland impacts. These three alignment alternatives are described in Chapter 2, Alternatives.

This EA evaluates the potential social, economic, and environmental impacts of the No-Build and Build Alternatives. A summary of those impacts is presented in Table S-1. A summary of mitigation measures follow the table.

**Table S-1
 Impacts Summary**

SUBJECT AREA	NO-BUILD ALTERNATIVE	PREFERRED ALTERNATIVE	RECONSTRUCT EXISTING ALIGNMENT	NEW ALIGNMENT AT DIVIDE	RAILROAD GRADE AT DIVIDE ALIGNMENT	RAILROAD GRADE EAST OF CHEADLE ALIGNMENT
CONSTRUCTION COST	None	\$50,200,000	\$47,900,000	\$59,500,000	\$66,800,000	\$47,900,000
Travel/Access	No change	Improvements maintain access	Improvements maintain access	Improvements maintain access	Improvements maintain access	Improvements maintain access
Pedestrian/Bicycle	Pedestrians and cyclists would not be accommodated	Improved; wider shoulder would meet AASHTO guidelines for bike use	Improved; wider shoulder would meet AASHTO guidelines for bike use	Improved; wider shoulder would meet AASHTO guidelines for bike use	Improved; wider shoulder would meet AASHTO guidelines for bike use	Improved; wider shoulder would meet AASHTO guidelines for bike use
Parks and Recreation	No change	No impact	No impact	No impact	No impact	No impact
Environmental Justice	No change	No impact	No impact	No impact	No impact	No impact
Land Use/Right-of-Way	None	227.1 ha (561.2 ac)	200.9 ha (496.4 ac)	239.7 ha (592.3 ac)	258.0 ha (637.7 ac)	287.5 ha (710.5ac)
Farmland						
Statewide Importance	No impact	35.9 ha (88.83 ac)	49.0 ha (121.0 ac)	51.2 ha (126.6 ac)	43.6 ha (107.7 ac)	49.5 ha (122.3 ac)
Prime	No Impact	29.0 ha (71.6 ac)	29.0 ha (71.6 ac)	28.8 ha (71.2 ac)	28.6 ha (70.8 ac)	12.4 ha (31.4 ac)
Prime if Irrigated	No impact	6.8 ha (16.7 ac)	9.9 ha (24.4 ac)	9.9 ha (24.4 ac)	9.9 ha (24.4 ac)	6.2 ha (15.4 ac)
Total Farmland Impacts	No impact	71.7 ha (177.1 ac)	87.9 ha (217.0 ac)	89.9 ha (222.2 ac)	82.1 ha (202.8 ac)	68.4 ha (169.1ac)
Irrigation	No impact	Relocations required	Relocations required	Relocations required	Relocations required	Relocations required
Local/Regional Economics	No impact	No impact	No impact	No impact	No impact	No impact
Floodplains	No impact	No impact	Boyd Creek Floodplain Impacts	No impact	No impact	No impact

**Table S-1
 Impacts Summary(cont.)**

SUBJECT AREA	NO-BUILD ALTERNATIVE	PREFERRED ALTERNATIVE	EXISTING ALIGNMENT	NEW ALIGNMENT AT DIVIDE	RAILROAD GRADE AT DIVIDE ALIGNMENT	RAILROAD GRADE EAST OF CHEADLE ALIGNMENT
Seeding/Erosion Control	No impact	Temporary soil disturbances; potential erosion; unwanted weed growth	Temporary soil disturbances; potential erosion; unwanted weed growth	Temporary soil disturbances; erosion; unwanted weed growth	Temporary soil disturbances; erosion; unwanted weed growth	Temporary soil disturbances; erosion; unwanted weed growth
Water Quality	No impact	Would minimize impacts from erosion and siltation; improve water quality moving roadway from floodplain and wetland areas; and acid mine drainage	Would minimize impacts from erosion and siltation	Increased erosion; acid mine drainage due to crossing extensive coal outcrop and abandoned coal mine sites	Erosion; acid mine drainage due to crossing some coal outcrop and abandoned coal mine sites	Floodplain and wetland impacts more extensive than the Existing Alignment
Wetlands	No impact	3.0 ha (7.5 ac)	3.5 ha (8.8 ac)	4.5 ha (11.2 ac)	6.8 ha (16.8 ac)	21.3 ha (52.8 ac)
Threatened & Endangered Species	No impact	Bald Eagle – May affect, is not likely to affect; Black-footed Ferret – No effect; Mountain Plover – No effect	Bald Eagle – May affect, is not likely to affect; Black-footed Ferret – No effect; Mountain Plover – No effect	Bald Eagle – May affect, is not likely to affect; Black-footed Ferret – No effect; Mountain Plover – No effect	Bald Eagle – May affect, is not likely to affect; Black-footed Ferret – No effect; Mountain Plover – No effect	Bald Eagle – May affect, is not likely to affect; Black-footed Ferret – No effect; Mountain Plover – No effect
Biological Resources	No impact	Minor and temporary impacts	Minor and temporary impacts	Minor and temporary impacts	Minor and temporary impacts	Minor and temporary impacts
Species of Concern	No impact	Occurrences of Northern Goshawk and Northern Leopard Frog – potential impact to habitats	Occurrences of Northern Goshawk and Northern Leopard Frog – potential impact to habitats	Occurrences of Northern Goshawk and Northern Leopard Frog – potential impact to habitats	Occurrences of Northern Goshawk and Northern Leopard Frog – potential impact to habitats	Occurrences of Northern Goshawk and Northern Leopard Frog – potential impact to habitats

**Table S-1
 Impacts Summary(cont.)**

SUBJECT AREA	NO-BUILD ALTERNATIVE	PREFERRED ALTERNATIVE	EXISTING ALIGNMENT	NEW ALIGNMENT AT DIVIDE	RAILROAD GRADE AT DIVIDE ALIGNMENT	Railroad Grade East of Cheadle Alignment
Cultural/Archaeological/ Historic Resources	No impact	4 sites and a mining district (including 1 contributing site) that is NRHP eligible	4 sites and a mining district (including 2 contributing sites) that are NRHP eligible	2 sites and a mining district (including 2 contributing site) that are NRHP eligible	3 sites and a mining district (including 1 contributing site) that are NRHP eligible	4 sites and a mining district (including 2 contributing sites that are NRHP eligible; 2 sites of unknown NRHP eligibility)
Noise	No impact	In compliance with FHWA and MDT noise abatement criteria	In compliance with FHWA and MDT noise abatement criteria	In compliance with FHWA and MDT noise abatement criteria	In compliance with FHWA and MDT noise abatement criteria	In compliance with FHWA and MDT noise abatement criteria
Visual Resources	No impact	View shed impacts for 8.5 km (5.2 mi) with moderate cut and fill activities associated with relocating the road for this length.	Vegetation impacts due to widening of shoulders for 47.7 km (29.6 mi); extensive cuts would occur at Phillips Hill and West Divide Road	Extensive view shed impacts for 10.2 km (6.4 mi); view shed impacts to nearby residents	Extensive view shed impacts for 11.5 km (7.2 mi); extensive cuts and fills at railroad tunnel and at West Divide Road.	View shed impacts for 26.6 km (16.5 mi); area of impact is generally flat terrain and would not result in major view shed changes.
Air Quality	NAAQS compliant with highest emissions (due to worst LOS)	NAAQS compliant with lower emissions due to improved LOS	NAAQS compliant with lower emissions due to improved LOS	NAAQS compliant with lower emissions due to improved LOS	NAAQS compliant with lower emissions due to improved LOS	NAAQS compliant with lower emissions due to improved LOS
Hazardous Materials	No impact	14 sites	9 sites	9 sites	12 sites	12 sites
Construction	None	Temporary impacts include increased noise, mobile source emissions, fugitive dust, soil erosion, construction easements, traffic delays	Same as Preferred Alternative	Same as Preferred Alternative	Same as Preferred Alternative	Same as Preferred Alternative

Mitigation Summary for the Preferred Alternative

Mitigation of Travel/Access Impacts

Consultation with affected property owners would occur prior to completion of final design to minimize impacts to business operations. Provision of a reconstructed and upgraded roadway under any of the build alternatives would result in positive impacts of improved access for all area residents, businesses, travelers and truckers, who rely heavily on US 87. These improvements would not be provided under the No-Build Alternative

Mitigation of Pedestrian and Bicycle Impacts

None of the project's five build alternatives have any special features (i.e., sidewalks or paths) for pedestrian/bicycle use. However, the proposed wider shoulders (2.4 m [8 ft]) would accommodate pedestrians and bicyclists, because they meet the AASHTO *Guide for the Development of Bicycle Facilities* (1999), which recommends a width of 1.2 m (4 ft) for bicycle facilities. Included in the project design are rumble strips. Rumble strips would occupy 0.4 m (1.5 ft) of the shoulders, and leave approximately 1.9 m (6.5ft) available for pedestrian and bicycle use. The wider shoulders would also greatly improve visibility for all users of the facility, including pedestrians and bicyclists. Therefore, safety conditions improve under all of the build alternatives, and they accommodate potential increases (if any) in pedestrian/bicyclist use following completion of the project.

The No-Build Alternative would not improve safety for pedestrians/bicyclists or drivers. Also, it further restricts any increased usage for cyclists and pedestrians.

Mitigation of Parks and Recreation Impacts

No National Land & Water Conservation Fund (NL&WCF) Act - Section 6(f) (16 U.S.C.460) properties have been identified within the vicinity of the proposed project.

Mitigation of Environmental Justice Impacts

Both the No-Build Alternative and the five build alternatives are in accordance with E.O. 12898, and would not create disproportionately high and/or adverse impacts on the health or environment of minority and/or low-income populations. These alternatives also comply with the provisions of Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000(d), as amended) under the FHWA's regulations (23 CFR 200). No mitigation is required.

Mitigation of Right-of-Way Impacts

All lands needed for right-of-way are in private ownership, and would be acquired in accordance with both the *Uniform Relocation Assistance and Real Property Acquisition Act* of 1970 (P.S. 91-646), and the *Uniform Relocation Act Amendments* of 1987 (P.S. 10-17). Compensation for right-of-way acquisitions would be made at "fair market value" for the "highest and best use" of the land.

Mitigation of Farmland Impacts

All alternatives had "Total Site Assessment Points" of less than 160 and, therefore, under the provisions of 7 CFR 658.4(c) part (2), not mitigation is necessary. A copy of the #AD-1006 is

included in Appendix D. BMP's will be used to limit disturbance and control erosion, and to reclaim disturbed vegetation within the construction limits.

Mitigation of Irrigation Impacts

MDT will coordinate the required relocations with affected landowners. There would be no impact to irrigation activities from the build alternatives.

Mitigation of Floodplain Impacts

A Floodplain Permit will be required from the Fergus County Floodplain Administrator. No mitigation is required.

Mitigation of Seeding/Erosion Impacts

MDT will re-establish a permanent desirable vegetation community over all landform surface areas that are disturbed by the construction of the proposed project. This action will be in accordance with **7-22-2152** and **60-2-208**, M.C.A., and a set of revegetation guidelines will be developed by MDT that must be followed by the contractor. These specifications will include instructions on seeding methods, dates, mix components, and the types and amounts of mulch and fertilizer. Seed mixes include a variety of species to assure that areas disturbed by construction will be stabilized by vegetative cover. Vegetation disturbances outside the construction limits of the project will be avoided, minimized, and reclaimed with desirable and beneficial plant species as determined by the MDT reclamation specialist.

Appropriate measures will be taken to prevent the spread of noxious weeds, which can occur during construction. MCT will follow the guidelines and recommendations included within the *Statewide Integrated Weed Management Plan 2003-2008*. In addition, MDT will work closely with the Fergus County Weed Board to assure long term compliance with the Fergus County Weed Management Plan.

MDT will comply with all other measures in the Fergus County Noxious Weed Management Plan.

Mitigation of Water Quality Impacts

Mitigation of storm water and erosion impacts to water quality will be achieved through engineering controls, such as grading, revegetation, design of culverts/ditches, placement of silt fences, and various Best Management Practices (BMPs). Any of the alternatives will require a Storm Water Pollution Prevention Plan (SWPPP) and field monitoring/oversight to ensure that impacts to water quality due to construction along any of the proposed alternative alignments is minimal. Acid mine drainage is anticipated, but will be minimal and potential impacts related to potential acid mine drainage could be eliminated or alleviated by engineering design.

Mitigation of Wetland Impacts

The Preferred Alternative consists of those alignment alternatives with the least wetland impacts, and efforts have been made to avoid and/or minimize impacts to high quality wetlands throughout the corridor by reducing construction limits from the standard 6:1 to 4:1 fill slopes in areas with Category I and II wetlands. Mitigation opportunities to compensate for potential wetland impacts along the proposed US 87 project corridor have been investigated. The best

opportunities to create, restore, or enhance wetlands occurs in the floodplain of North Fork McDonald Creek and, to a lesser extent, at Alkali Creek. A dam constructed across the floodplain of North Fork McDonald Creek at the confluence with Alkali Creek has backed up water and inundated the floodplain. Opportunities to mitigate wetland impacts include impounding tributaries to Alkali Creek and the North Fork McDonald Creek and side channels of both drainages, and by enlarging existing wetlands by excavating the surrounding upland habitats. More specific details of mitigation opportunities along the project corridor are still being investigated.

Mitigation of Threatened and Endangered Species Impacts

No mitigation/coordination measures are required for the black-footed ferret, mountain plover, or black-tailed prairie dog based on lack of suitable habitat and no known occurrences of the species within the project corridor.

Based on known occurrences of migrating and transient bald eagles using suitable habitat within the corridor, the following mitigation/coordination measure is required:

- Any power lines that are relocated as a result of the project will be raptor-proofed in accordance with MDT policy.

Mitigation of Terrestrial Resource Impacts

The following mitigation/coordination measures will be followed to prevent the destruction of occupied swallow nests, eggs or nestlings.

- To protect Cliff Swallow and Barn Swallows nesting at the 16 timber bridges in the project corridor, one of the following will occur: the bridges will be removed during the non-nesting season (September 1 to March 15); or, if the bridges can not be removed during the non-nesting season, existing nests will be removed and fine mesh netting, chicken wire fencing, or other suitable material to prevent birds from establishing new nests (as approved by the USFWS) will be placed on the underside of the bridge decking during the non-nesting season (September 1 to March 15). The netting will be maintained throughout the nesting season, or until the structures can be removed.
- To protect a nesting Red-tailed Hawk at approximately RP 83.3, one of the following will occur: the nest tree will be removed during the non-nesting season (August 1 to March 15); or a temporal and spatial restriction will be in place from April 1 to August 1 for all ground disturbance activities within 0.40 km (0.25 mi) of the nest tree. USFWS will determine what permit(s) are necessary to remove the nest tree.

Mitigation of Aquatic Resource Impacts

Because some in-stream work would be necessary, the following conservation measures will be implemented to minimize temporary impacts to aquatic resources:

- Adhere to guidelines established in MDT's Highway Construction Standard SWPPP.

- Sediment controls for drainage from topsoil, staging areas, channel changes and instream excavations will be provided.
- Streambeds and banks will be reclaimed, where practicable, as close as possible to their pre-disturbed conditions and elevations.
- Disturbed wetland and streamside areas will be revegetated with desirable and beneficial plant species as determined by the MDT reclamation specialist at the earliest practicable date.
- The use of BMPs will be utilized to reduce or minimize the increase in sediment loads from entering wetland and stream habitats.
- Removed culverts and other items will be stockpiled according to permit conditions.
- Use of fertilizers, hydrofertilizers, or hydromulching near any stream, intermittent drainage, or wetland will be restricted according to permit conditions.
- Staging and storing areas will be located according to permit conditions.

Mitigation of Species of Concern Impacts

Two measures that will be utilized to mitigate impacts to species of concern:

- All vegetation disturbances outside the construction limits of the project will be avoided and minimized where practicable and reclaimed with desirable and beneficial plant species as determined by the MDT reclamation specialist.
- Unavoidable impacts to jurisdictional wetlands will be mitigated in the project corridor or in the same watershed to reduce and replace lost functions and values, including the loss of possible foraging, roosting, and nesting habitat.

Mitigation of Cultural/Archaeological Resource Impacts

Techniques used to mitigate impacts to historic/archaeological resources will be developed in coordination with the State Historic Preservation Office. If required, "Memoranda of Agreement" between FHWA, MDT, and SHPO will be developed to ensure impacts are mitigated whenever practicable. Concurrence has been obtained from SHPO and is documented in their October 31, 2002 letter.

Mitigation of Noise Impacts

No traffic noise impacts are predicted at the receptors due to the Preferred Alignment, and therefore, traffic noise abatement measures do not need to be considered. The increase in traffic noise is not enough to warrant mitigation.

Mitigation of Visual Impacts

All of the proposed build alternatives will require some degree of mitigation for visual impacts. Techniques that will be employed, if practicable, to mitigate the visual impact of typical rock cuts, brush and tree clearing, and bridge abutments include creating natural looking rock cuts

with non-linear edges that have rounded formations resembling adjacent, existing bluffs and outcroppings. Also, brush and trees will be cleared in a manner that would not create a linear woodland edge, but instead provide a random meandering edge.

Other practices that will be utilized for revegetation will include reintroducing desirable plant species, creating pockets in newly graded slopes for plantings, and revegetating in ways that do not result in a linear edge.

Mitigation of Air Quality Impacts

No short-term or long-term negative impacts to air quality are anticipated; therefore, no mitigation measures are required.

Mitigation of Hazardous Materials Impacts

Avoiding contaminated property is the preferred mitigation option; however, this is not always possible. Mitigation measures will include the following: construction methods to protect workers and the public from exposures and to control inadvertent releases of contaminants; and direct appropriate treatment and disposal options for contaminated materials, soil, and ground water. Any hazardous material encountered will be handled by MDT in coordination with DEQ.

Demolition of mine structures and closure/grading of adits, tunnels, shafts and prospect pits may be required to prevent subsidence and limit liability of MDT on acquired properties.

Mitigation of Construction Impacts

Temporary impacts such as noise, air quality, erosion, and fugitive dust, related to construction will use mitigation techniques indicated above for noise, air quality, and seeding/erosion. Mitigation of impacts associated with traffic delays due to construction will be handled by phasing the project in segments and keeping a lane open at all times during construction to maintain traffic flow.

Metric Conversion/Abbreviations and Acronyms

In accordance with recent Executive Orders and Secretary of Commerce direction, Federal Highway Administration and supporting agency plans are presented in metric units. This document, where appropriate, will reflect both English and metric units side by side to assist the reader. The metric unit is shown first, followed by the English unit in parentheses. For example: 13.7 km (8.5 mi). The following shows the conversion factors and units used in this document:

<u>Metric Units</u>	<u>English Units</u>	<u>Conversion Factor</u> (Metric to English)
Centimeter (cm)	inch (in)	0.3937
Meter (m)	foot (ft)	3.2808
Kilometer (km)	mile (mi)	0.6214
Hectare (ha)	acre (ac)	2.471

Abbreviations and Acronyms

±	.....	Approximately
ac	.....	acre(s)
ACHP	.....	Advisory Council on Historic Preservation
BLM	.....	Bureau of Land Management
BMPs	.....	Best Management Practices
BRR	.....	Biological Resource Report
CADD	.....	Computer Aided Design and Drafting
cm	.....	centimeter(s)
COE	.....	U.S. Army Corps of Engineers
DEQ	.....	Department of Environmental Quality
DNRC	.....	Department of Natural Resources and Conservation
EA	.....	Environmental Assessment
EO	.....	Element Occurrence
ESA	.....	Endangered Species Act
FHWA	.....	Federal Highway Administration
ft	.....	foot (feet)
ha	.....	hectare(s)
Hwy	.....	Highway(s)
in	.....	inch(es)
km	.....	kilometers(s)
m	.....	meter(s)
mi	.....	mile(s)
M.C.A.	.....	Montana Code Annotated
MDT	.....	Montana Department of Transportation
MFWP	.....	Montana Fish, Wildlife, and Parks
MNHP	.....	Montana Natural Heritage Program
MPDES	.....	Montana Pollution Discharge Elimination System
MRIS	.....	Montana Rivers Information System
NHS	.....	National Highway System
MOA	.....	Memorandum of Agreement

NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Office
SSURGO	Soil Survey Geographic
SWPPP	Storm Water Pollution Prevention Plan
T/E	Threatened and Endangered
TSM	Transportation System Management
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

List of Technical Reports

1. Lewistown-West Overpass Noise Analysis (Big Sky Acoustics, 2002)
2. Initial Site Assessment Lewistown to Grass Range Environmental Corridor Study (Hyalite Environmental, 2002)
3. Biological Resources Report (BRW, Inc., 2001)
4. A Cultural Resource Inventory of the Proposed Lewistown to Grass Range Environmental Corridor Study Area, Fergus County, Montana (Ethnoscience, Inc., 2002)

*Note: Copies of Technical Reports are available for review from MDT.
Please contact Environmental Services at (406) 444-7228 to request more information.*

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1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 Project Area Description

The proposed action is to reconstruct and widen, and possibly construct a new alignment for, US 87 from east of Lewistown to the junction of US 87 and State Route (SR) 19, north of Grass Range - a distance of 47.5 km (29.5 mi). This segment of roadway is designated as a principal arterial on the National Highway System (NHS).

The current two-lane facility was constructed between the late 1930s and the early 1950s. The segment was overlain in the early 1980s. Most of this segment received a pavement preservation treatment in the year 2000.

The project area terrain ranges from mountainous to fairly level. Near the western terminus, US 87 crosses Boyd and Pike Creeks and is located in generally rolling terrain. Further to the east, the roadway climbs over a mountain pass (known as the Divide) before traversing the rolling-to-level terrain that generally parallels the North Fork of McDonald Creek all the way to the project's eastern terminus. Figure 1 locates the project in the state and Figure 2 shows the project corridor and limits. Adjacent land uses along the corridor include forest land, pasture for grazing, irrigated hayland, and rural homesites.

The roadway is narrow (7.3 m [24 ft] to 8.5 m [28 ft]), with shoulder widths ranging from zero to 0.6 m (2 ft); and has steep cut-and-fill slopes in the western segment, sixteen timber stringer structures, and three chain-up areas. The 16 timber stringer bridges (mostly 8.5 m [28 ft] wide) vary from one to four spans. Also along the project corridor are numerous irrigation crossings.

East and west of the mountain pass along US 87, existing chain-up areas are located at Reference Posts (RP) 93.9 and 86.0, respectively. On the east side of the pass, paved pull-out areas are located on both the north and south sides of the highway, providing for safe chain-up and chain-down activities. The width of the east side pull-out area is similar to that of the west side, but the length is approximately double that of the west side. Actual dimensions for the eastside paved area is 165 m (540 ft) long and 5.8 m (20 ft) wide. On the west side of the pass, an unpaved pull-out area measuring 75 m (246 ft) long and 5.8 m (20 ft) wide is located on the south side of the roadway. This single area provides for passenger vehicles and trucks to chain up prior to encountering the curvilinear alignment and steep grades on the mountain pass. In order for a westbound motorist to chain down on the west side of the divide, however, it is necessary to cross on-coming traffic to enter and exit the pull-out area, which is on the south side of the highway.

Figure 1
General Project Location

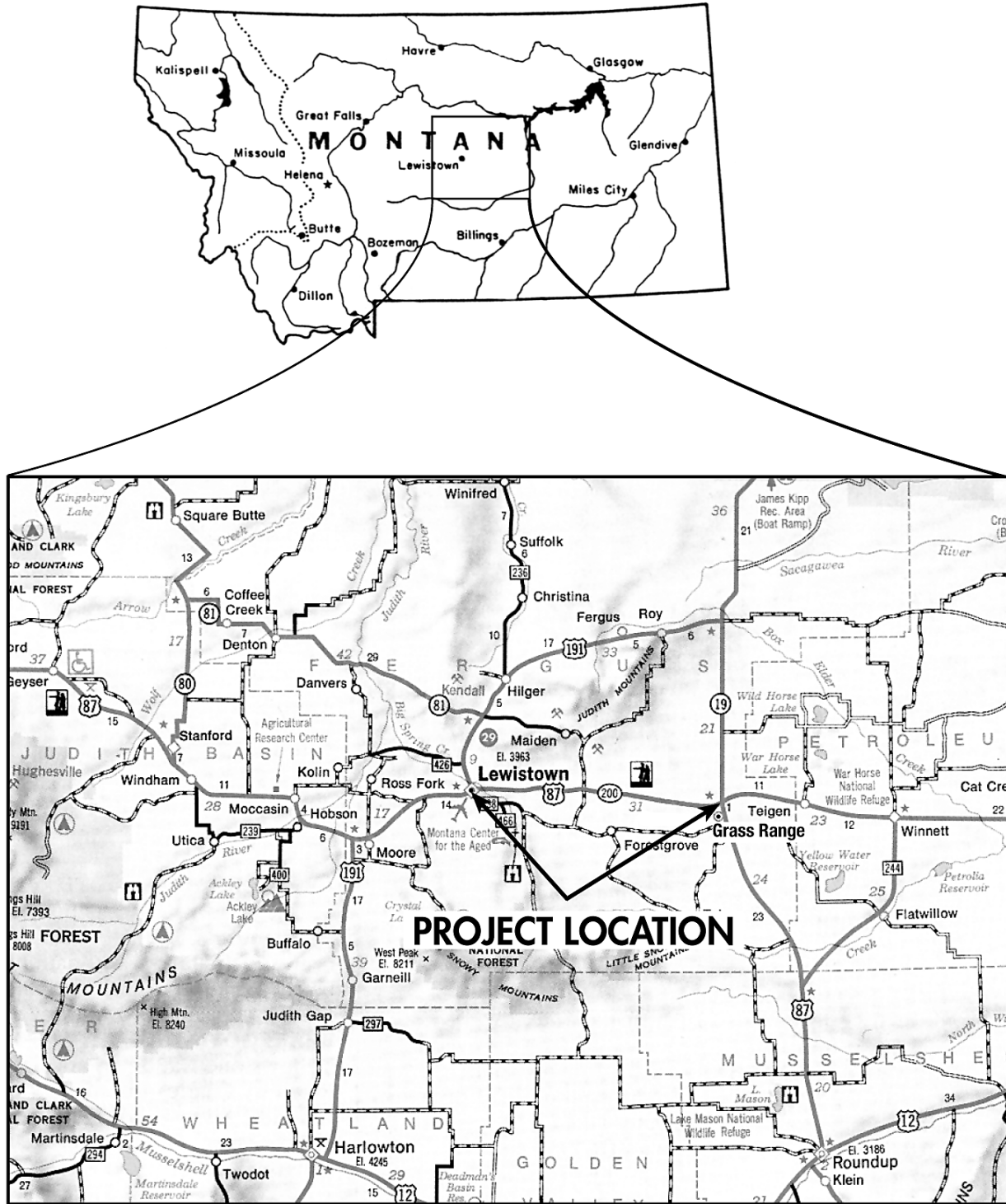
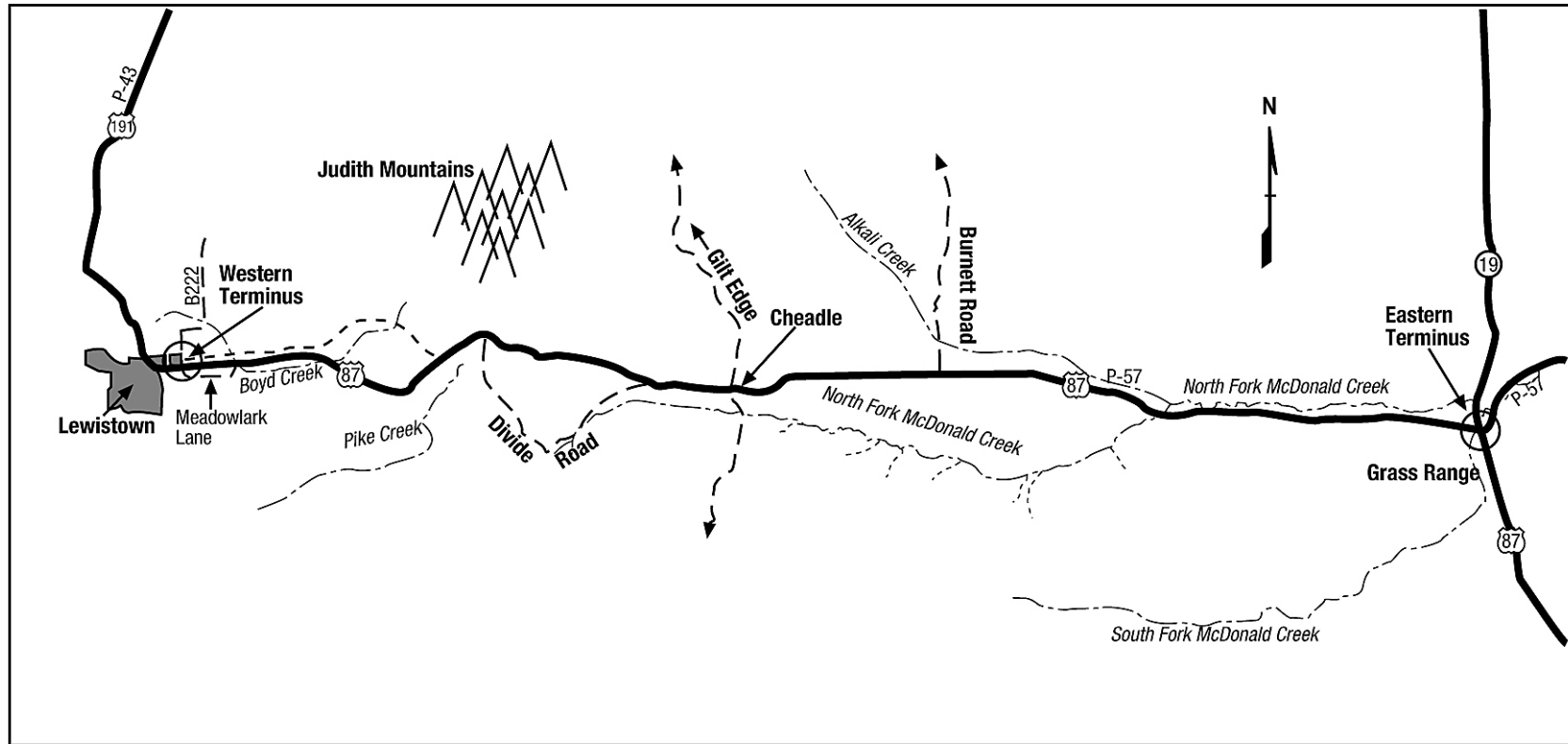


Figure 2
 Project Corridor and Limits



Existing US 87 Corridor

- = Major Highway
- - - = Dirt Road
- · - · = Creeks
- - - - = Old Railroad Grade

1.2 Project Corridor Location

The project corridor is located in central Montana in Fergus County, within the following legal description(s):

Township	Range	Section(s)
15N	18E	11-14
15N	19E	7,8,13-18
15N	20E	7, 13-18
15N	21E	13-18
15N	22E	18-24
15N	23E	19-21

The project begins at the eastern limits of Lewistown at RP 83.2 and proceeds east approximately 47.5 km (29.5 mi) to RP 112.9, the junction of US 87 and SR 19 (north of Grass Range).

1.3 Purpose of the Proposed Action

The purpose of the proposed action is to provide a highway that meets current MDT standards for this type of facility.

Highway 87 is a designated rural principal arterial on Montana's National Highway System (NHS) and, as such, the Route Segment Plan identifies a typical roadway width of 12 m (40 ft). The Route Segment Plan serves as a guide for future roadway improvement projects based on current and projected travel demand. The Plan provides the basis for prioritizing projects and planning future investments to maintain the overall integrity of the state highway system. The MDT NHS standard requires a minimum of two 3.6 m (12 ft) travel lanes and two 2.4 m (8 ft) paved shoulders. The existing road width ranges from 7.3 m to 8.5 m (24 ft to 28 ft). Shoulder widths along the existing alignment are typically 0.0 to 0.6 m (2 ft). Structural crossings, such as bridges and culverts, would require replacement to accommodate the wider roadway width. In addition, approximately 40 percent of the vertical alignment needs improvement in order to bring it up to the current MDT design standard.

Due to the substantial gap between the existing conditions and current standards, a rehabilitation of the existing facility would not be a feasible alternative. Reconstruction of the highway is needed to meet MDT's current standards.

Highway operations and safety can be enhanced by providing an upgraded facility that meets current MDT design standards. This would include straightening of horizontal curves and flattening of vertical curves, providing wider shoulders and bridges, maintaining clear zones where possible that would eliminate the need for guardrails, and improving the roadway surface to better accommodate projected traffic volumes and loads. These types of improvements are proposed to provide a modern highway facility compatible with the surrounding built and natural environments.

1.4 Need for the Proposed Action

The function of an NHS facility is to provide for the safe and efficient movement of people and goods. Current elements of design on US 87 inhibit efficient and safe travel. For example, roadway deficiencies pertaining to sight distance and clear zone compromise safety of travel. With regard to efficiency, the travel speed recommended for this route cannot be reasonably maintained on the existing roadway.

Traffic Use

The existing project corridor had an average daily traffic (ADT) count of 1,410 in year 2001. By design year 2026, the ADT is anticipated to increase 59 percent to an ADT of 2,370 as depicted in Table 1 below.

Table 1
Average Daily Traffic for US 87

Existing (2001)	1,410 ADT
Year of Opening (2006)	1,560 ADT
Design Year (2026)	2,370 ADT
DHV	310
Commercial Truck	14.3%

Source: MDT Transportation Planning Section

US 87 is (and would continue to be) a key truck route. Truck traffic on this road segment is currently about 14 percent of the total traffic volume. This proportion is equal to the national average for a similar type of facility, according to the Transportation Research Board's Highway Capacity Manual (1997 edition). Future estimates of truck use on US 87 indicate that the proportion of truck traffic on the corridor will not change substantially.

Safety Concerns

Poor horizontal and vertical alignments along the existing corridor result in inadequate sight distances, limited passing opportunities, and difficult property access. These alignment issues, combined with the narrow width of the roadway, contribute to safety concerns along the project corridor.

Accident data collected between 1990 and 1999, and highlighted in Table 2, indicate that the accident rates for all vehicles traveling the roadway is about 16 percent higher than the statewide average for a similar facility type. Accident rates for off-road collisions, collisions with objects off the roadway, and icy road conditions are all higher than the statewide average, ranging in variation from nine to eleven percent. The percent of wild animal collisions along the corridor, particularly from RP 92.5 to RP 100.0, is more than double that of the statewide average. For the entire corridor, wild animal collisions are eight percent higher than the statewide average.

Table 2
MDT Accident Summary of Project Corridor (1990 - 1999)

Selected Accident Types	US 87 Study Area	Statewide Average
Off-Road Collisions	52%	32%
Collisions with Objects off the Roadway	35%	14%
Wild Animal Collisions	22%	14%
Icy Road Conditions	29%	18%
Accident Rate or Index	US 87 Study Area	Statewide Average
All Vehicles (acc/mvm)	1.51	1.30
Trucks (acc/mvm)	0.82 ^{1,2}	1.01 ¹
Severity Index	2.21 ³	2.49 ³
Severity Rate	3.34 ⁴	3.11 ⁴

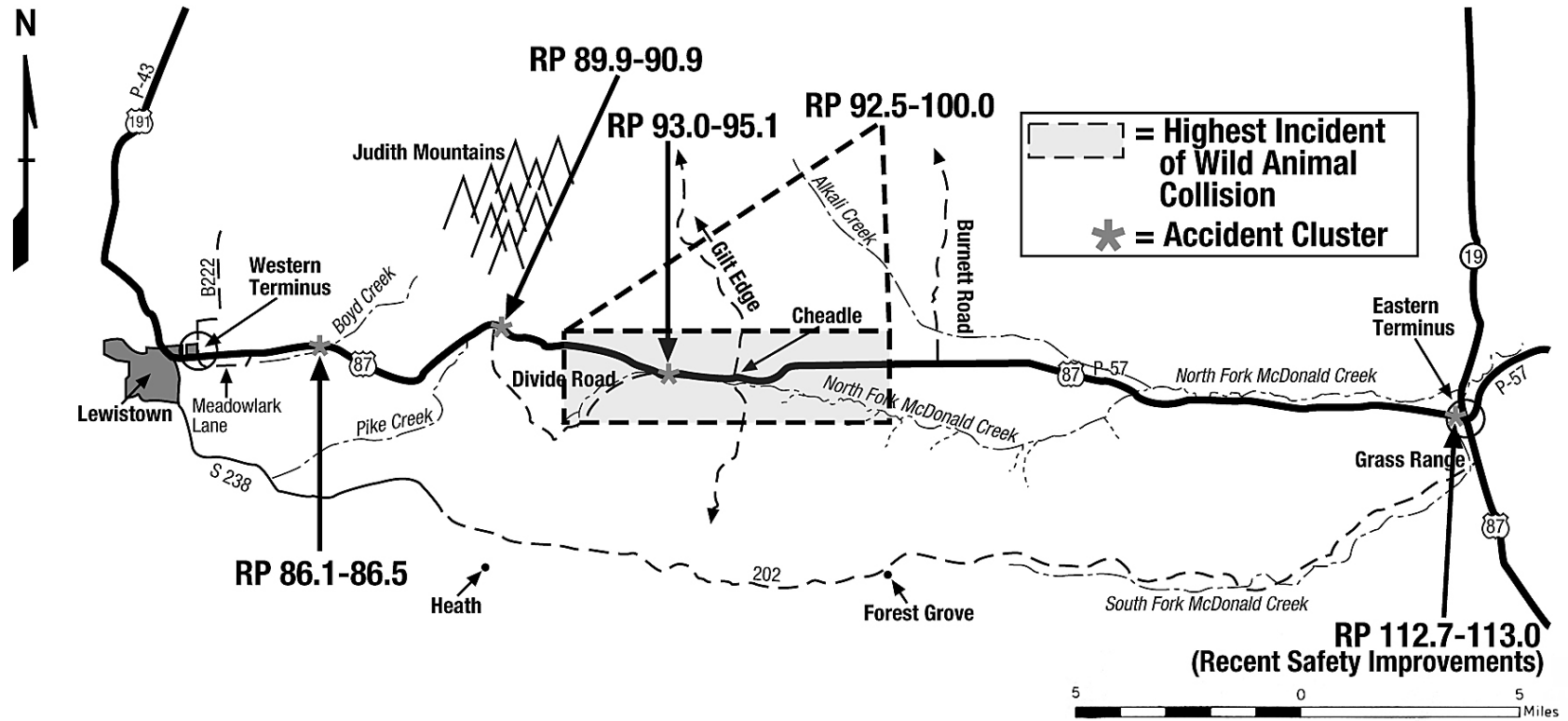
Source: MDT Safety Management Section Memorandum, July 25, 2000.

1. Based on A Study of Large Trucks (MDT, 1995), covering years 1991, 1992, and 1993.
2. Section limits RP 82.056 to RP 112.980, slightly different than for this study.
3. Severity Index = [(8 x Fatal/Incapacitating Accidents)+(3 x Injury Accidents)+(Property Damage Accidents)/(All Accidents)], a weighted average of accident totals by severity.
4. Severity Rate = Accident Rate x Severity Index.

Five accident clusters have been identified on US 87 within the project study area. (Refer to the list below and Figure 3, which displays accident cluster locations.)

- RP 86.1 to 86.5 (Near Lewistown City Limit)
- RP 89.9 to 90.9 (Near Divide Road Intersection, West)
- RP 92.5 to 100.0 (Between Divide Road Intersection, West and Burnett Road)
- RP 93.0 to 95.1 (Near Divide Road Intersection, East)
- RP 112.7 to 113.0 (SH 19 Intersection)

Figure 3
Accident Cluster Map



At public meetings held in Lewistown and Grass Range, specific safety-related concerns that were raised included the following:

- Sharp curves
- Deer strikes
- Poor sight distances at approaches, access points, and chain-up areas
- Limited passing areas
- Poor sight distances for school bus operation
- Conflicts with truck traffic and other vehicles
- Winter shading and icing
- Slow moving agricultural equipment
- Need for acceleration lanes at specific locations to safely merge with faster moving traffic
- Guardrails that limit access and create safety concerns related to agricultural equipment crossing the highway

More specifically, in relation to school bus operation and agricultural equipment, the following information was obtained at the public meetings:

School buses serving Lewistown and Grass Range make 13 stops along US 87. School bus safety issues voiced by local residents relate to poor sight distance for bus stops; limited locations to pass school buses; lack of school bus turnaround areas; and, at one stop, the need for additional parking.

Farm vehicles commonly use this route for local and regional transport of agricultural products and for farm support services. These vehicles range from small tractors and ditch equipment to large combines and cattle trucks. These slow-moving vehicles often cause traffic queues. The larger slow-moving vehicles not only slow traffic, but also contribute to unsafe passing maneuvers.

Guardrails situated along the existing roadway have been noted for limiting access to US 87 and causing safety concerns for farm equipment operators attempting to cross the highway with their equipment.

Roadway Deficiencies

Roadway Geometrics

Approximately 40 percent of the vertical alignment of the project corridor needs improvement in order to meet current NHS standards. Substandard roadway geometry includes the lack of appropriate clear zone and sight distances. Providing standard clear zones along the alignment would eliminate the need for a guardrail in many areas. An examination of the roadway's current vertical alignment shows that several locations exist that have potential sight distance deficiencies. Some of these deficiencies result from the steep grades, which are located mostly on the western portion of the project corridor, or are due to the angle of approach of access roads. In some areas along the corridor, sight distances for passing are limited. Areas identified by the public for poor sight distance include the following:

- The Pamida turnoff;
- Roadway access at Fergus Electric;
- Boyd Creek Road;
- Horseshoe Bend;
- West leg of “Y” at west end of Divide Road;
- Curve at RP 97;
- East of RP 97;
- East of RP 102;
- Burnett Road, southbound to eastbound;
- Sharp curve west of Ayers Ranch Colony;
- MP 106 south side; and
- East of RP 109 - vertical curve.

Structural Deficiencies

The sufficiency rating for a bridge structure is based on its structural adequacy and safety, necessity for public use, serviceability, and functional obsolescence. The rating is used to determine a structure’s adequacy, both with regard to its load-carrying capabilities and its ability to accommodate the volume of traffic the road serves. The ratings are developed by the Federal Highway Administration and are one of the parameters used in allocating federal funding for the Highway Bridge Replacement and Rehabilitation Program. They provide a basis for establishing eligibility and priority for replacing or rehabilitating bridges. In general, the lower the rating (on a scale from 0 to 100), the higher the priority.

Sufficiency ratings for bridge structures along the corridor are provided in Table 3.

**Table 3
 Structural Inventory and Assessment**

Feature Crossed	Structure Type	Location Mile Post	Year Built	Sufficiency Rating	Status
Boyd Creek	3 Span, Timber	84.0	1942	63.1	Not Deficient
Boyd Creek	3 Span, Timber	86.0	1942	57.1	Not Deficient
Drainage/Stockpass	1 Span, Timber	87.0	1942	48.5	Not Applicable
Drainage	2 Span, Timber	95.0	1930	55.6	Not Deficient
Drainage	3 Span, Timber	100.0	1939	54.5	Not Deficient
Drainage	1 Span, Timber	103.0	1939	54.5	Not Deficient
North Fork McDonald Creek	4 Span, Timber	105.0	1939	57.1	Not Deficient
Drainage	4 Span, Timber	106.0	1939	57.1	Not Deficient
Drainage	4 Span, Timber	107.2	1939	57.1	Not Deficient
Irrigation Reservoir	4 Span, Timber	107.6	1939	58.1	Not Deficient
Drainage	3 Span, Timber	109.0	1939	61.1	Not Deficient
Drainage	3 Span, Timber	110.3	1939	59.9	Not Deficient
Drainage	1 Span, Timber	110.5	1939	59.9	Not Applicable
Drainage	3 Span, Timber	110.8	1939	57.1	Not Deficient
Drainage	2 Span, Timber	111.0	1939	57.1	Not Deficient
South Fork McDonald Creek	2 Span, Timber	112.0	1939	57.1	Not Deficient

Source: MDT, 2003

Chain-up Areas

One chain-up area does not comply with MDT standards. The chain-up area (located approximately 4.7 km (3.0 mi) east of Lewistown on the west side of the Divide area) is located between two private accesses and does not have the recommended chain-up area taper lengths. Safety concerns arise when trucks use the chain-up area and vehicles from private drives attempt to access US 87 simultaneously. The storage length does not fall within MDT guidelines for this type of facility. In addition, the chain-up area could potentially pose a safety hazard if westbound trucks decide to use this facility, because it is situated only on the south side of the highway.

2.0 ALTERNATIVES

An extensive public education and involvement process was undertaken to assist in the identification and assessment of a broad range of alternatives, and ultimately to select a Preferred Alternative. The process of alternatives development and evaluation is described below.

2.0 Development of Alternatives and Evaluation Process

A total of ten project alternatives were initially identified in October 2000, based on ideas suggested at public meetings and during policymaker interviews in Lewistown and Grass Range. The ten alternatives included the following:

- A no action alternative;
- A Transportation System Management (TSM) alternative¹;
- Reconstruction of the existing alignment;
- New alignment for the entire corridor:
 - SH 238/CR 202, or
 - Railroad Grade to Heath/CR 202;
- New alignment along the Divide:
 - Phillips Hill RP 88 to East Divide RP 94, or
 - Railroad Grade at Divide
- New alignment from east of Cheadle to the project's eastern terminus north of Grass Range;
- A climbing lane near the Divide area; and
- Passing lanes where appropriate.

The ten alternatives were evaluated using the following four criteria, which are based on the project's Purpose and Need:

- A. Improve safety;
- B. Provide updated design features (consistent with current MDT standards);
- C. Address deficiencies; and
- D. Provide reasonable cost or cost-effective improvements.

As a result of this evaluation, six of the ten initial alternatives were eliminated. The TSM alternative was eliminated because it is not applicable to this project. In addition, it would not improve safety (Criterion A), provide a roadway design that meets NHS standards (Criterion B), or address roadway deficiencies (Criterion C). Three alternatives were eliminated because they would not provide cost-effective improvements (Criterion D). These included the two route alternatives that would have replaced US 87 and the Railroad Grade East of Cheadle Alignment. The Climbing Lane Alternative was eliminated as a stand-alone alternative because it was decided that it could be incorporated into any of the build alternatives. The Passing Lanes Alternative was eliminated because it would not substantially improve safety (Criterion A) or entirely address roadway deficiencies (Criterion C).

¹ The goal of TSM is to coordinate various modes of transportation (automobile, transit, bicycle, pedestrian) to increase efficiency of travel. TSM is most applicable to densely populated areas. For this project, the study area does not have the population to support a TSM alternative.

At the completion of the evaluation process, therefore, three build alternatives and the No-Build Alternative were retained for further evaluation. The three build alternatives were the Existing Alignment, the New Alignment at Divide, and the Railroad Grade at Divide. These alternatives were presented to the public during meetings in February 2001, along with a description of the evaluation process and the reasons for eliminating six of the initial alternatives. Considerable support was expressed at these meetings for retaining the Railroad Grade East of Cheadle Alignment Alternative. For this reason, it was decided to add this alternative back into the group being retained for further analysis, bringing the total to five, including the No-Build Alternative.

At the next round of public meetings, in August 2001, two new alignments were discussed and recommended for inclusion in the EA: an approximate 1.8 m (4 mi) segment running west of Cheadle Road on the railroad grade, and an approximate 0.3 m (1 mi) segment on the ridge that would skirt an area where heavy snow drifting occurs on US 87. These alignments were designated as the Railroad Grade West of Cheadle Alignment Alternative and the Snow Ridge Alignment Alternative. With the inclusion of these two alignments, the number of project alternatives totaled seven, including the No-Build Alternative.

These seven alternatives were analyzed to identify potential impacts associated with their implementation, and the results of this analysis were presented to the public at meetings in Grass Range and Lewistown in March 2002. Strong support for the Existing Alignment Alternative was expressed at both meetings. Some members of the public asked whether several of the alternatives could be combined to improve the Existing Alignment. In particular, it was suggested that adding the Snow Ridge Alignment and the Railroad Grade West of Cheadle to the Existing Alignment would result in a better alternative overall. The project team agreed. The result is a new alignment called the Preferred Alternative.

Figure 4 shows the following four build alternatives: Preferred Alternative, New Alignment at Divide, Railroad Grade at Divide, Railroad Grade East of Cheadle. The four build alternatives and the No-Build Alternative are described in more detail below.

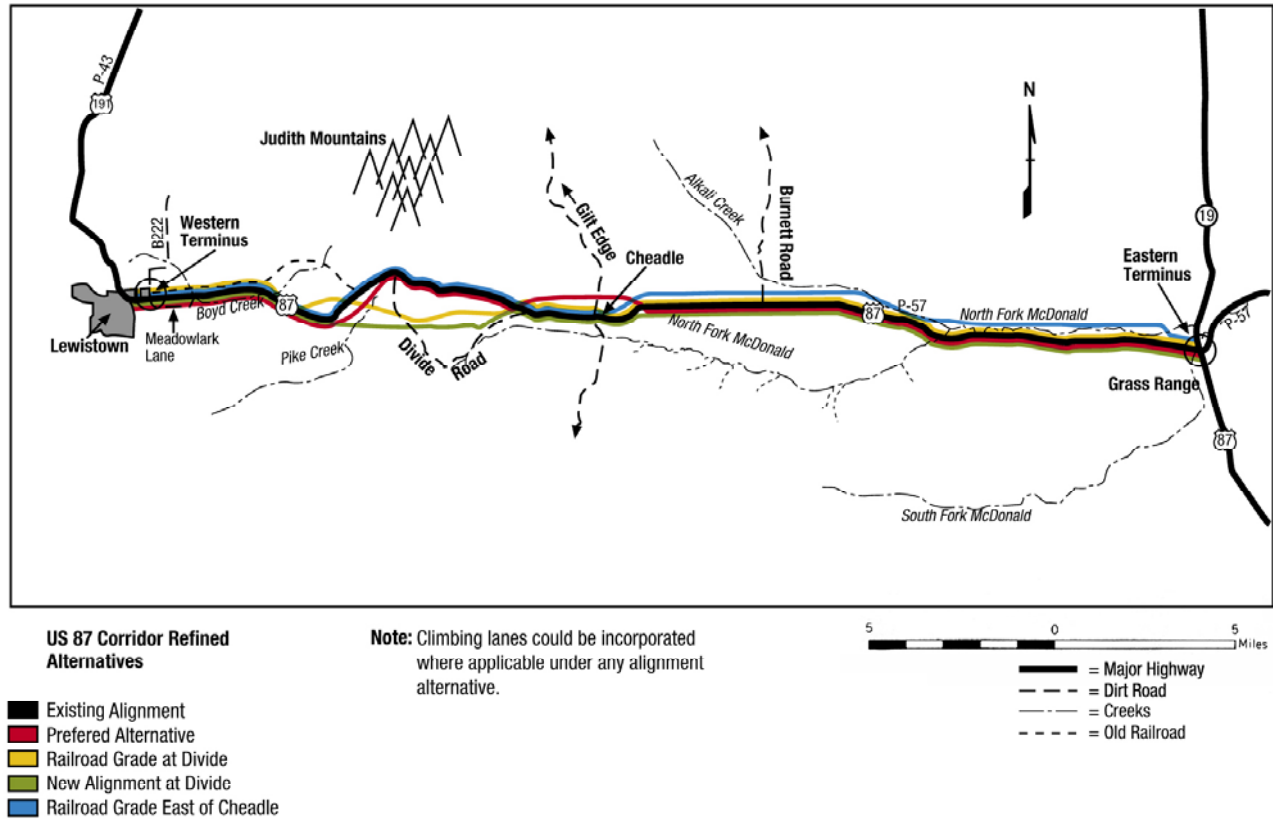
2.2 No-Build

The No-Build Alternative is a non-construction alternative that would maintain the existing conditions along the entire length of the project corridor. The objective of upgrading the US 87 facility as part of the route from Great Falls to Billings would not be met under the No-Build Alternative. Consequently, there would be no safety improvements. The No-Build Alternative would include routine maintenance projects on US 87.

2.3 Preferred Alternative

The western terminus of the Preferred Alternative starts approximately at the intersection of Meadowlark Lane and US 87 at the east city limits of Lewistown at RP 83.2. The eastern terminus of the Preferred Alternative is at the intersection of MT 19 (State Primary Route P-61) at RP 112.9 just north of Grass Range. The total length of the Preferred Alternative is approximately 47.5 km (29.5 mi). The Preferred Alternative includes the Snow Ridge Alignment and the Railroad Grade West of Cheadle Alignment combined with the reconstruction of the existing alignment.

Figure 4: Conceptual Alignment Alternatives



The Preferred Alternative follows the alignment of the existing highway, except for two areas where it departs from this alignment. The first area starts at RP 88.5± (just past the Phillips Hill curve), this alternative runs easterly of and parallel to existing US 87 for about 2.3 km (1.4 mi), terminating at RP 90.0±. This departure from the existing alignment is intended to reduce snow-drift impacts across this segment of roadway.

The second area that departs from the existing highway is approximately 6.2 km (3.8 mi) in length and starts at RP 94.0±. This alternative was developed to minimize impacts to prime farmland. Starting at RP 94.0± the alternative's centerline is a maximum of 750 m (2460± ft) northerly of and parallel to US 87's present route. The railroad grade along this alternative has been abandoned for quite some time. There were no structures or rail placed, but the original grading remains intact. This alternative allows for a more desirable profile in addition to improving the existing horizontal curvature.

There are two typical sections for the Preferred Alternative. Near the city of Lewistown, an urban typical section would be used. For the remainder of the alignment, a rural typical section would be used. For the urban typical section, each direction of travel would consist of one 3.6 m (12 ft) driving lane with a 1.0 m (3 ft) shoulder and a 1.5 m (5 ft) sidewalk. A center, two-way, left-turn lane of 5.0 m (16 ft) would separate each direction of travel. The rural typical section would consist of one 3.6 m (12 ft) driving lane for each direction of travel and paved shoulders of 2.4 m (8 ft). An additional 0.8 m (2.6 ft) will be included in the finished top width to accommodate one overlay project within the 20-year design life of the reconstruction project. A 3.6 m (12 ft) climbing lane is included from RP 86.6 to RP 90.0 and from RP 92.5 to RP 89.5 for a total of approximately 11.3 km (7.0 mi). Figure 5 and Figure 6 illustrate the rural and urban typical section, respectively.

The road would be widened from the centerline of roadway in most cases to minimize right-of-way impacts to each property owner, although in some cases widening may be to the south or north as a result of engineering or environmental factors. All of the existing timber bridges and culverts would be replaced. The cost of this alternative will be approximately \$1.2 million.

2.4 Alternatives Considered but Eliminated

As described previously, several alternatives were explored early in the process and eliminated because they failed to satisfy the basic evaluation criteria. Other alternatives evolved throughout the project development stage and appeared to satisfy the criteria but resulted in more severe social, economic or environmental impacts. The impacts related to each of these alternatives are discussed in detail in Chapter 3. The description of the alternative itself and the reason it was eliminated from final consideration are included in the following discussion.

Reconstruct Existing Alignment

Reconstruction along the centerline of the existing alignment was considered but eliminated because it does not address the current concerns regarding curves and grades. This alternative also impacts two National Register of Historic Places (NRHP) eligible sites, results in extensive cuts at Phillips Hill and West Divide Road, and encroaches on the Boyd Creek floodplain.

Figure 5
 Rural Typical Section

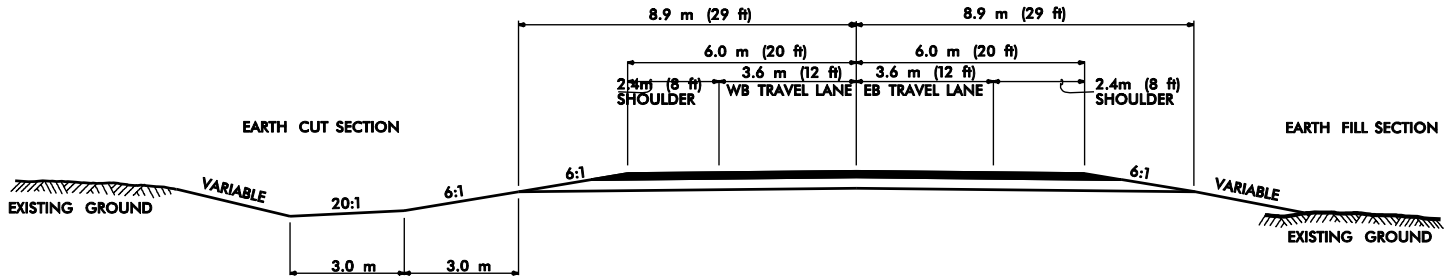
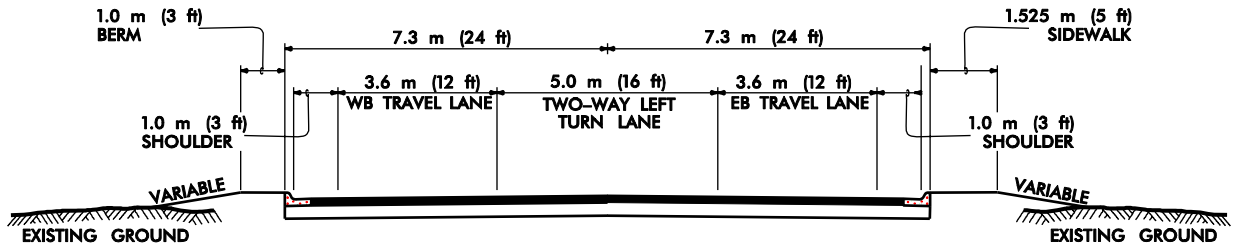


Figure 6
 Urban Typical Section



Note – An additional 0.8 m (2.6 ft) will be included in the finished top width to accommodate on overlay project within the 20-year design life of the reconstruction project.

New Alignment at Divide

The length of the New Alignment at Divide alternative is approximately 10.2 km (6.4 mi). This alternative was developed to improve the curve around Phillips Hill and to provide a southern alternative to the Railroad Grade at Divide Alignment. Starting east of Boyd Creek Road at RP 87.5±, this alternative runs easterly with the centerline a maximum of 1,950 m (6,400± ft) south of and parallel to US 87's present route. This alternative allows for a more even profile, in addition to improving the existing horizontal curvature. The New Alignment at Divide rejoins US 87 at RP 94.5±. The total cost of New Alignment at Divide would be \$1.5 million. The typical section would consist of one 3.6 m (12 ft) driving lane for each direction of travel and paved shoulders of 2.4 m (8 ft). A 3.6 m (12 ft) climbing lane is included where appropriate in the Divide area.

The alternative was eliminated due to the increased erosion and the potential acid mine drainage due to crossing extensive coal outcrop and abandoned coal mine sites. The construction cost and wetland impacts exceed that required for the Preferred Alternative.

Railroad Grade at Divide

The length of the Railroad Grade at Divide Alternative is approximately 11.5 km (7.2 mi). This alternative was developed to eliminate the curve around Phillips Hill and follows the old railroad grade for most of its alignment. Starting just east of Boyd Creek Road at RP 86.5±, this alternative proceeds northerly of US 87's present horizontal alignment to cross US 87 at RP 89.0±, proceeding eastward along the old railroad grade. This railroad grade has been abandoned for quite some time. There were no structures or rail placed, but the original embankment remains intact. This alternative allows for a more desirable grade in addition to improving the existing horizontal curvature. The typical section would consist of one 3.6 m (12 ft) driving lane for each direction of travel and paved shoulders of 2.4 m (8 ft). A 3.6 m (12 ft) climbing lane is included where appropriate in the Divide area. Between RP's 89.0± and 94.5±, this alternative's centerline is a maximum distance of 1,250 m (4,100± ft) from the existing centerline. The total cost of Railroad Grade at Divide would be \$1.6 million.

This alternative was eliminated due to the cost of the alternative compared to all other alternatives, the potential of acid mine drainage due to crossing various coal outcrop and abandoned coal mine sites, and the number of wetlands that would be impacted.

Railroad Grade East of Cheadle

The length of the Railroad Grade East of Cheadle Alignment is approximately 26.5 km (16.5 mi). This alternative was developed to minimize impacts to prime farmland. Starting at RP 96.0± the alternative's centerline is a maximum of 750 m (2,460± ft) northerly of and parallel to US 87's present route. The railroad grade along this alternative has been abandoned for quite some time. There were no structures or rail placed, but the original embankment remains intact. This alternative allows for a more desirable profile. The typical section would consist of one 3.6 m (12 ft) driving lane for each direction of travel and paved shoulders of 2.4 m (8 ft). The alternative returns to existing at RP 112.0±. The total cost of the Railroad Grade East of Cheadle would be \$1.8 million.

The Railroad Grade East of Cheadle Alignment was eliminated due to the substantially higher wetland impacts when compared to all other alternatives.

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3.0 IMPACTS

This section contains information on potential social, economic and environmental resource impacts due to the Build Alternatives. This information was developed in a cooperative effort between federal agencies, MDT and other state agencies, Fergus County officials, and members of the general public.

For the purposes of the impact analyses, the alternatives are defined in a way that makes them more comparable. The Existing Alignment remains the same, but the remaining five alternatives use the Existing Alignment as a base and then incorporate the relevant alternative segment into it. For instance, the New Alignment at Divide alternative follows US 87 from the east city limits of Lewistown to just east of Boyd Creek, where it drops down in the Divide area to run southerly and parallel to US 87 for approximately 10.2 km (6.3 mi). All of the alternatives begin and end in the same place and are differentiated by those segments where they deviate from US 87. This provides that the comparison of wetland impacts or right-of-way impacts, for instance, is done on alternatives that are roughly comparable in length.

3.1 Social

This section includes impacts on the traveling public and/or other users of the existing and proposed transportation facility. It also describes any relocations, displacements of any ethnic minorities (or low-income groups), and/or impacts on community cohesion. Information on existing patterns of household size and education, and characteristics of the local housing stock is presented below in order to provide a context in which to evaluate social impacts.

Demographic Information

According to census data, the total population of Fergus County was 11,893 in year 2000. The population of Lewistown was 5,813, and Grass Range had a population of 149. All three jurisdictions have declined in population since 1990, when their populations were as follows: Fergus County, 12,083; Lewistown, 6,051; and Grass Range, 160.

A breakdown of the population by race indicates that 97.1 percent of the population in Fergus County is white. The percentage of white population in Lewistown and Grass Range is 96.5 and 100 percent, respectively. The representation of individual minority groups in the county and two incorporated communities ranges from 0.1 percent for various Asian populations to 1.4 percent for the American Indian population.

The median age of residents in Fergus County is 42.4 years; the median age in Lewistown and Grass Range is 42.9 and 45.1, respectively. Average household size is 2.3 in Fergus County, 2.8 in Lewistown, and 2.2 in Grass Range.

At the time the 2000 census was taken, 12.6 percent of housing units in Fergus County were vacant. The vacancy rate was 9.6 percent in Lewistown and 16.3 percent in Grass Range. About three-fourths of the housing units in the county were owner-occupied. The proportion of owner-occupied housing units was about two-thirds in Lewistown and three-fourths in Grass Range.

Travel/Access

Impacts

Overall, the proposed action would be an improvement to the public road and bridge system in this area of Fergus County. The horizontal and vertical alignment improvements, along with the provision of wider shoulders, would make travel on the roadway safer as sight distances would be increased and turn-off areas would be available. In addition, inclined approaches and curves along the existing roadway would be flattened and brought up to current standards, also increasing safety and convenience to motorists.

Access control is important in ensuring safe highway operation on US 87, a rural principal arterial. MDT's access control guidelines establish a standard 400 m (0.3 mi) spacing requirement for such roadways. Therefore, wherever feasible, access is consolidated or relocated in accordance with MDT access control guidelines. Consequently, some private access drives and field accesses on US 87 would be modified or relocated for safety reasons, or to conform with existing access control requirements. This kind of consolidation occurs at Meadowlark Lane and Fergus Electric, Boyd Creek Road, West Divide Road, East Divide Road, 1.5 km (0.9 mi) east of East Divide Road (properties owned by Swanson and Boyce), 1.8 km (1.1 mi) west of SR19 (property owned by Griffith) and County Road 237 just north of Grass Range.

Access to fields or private residences, while it may be modified (i.e., lengthened due to the proposed alignment of US 87), would still be provided.

The access changes are not expected to adversely impact existing or future businesses. The businesses that would be affected are listed below, along with the type of planned access improvements.

- The Animal Hospital - grading
- Pamida Discount Center/Ace Hardware - widen
- Al's Mini-Storage - widen
- Fergus Electric Cooperative, Inc. - relocate 60 m to the east, widen
- Lewistown Disposal - grading
- Horizon Veterinary & Horseshoeing Service - grading

Mitigation

Consultation with affected property owners would occur prior to completion of final design to minimize impacts to business operations. Provision of a reconstructed and upgraded roadway under any of the build alternatives would result in positive impacts of improved access for all area residents, businesses, travelers and truckers, who rely heavily on US 87. These improvements would not be provided under the No-Build Alternative.

Pedestrians and Bicyclists

Impacts

Pedestrian/bicyclist traffic in the vicinity of the proposed project is limited and very minor. The nearest source of such traffic is Lewistown, which is located west of the project boundary.

Currently, US 87's comparatively narrow road width, steep inclines, and lack of substantial shoulders tend to restrict pedestrian/bicycle use on the existing roadway. Some use of this type does occur from nearby local residences and sporadic seasonal visitors; however, it is sparse and intermittent.

Mitigation

None of the project's five build alternatives have any special features (i.e., sidewalks or paths) for pedestrian/bicycle use. However, the proposed wider shoulders (2.4 m [8 ft]) would accommodate pedestrians and bicyclists, because they meet the AASHTO *Guide for the Development of Bicycle Facilities* (1999), which recommends a width of 1.2 m (4 ft) for bicycle facilities. Included in the project design are rumble strips. Rumble strips would occupy 0.4 m (1.5 ft) of the shoulders, and leave approximately 1.9 m (6.5ft) available for pedestrian and bicycle use. The wider shoulders would also greatly improve visibility for all users of the facility, including pedestrians and bicyclists. Therefore, safety conditions improve under all of the build alternatives, and they accommodate potential increases (if any) in pedestrian/bicyclist use following completion of the project.

The No-Build Alternative would not improve safety for pedestrians/bicyclists or drivers. Also, it further restricts any increased usage for cyclists and pedestrians.

Parks and Recreation/NL&WCF - Section 6(f) Lands

No National Land & Water Conservation Fund (NL&WCF) Act - Section 6(f) (16 U.S.C.460) properties have been identified within the vicinity of the proposed project. No acquisition of NL&WCF - Section 6(f) properties would occur, and there would be no impacts by the proposed project's build alternatives. The Department of Natural Resource Conservation's (DNRC) February 13, 2002 letter, found in Appendix B, supports these findings.

E.O. 12898/Title VI - Environmental Justice

Title VI of the U.S. Civil Rights Act and E.O. 12898 requires that no minority or, by extension, low-income person shall be disproportionately impacted by any project receiving federal funds. For transportation projects, this means that no particular minority may be disproportionately isolated, displaced, or otherwise subjected to adverse effects.

Impacts

The proposed action would not cause any residential or business displacements, and would not have any substantial impact on the location, distribution, density or growth rate of the area's population. This is a rural area and none of the build alternatives would affect the cohesion of any communities or divide any neighborhoods. Therefore, the proposed action would not adversely impact any ethnic, low income, or other minority groups.

Mitigation

Both the No-Build Alternative and the five build alternatives are in accordance with E.O. 12898, and would not create disproportionately high and/or adverse impacts on the health or environment of minority and/or low-income populations. These alternatives also comply with the provisions of Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000(d), as amended) under the FHWA's regulations (23 CFR 200). No mitigation is required.

3.2 Economic

This section identifies changes in land use (including farmlands), and potential impacts on local/regional economies that could occur under the proposed action.

Land Use/Right-of-Way/Easements

Impacts

The Lewistown to Grass Range corridor is located between the Judith Mountains on the north and the Snowy Mountains on the south.

Lewistown and Grass Range, which provide agricultural support services, are the population centers at each end of the alignment. Land use is a combination of agricultural and rural residential use. The topography is nearly level for 4.8 km (3.0 mi) from Lewistown to Boyd Creek, and there is a mountainous segment for 12.9 km (8 mi) between Boyd Creek and East Divide Road. The last 30.0 km (18.7 mi) of the study area just west of the SR 19 intersection is nearly level, following the North Fork of McDonald Creek.

As noted earlier, the populations of Fergus County, Lewistown and Grass Range have declined since the 1990 census. Neither the No-Build Alternative nor any of the proposed build alternatives would have any substantial impact on the location, distribution, density, or growth rate of the area's population.

Because this area is not currently experiencing, nor is it anticipated to experience, substantial increases in population or employment, and because the proposed improvement to US 87 would essentially maintain the existing roadway very near its existing alignment, it is not anticipated that this proposed action individually or cumulatively, when considered with the other projects, would have any substantial cumulative impacts relating to induced growth and development.

The amount of new/additional right-of-way that would be required to implement the proposed action varies between the five build alternatives. Table 4 shows the total right-of-way requirements, and the estimated cost of right-of-way acquisition, for each alignment. As shown in the table, the Railroad Grade East of Cheadle Alignment would require the most right-of-way - a total of 287.5 ha (710.5 ac) and the Existing Alignment would require the least or 200.9 ha (496.4 ac). The remaining three build alternatives would require right-of-way amounts that are between these two. The total cost of acquiring right-of-way ranges from about \$1.8 million for the Railroad Grade East of Cheadle Alignment, to about \$1.3 million for the Existing Alignment. The cost of right-of-way for the Preferred Alternative was slightly more than the Existing Alignment at approximately \$1.4 million.

Mitigation

All lands needed for right-of-way are in private ownership, and would be acquired in accordance with both the *Uniform Relocation Assistance and Real Property Acquisition Act* of 1970 (P.S. 91-646), and the *Uniform Relocation Act Amendments* of 1987 (P.S. 10-17). Compensation for right-of-way acquisitions would be made at “fair market value” for the “highest and best use” of the land.

Table 4
 Summary of Right-of-Way Requirements

Alignment	Total Hectares	Total Acres
Preferred Alignment	227.1	561.2
Existing Alignment	200.9	496.4
New Alignment at Divide	239.7	592.3
Railroad Grade at Divide	258.0	637.7
Railroad Grade East of Cheadle	287.5	710.5

Source: MDT

No relocations of residences or businesses would be required under the No-Build Alternative or any of the build alternatives.

Farmlands

The majority of land adjacent to US 87 and the proposed alignment alternatives is used for agricultural purposes. The 1981 *Farmland Protection Policy Act* (FPPA) requires that the effects of proposed highway projects be examined before any farmland is acquired. The FPPA uses the Farmland Conversion Impact Rating form (#AD-1006) to assess farmland impacts. This form was used to identify the potential farmland impacts that would be associated with each project alternative. This impact analysis was conducted for the area within the proposed right-of-way. The right-of-way area was inventoried using the Natural Resource Conservation Service (NRCS) Soil Survey Geographic (SSURGO) database for Fergus County.

Impacts

All five build alternatives and the No-Build Alternative were evaluated for farmland impacts, using the Farmland Conversion Impact Rating form.

The FPPA definition of farmlands includes all areas in non-urban use. This does not mean that these lands are currently in crop production, since the definition also includes forested, idle, pasture, open and recreational lands, as well as unpaved roads, rural residences and farm buildings. Impacts were calculated for three types of farmland:

- **Prime Farmland** is land that has the best combination of physical and chemical characteristics for producing agricultural crops with minimum inputs of fuel, fertilizer, pesticides, labor and without intolerable soil erosion.
- **Prime Irrigated Farmland** is additional farmland that would be prime if irrigated.
- **Farmland of Statewide Importance** is farmland that is of statewide or local importance for the production of food, feed, fiber, forage, and oilseed, as determined by the Secretary of Agriculture.

As illustrated in Table 5 the proposed alternatives traverse prime farmland, prime irrigated farmland, and farmland of statewide importance throughout most of the corridor. The location of farmlands is shown in Appendix D.

Table 5
Summary of Farmland Impacts

Alignment	Statewide Importance		Prime Farmland		Prime if Irrigated		Total Farmland Right-of-Way	
	Hectares	(Acres)	Hectares	(Acres)	Hectares	(Acres)	Hectares	(Acres)
Preferred Alternative	36.0	(88.8)	29.0	(71.6)	6.8	(16.7)	71.7	(177.1)
Existing Alignment	49.0	(121.0)	29.0	(71.6)	9.9	(24.4)	87.9	(217.0)
New Alignment at Divide	51.2	(126.6)	28.8	(71.2)	9.9	(24.4)	89.9	(222.2)
Railroad Grade at Divide	43.6	(107.7)	28.6	(70.8)	9.9	(24.4)	82.1	(202.8)
Railroad Grade East of Cheadle	49.5	(122.3)	12.7	(31.4)	6.2	(15.4)	68.4	(169.1)

Source: URS, 2002

Mitigation

All alternatives had “Total Site Assessment Points” of less than 160 and, therefore, under the provisions of 7 CFR 658.4(c) part (2), no mitigation is necessary. A copy of the #AD-1006 is included in Appendix D. BMP’s will be used to limit disturbance and control erosion, and to reclaim disturbed vegetation within the construction limits.

Irrigation

Impacts

There are two irrigation facilities on the Existing Alignment. The first facility is located at MP 180.2 and consists of two 600 mm (23.4 in) corrugated metal pipe culverts with interconnecting channels with headgates located outside of the right-of-way. The second facility is located at the eastern terminus of the project, near the intersection of US 87 and P-61 at MP 113.5. This facility is a single 1,066 mm (41.47 in) cross culvert that extends beyond the right-of-way.

Under the reconstruction of the Existing Alignment alternative, the existing pipes would either be replaced or would extend beyond the new right-of-way. If replaced, the new irrigation pipe would have to meet the 150-year design life requirements of MDT.

Mitigation

MDT would coordinate with ditch owners during construction. There would be no impact on irrigation activities from any of the build alternatives.

Local/Regional Economics

Impacts

The proposed project would not have any direct long-term adverse or beneficial effects on the local or regional economies. The improvements would not substantially increase roadway capacity because it would remain a two-lane facility. In addition, by keeping the roadway open during construction, and phasing construction along the corridor, only minor disruptions to business, residential and tourist traffic are anticipated. Likewise, impacts on the local and regional economies from the No-Build Alternative would be negligible.

Mitigation

No mitigation required.

Construction Costs

Table 6 below indicates the cost estimates for construction by alternative. As the table indicates, the Existing and the East of Cheadle alignments are the most cost effective alternatives, while the Railroad Grade at Divide Alignment is the least cost efficient. The Preferred Alternative is one of the more cost efficient options retained for evaluation.

**Table 6
 Construction Cost Comparison by Alternative**

Alignment Alternative	Construction Cost*
Preferred Alternative	\$50,200,000
Existing Alignment	\$47,900,000
New Alignment at Divide	\$59,500,000
Railroad Grade at Divide	\$66,800,000
East of Cheadle Alignment	\$47,900,000

Source: URS/BRW 2002

* Estimates do not include costs for asphalt removal on the abandoned roadway.

3.3 Environmental

This section describes the biological, historic/cultural, and hazardous waste impacts from the proposed action, and mitigation as appropriate for impacts.

Floodplains (E.O. 11988)

In accordance with Executive Order 11988 (Flood Plain Management), FHWA requires the evaluation of the proposed project to determine if any of its alternatives encroach on the “base” floodplain (23 CFR 650, Subpart A). The “base” floodplain is defined as the area covered by water from a 100-year flood. The 100-year flood event has a one percent chance of occurring on any day within a given year.

From the western terminus of the project at RP 83.2 to the second Boyd Creek crossing at RP 86.0, the project corridor is within the Boyd Creek Floodplain. The floodplain was delineated by the Federal Emergency Management Agency (FEMA) on Community Panel Numbers 300019 1834 B, 1853 B and 1854 B. The main channel of Boyd Creek was delineated by detailed methods, signifying that the creek has been hydraulically modeled and that 100-year water surface elevations have been assigned incrementally along the floodplain boundary. Any transverse or lateral encroachment upon this floodplain would be limited to a maximum water

surface elevation increase of 15.2 cm (6.0 in) above the published water surface elevations. The floodplain is administered by Fergus County and a permit would be required for any work that impacts the floodplain.

Impacts

The base floodplain of Boyd Creek would only be affected by the Reconstruct Existing Alignment alternative. This alternative involves minor widening of the roadway and embankment slopes along the existing corridor of US 87. This alignment would transversely encroach the floodplain at the existing bridge crossings at RP 84.1 and 86.0. Longitudinally, the floodplain would be encroached upon for approximately 880 m (2,886 ft) on the south side of the roadway, between the two bridge crossings.

A hydraulic water surface analysis would be required for both bridge crossings and the longitudinal embankment expansion for this alternative, in order to obtain a floodplain permit from Fergus County and to be in compliance with E.O. 11988.

Under the No-Build Alternative, the lateral and transverse encroachments to the floodplains associated with Boyd Creek would remain. Flooding problems resulting in over bank flow near the Boyd Creek bridge crossing at RP 84.1 would continue.

Mitigation

A Floodplain Permit will be required from the Fergus County Floodplain Administrator. No mitigation is required.

Seeding/Erosion

Impacts

Construction of any of the proposed build alternatives would cause temporary soil surface disturbances and create the potential for erosion of disturbed areas and the growth of unwanted weeds. The No-Build Alternative would not cause these potential impacts, because it would not involve construction.

Of the 23 plants designated as noxious weeds in Montana (Categories 1-3), 12 have been identified in Fergus County and include: Canada Thistle, Common Tansy, Dalmatian Toadflax, Diffuse Knapweed, Field Bindweed, Hoary Cress, Houndstongue, Leafy Spurge, Russian Knapweed, Spotted Knapweed, Sulfur Cinquefoil, and Tall Buttercup (Invaders Database System (IDS) 2001). Of the 12 noxious weeds identified in Fergus County, five were identified during the field surveys of the project corridor and include: Leafy Spurge (Category 1), Canada Thistle (Category 1), Houndstongue (Category 1), Field Bindweed (Category 1), and Spotted Knapweed (Category 1). The Montana Department of Agriculture defines Category 1 noxious weeds as weeds that are currently established and generally widespread in many counties of the state. The Leafy Spurge primarily occurred at the east and west ends of the project near the cutoff road to Grass Range and the city limits of Lewistown, although it was observed in less coverage at scattered locations throughout the existing and proposed alignments. The other species were observed throughout the existing and proposed alignments. Canada Thistle was observed in the majority of the wetland areas.

Mitigation

MDT will re-establish a permanent desirable vegetation community, where practicable, over all landform surface areas that are disturbed by the construction of the proposed project. This action will be in accordance with 7-22-2152 and 60-2-208, M.C.A., and a set of revegetation guidelines will be developed by MDT that must be followed by the Contractor. These specifications will include instructions on seeding methods, dates, mix components, and the types and amounts of mulch and fertilizer. Seed mixes include a variety of species to assure that areas disturbed by construction are stabilized by vegetative cover. Vegetation disturbances outside the construction limits of the project will be avoided and minimized where practicable and reclaimed with desirable and beneficial plant species as determined by the MDT Reclamation specialist.

Appropriate measures will be taken to prevent the spread of noxious weeds, which can occur during construction. MDT will follow the guidelines and recommendations included within the *Statewide Integrated Weed Management Plan 2003-2008*. In addition, MDT will work closely with the Fergus County Weed Board to assure long term compliance with the Fergus County Weed Management Plan.

MDT will comply with all other measures in the Fergus County Noxious Weed Management Plan.

Water Quality

Impacts

In general, there would be an increase in the total surface area of paved road related to widening and reconstruction under all build alternatives. This increase in total road surface area decreases the overall permeability of substrate and increases the rate and quantity of surface water runoff from the roadway. The increased surface water runoff has increased potential for erosion, transport of dissolved and particulate contaminants, and for sedimentation.

The quality of runoff from roadways is impacted by vehicle-related contaminants, such as motor oil, grease and tire rubber. In addition, surface water runoff is impacted by herbicides and pesticides that may be used in landscaped or maintained areas along the highway.

The Preferred Alternative would likely improve water quality relative to existing conditions. More rigorous standards would be met (e.g. with respect to grade, surface water runoff controls, sedimentation and erosion control), and impacts to surface water quality due to erosion and siltation would be reduced. In addition, this alternative moves the roadway further from the floodplain and associated wetlands of the North Fork McDonald Creek for a short extent. Acid mine (or acid rock) drainage is anticipated, but will be minimal and potential impacts related to potential acid mine drainage could be eliminated or alleviated by engineering design.

Reconstruction of US 87 on the Existing Alignment would likely improve water quality relative to current conditions. The reconstructed roadway would meet more rigorous standards (e.g. with respect to grade, surface water runoff controls, sedimentation and erosion control), and reduce impacts to surface water quality due to erosion and siltation. This alternative does not move the roadway away from the floodplain and associated wetlands and creates more of an impact than the Preferred Alternative.

The New Alignment at Divide also has greater potential for acid mine drainage impacts to surface water quality than the Preferred Alternative. However, the potential for acid mine drainage is not as great for the New Alignment at Divide as it is for the Railroad Grade at Divide Alignment, because it does not cross as large an extent of coal outcroppings nor as many abandoned coal mine features. Again, the potential impacts related to potential acid mine drainage could be eliminated or alleviated by engineering design.

The Railroad Grade at Divide Alignment would encounter two conditions that could potentially impact water quality. The impacts would be greater than the Preferred Alternative impacts. The first is that the alignment passes through gullied and steeply dissected rangeland between approximately RP 87.0 and RP 87.6. This dry, steep terrain would be very susceptible to increased erosion due to disturbances. The second condition encountered by this proposed alignment is increased exposure to coal mining features and coal outcrops, with a greater potential for water quality degradation due to acid mine drainage. Either of these potential impacts could be reduced, eliminated or alleviated by appropriate engineering design.

The proposed alignment for the Railroad Grade East of Cheadle Alignment would impact a substantially larger amount of floodplains of both Alkali Creek and the North Fork McDonald Creek than the Preferred Alternative. The intrusion of the roadway into the floodplain inhibits the natural meandering of the stream and the water quality functioning of the associated floodplain and wetlands. Therefore, this alternative would likely have greater impacts to water quality in these streams than the Preferred Alignment alternative.

Mitigation

There are two primary potential impacts to water quality related to the proposed build alternatives: increased sedimentation and erosion; and acid mine drainage.

Storm Water and Erosion. Each of the proposed build alternatives may impact water quality through storm water runoff and erosion. Mitigation of these impacts is achieved through engineering controls, such as grading, revegetation, design of culverts/ditches, placement of silt fences, and various BMPs. Any of the alternatives will require a SWPPP and field monitoring/oversight to ensure that impacts to water quality due to construction along any of the proposed alternative alignments is minimal.

Acid Rock Drainage. If waste rock piles are encountered during construction, there are three primary methods to control any resulting acid mine(or rock) drainage: source control, pathway interruption, or collection/treatment of contaminated media.

Source control of acid mine drainage must eliminate one of four factors: sulfide substrate, water, oxygen, or the bacteria that catalyze the reaction. To eliminate the critical amount of sulfide substrate, acid generating rocks are often mixed with non-acid generating materials – an effective "dilution" solution. Alternative methods of removing the sulfide substrate involve excavation and processing of the wastes, by physical and chemical methods. Exclusion of water may be achieved by burial and cover/seals/caps/or grout to reduce water (and air) infiltration. Soil cover and revegetation may be sufficient to change the water balance of the soils by vegetative uptake, effectively eliminating net infiltration. Exclusion of oxygen is achieved by burial (often with

reduced materials, such as compost or municipal wastewater treatment sludge) or flooding (subaqueous closure). Unfortunately, sulfate-reducing bacteria are hardy and relatively ubiquitous, so that eliminating the catalyzing bacteria is difficult. Areas with year-round cold temperatures may rely on cold to eliminate catalysis of the reaction by bacteria, but in moderate climates bactericides are required to eliminate the bacterial reaction, and this has been found to have only short-term effectiveness.

The most common pathway interruption method of controlling acid rock drainage is to "lime" the acid-generating materials. By mixing in an alkaline material, the acidic pore waters are buffered, interrupting the transport of acidic solutions and dissolved metals. Alternatively, capping and revegetation, as mentioned previously, may either eliminate water to the sulfide substrate or reduce/control pore water movement. Alternative methods of controlling ground water infiltration and transport include interception trenches, impermeable caps, and several of the other methods that were mentioned previously as techniques for reducing initial water contact with the acid-generating materials to preclude acid generation.

The third method of mitigation for acid rock drainage is collection and treatment of the contaminated media. There are numerous active water treatment systems that may be employed for treatment of acid rock drainage. Most of the active methods require settling ponds, addition of a reagent to cause precipitation of metal sulfides, and removal of the precipitated sludge. Passive collection and treatment methods include constructed wetlands and anoxic lime drains. However, even the passive methods require monitoring and maintenance.

The Huntingdon study (1999) was carried out for DEQ for acid mine drainage in the vicinity of the Sharp/Skaggs mines, east of Divide Road, just south of the existing alignment of Highway 87. This study investigated the causes of low pH (acidity) and high metals concentrations in the surface water and stream sediments in that vicinity. The study determined that the coal seam in the Morrison Formation acts as a regional aquifer. The abandoned underground coal mineworkings were acting as ground water conduits and adits, despite previous reclamation, as discharge points for acid mine drainage. This study maybe be used as a starting point for considering mitigation measures for acid rock drainage that is directly related to underground mine workings; it may not be as applicable to acid-generating waste rock piles.

The acid rock drainage mitigation measures identified in the Huntingdon study include the following:

1. Flood the mine workings by sealing mine adits or constructing dams;
2. Backfill the mine workings with alkaline materials;
3. Install a pump-back system to return acid discharge to the mine workings;
4. Construct an anoxic limestone drain; and
5. Construct a chemical treatment facility.

The standard "rule of thumb" engineering controls used in the field for waste rock dumps at mines and in mining areas are primarily liming and burial. Site-specific investigation would be required to determine if this is the most cost-effective solution for waste rock piles encountered by the proposed alternative roadway alignments.

Wetlands (E.O. 11990)

Regulatory Setting

Wetlands are regulated by Section 404 of the Clean Water Act, Executive Order (EO) 11990 (“Protection of Wetlands”), and EO 11998 (“Floodplain Management”). EO 11998 requires federal agencies to take floodplain management into account when formulating or evaluating any water and land use plans. The U.S. Army Corps of Engineers (CoE) is the primary regulating agency in Montana. Under both the CoE and EPA regulations (33 CFR 328.3 and the 40 CFR 230.0), the term “wetlands” means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

According to the CoE, “Waters of the United States” include those waters defined in 33 CFR 328.318. The lateral limits of jurisdiction in those waters may be divided into three tidal waters, and non-tidal waters. See 33 CFR 328.4 (a), (b), and (c) for a detailed definition of “Waters of the United States.”

Work permitted by the state in natural streams is covered under the Corp’s general Section 404 permit. DEQ also reviews potential impacts through their Section 401 water quality certification process. Through this process, DEQ will either waive Section 401 water quality certification, certify without conditions, certify with conditions, or they will deny Section 401 water quality certification. Alternations to natural stream channels are regulated by MFWP through the 124SPA permit process.

The wetlands were assessed for 12 wetland function and value variables and assigned one of four MDT Category Ratings:

- **Category I** – Exceptionally high quality;
- **Category II** – More common than Category I, providing good quality habitat for sensitive plants or animals, function at very high levels for fish/wildlife habitat or are unique in a given region;
- **Category III** – More common, generally less diverse, and often smaller and more isolated than Category I and II wetlands; and
- **Category IV** – Generally small, isolated and lack vegetative diversity.

Impacts

Wetland areas and impacts were calculated within the project corridor [defined as 30.5 m (100.0± ft)] on either side of the existing roadway centerline, and proposed new roadway centerlines for the various alignment alternatives. Figure 7 illustrates approximate wetland locations associated with the proposed alignment alternatives. Note that no Category I impacts would occur under any of the build alternatives. See Table 7 below for a summary of wetland impacts by alternative. Table 8 outlines the individual wetlands that are illustrated in Figure 7. The wetland areas that are likely to be non-jurisdictional are noted with an asterisk.

**Table 7
 Wetland Impacts**

Alternative	Functional Category Rating			Total
	II	III	IV	
Preferred Alternative	1.6 ha (4.0 ac)	1.1 ha (2.8 ac)	0.3 ha (0.7 ac)	3.0 ha (7.5 ac)
Existing Alignment	2.2 ha (5.4 ac)	1.1 ha (2.7 ac)	0.3 ha (0.7 ac)	3.6 ha (8.8 ac)
New Alignment at Divide	3.1 ha (7.7 ac)	1.3 ha (3.3 ac)	0.3 ha (0.8 ac)	4.8 ha (11.8 ac)
Railroad Grade at Divide	5.3 ha (13.2 ac)	2.0 ha (5.0 ac)	0.3 ha (0.7 ac)	7.6 ha (18.9 ac)
Railroad Grade East of Cheadle	16.0 ha (39.6 ac)	5.2 ha (12.7 ac)	0.2 ha (0.5 ac)	21.4 ha (52.8 ac)

**Table 8
 Wetland Data Summary**

Wetland Site #	Wetland Category Assessment Rating	Total delineated wetland area ¹	Approximate Wetland Impact Area ²
Existing Alignment			
1	III	0.04 ha (0.10 ac)	0.00
2a	III	0.06 ha (0.15 ac)	0.04 ha (0.10 ac)
2b	III	0.20 ha (0.49 ac)	0.18 ha (0.44 ac)
3	III	0.04 ha (0.10 ac)	0.03 ha (0.07 ac)
4	III	0.14 ha (0.35 ac)	0.09 ha (0.22 ac)
5a	III	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
5b	III	0.18 ha (0.44 ac)	0.01 ha (0.02 ac)
6	III	0.80 ha (1.98 ac)	0.01 ha (0.02 ac)
7	IV	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
9a	IV	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
9b	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
9c	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
13	IV	0.02 ha (0.05 ac)	0.00
10a	III	0.12 ha (0.30 ac)	0.11 ha (0.27 ac)
11	IV	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
12	III	0.13 ha (0.32 ac)	0.00
14a	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
14b	IV	0.03 ha (0.07 ac)	0.03 ha (0.07 ac)
15a	III	0.03 ha (0.07 ac)	0.03 ha (0.07 ac)
15b	III	0.03 ha (0.07 ac)	0.00
15c	III	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
15d	III	0.04 ha (0.10 ac)	0.03 ha (0.07 ac)
15e	III	0.01 ha (0.02 ac)	0.00
16a	III	0.52 ha (1.28 ac)	0.04 ha (0.10 ac)
16b	III	0.04 ha (0.10 ac)	0.01 ha (0.02 ac)

Table 8 (Continued)
Wetland Data Summary

Wetland Site #	Wetland Category Assessment Rating	Total delineated wetland area ¹	Approximate Wetland Impact Area ²
17a	III	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
17b	III	0.03 ha (0.07 ac)	0.00
18a	III	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
18b	III	0.03 ha (0.07 ac)	0.01 ha (0.02 ac)
19a	III	0.26 ha (0.64 ac)	0.15 ha (0.37 ac)
23	III	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
20a	II	0.55 ha (1.36 ac)	0.17 ha (0.42 ac)
20b	II	0.38 ha (0.94 ac)	0.35 ha (0.86 ac)
21a	III	0.15 ha (0.37 ac)	0.03 ha (0.07 ac)
21b	III	0.27 ha (0.67 ac)	0.01 ha (0.02 ac)
22a	II	0.11 ha (0.27 ac)	0.08 ha (0.20 ac)
22b	II	0.53 ha (1.31 ac)	0.09 ha (0.22 ac)
30	II	0.00 ³	0.00
31	II	0.00 ³	0.00
26a	III	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
26b	III	0.00 ³	0.00
26c	III	0.00 ³	0.00
27a*	IV	0.03 ha (0.07 ac)	0.03 ha (0.07 ac)
27b*	IV	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
27c*	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
27d*	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
27e*	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
27f*	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
27g*	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
28a*	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
28b*	IV	0.03 ha (0.07 ac)	0.03 ha (0.07 ac)
29a	II	0.51 ha (1.26 ac)	0.27 ha (0.67 ac)
29b	II	0.27 ha (0.67 ac)	0.21 ha (0.52 ac)
29c	II	0.03 ha (0.07 ac)	0.01 ha (0.02 ac)
32*	III	0.04 ha (0.10 ac)	0.03 ha (0.07 ac)
33	III	0.12 ha (0.30 ac)	0.09 ha (0.22 ac)
34	II	0.56 ha (1.38 ac)	0.41 ha (1.01 ac)
35	III	0.03 ha (0.07 ac)	0.03 ha (0.07 ac)
36a	II	0.08 ha (0.20 ac)	0.06 ha (0.15 ac)
36b	II	0.06 ha (0.15 ac)	0.04 ha (0.10 ac)
38a	II	0.08 ha (0.20 ac)	0.06 ha (0.15 ac)
38b	II	0.08 ha (0.20 ac)	0.03 ha (0.07 ac)
39*	III	0.04 ha (0.10 ac)	0.01 ha (0.02 ac)
40a	II	0.08 ha (0.20 ac)	0.03 ha (0.07 ac)
40b	II	0.05 ha (0.12 ac)	0.02 ha (0.05 ac)
41	III	0.09 ha (0.22 ac)	0.05 ha (0.12 ac)
43a	II	0.21 ha (0.52 ac)	0.17 ha (0.42 ac)
43b	II	0.08 ha (0.20 ac)	0.05 ha (0.12 ac)
44a	II	0.09 ha (0.22 ac)	0.03 ha (0.07 ac)
44b	II	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
45a	II	0.09 ha (0.22 ac)	0.04 ha (0.10 ac)
45b	II	0.07 ha (0.17 ac)	0.03 ha (0.07 ac)

Table 8 (Continued)
Wetland Data Summary

Wetland Site #	Wetland Category Assessment Rating	Total delineated wetland area ¹	Approximate Wetland Impact Area ²
46*	III	0.04 ha (0.10 ac)	0.03 ha (0.07 ac)
Total		7.78 ha (19.22 ac)	3.56 ha (8.80 ac)
Railroad Grade at Divide			
6	III	0.80 ha (1.98 ac)	0.01 ha (0.02 ac)
13	IV	0.02 ha (0.05 ac)	0.00
9a	IV	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
9b	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
9c	IV	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
10a	III	0.30 ha (0.74 ac)	0.30 ha (0.74 ac)
10b	III	0.03 ha (0.07 ac)	0.02 ha (0.05 ac)
10d	III	0.08 ha (0.20 ac)	0.06 ha (0.15 ac)
10e	III	0.10 ha (0.25 ac)	0.08 ha (0.20 ac)
10f	III	0.00 ³	0.00
10g	III	0.08 ha (0.20 ac)	0.07 ha (0.17 ac)
10h	III	0.00 ³	0.00
54	III	0.01 ha (0.02 ac)	0.01 ha (0.02 ac)
55	III	0.16 ha (0.40 ac)	0.16 ha (0.40 ac)
56	III	0.00 ³	0.00
57	II	0.09 ha (0.22 ac)	0.02 ha (0.05 ac)
58	II	0.14 ha (0.35 ac)	0.08 ha (0.20 ac)
59	II	0.06 ha (0.15 ac)	0.06 ha (0.15 ac)
60	II	0.31 ha (0.77 ac)	0.31 ha (0.77 ac)
61	II	0.23 ha (0.57 ac)	0.23 ha (0.57 ac)
62	II	0.06 ha (0.15 ac)	0.06 ha (0.15 ac)
70	II	2.30 ha (5.68 ac)	2.30 ha (5.68 ac)
63*	IV	0.06 ha (0.15 ac)	0.06 ha (0.15 ac)
64	III	0.20 ha (0.49 ac)	0.20 ha (0.49 ac)
65*	IV	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
66a	III	0.15 ha (0.37 ac)	0.15 ha (0.37 ac)
66b	III	0.00 ³	0.00
67	II	0.10 ha (0.25 ac)	0.10 ha (0.25 ac)
19a	III	0.31 ha (0.77 ac)	0.31 ha (0.77 ac)
19b	III	0.00 ³	0.00
100a	III	0.00 ³	0.00
100b	III	0.07 ha (0.17 ac)	0.07 ha (0.17 ac)
101a	II	0.00 ³	0.00
101b	II	0.14 ha (0.35 ac)	0.14 ha (0.35 ac)
Total		5.86 ha (14.48 ac)	4.86 ha (12.01 ac)
New Alignment at Divide			
12	III	0.13 ha (0.32 ac)	0.00
47	III	0.19 ha (0.47 ac)	0.19 ha (0.47 ac)
48	III	0.06 ha (0.15 ac)	0.06 ha (0.15 ac)
49	IV	0.10 ha (0.25 ac)	0.10 ha (0.25 ac)
50	II	0.51 ha (1.26 ac)	0.51 ha (1.26 ac)
52	III	0.00 ³	0.00

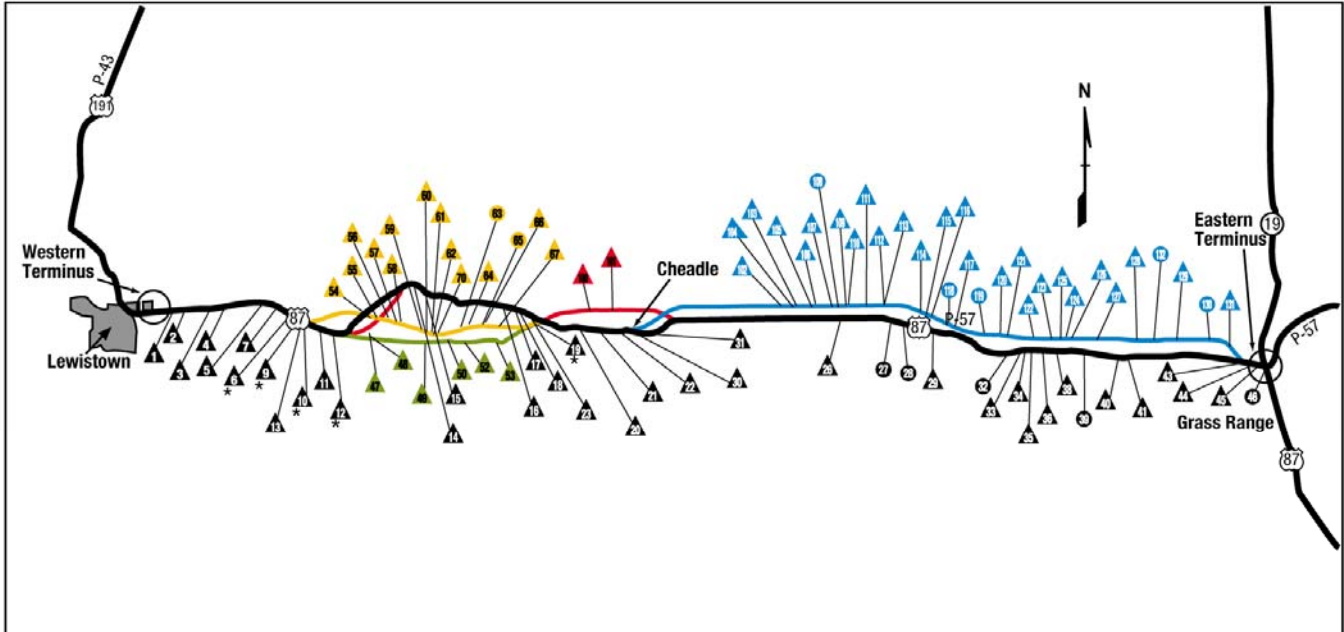
Table 8 (Concluded)
Wetland Data Summary

Wetland Site #	Wetland Category Assessment Rating	Total delineated wetland area ¹	Approximate Wetland Impact Area ²
53	II	0.44 ha (1.09 ac)	0.42 ha (1.04 ac)
19a	III	0.31 ha (0.77 ac)	0.31 ha (0.77 ac)
19b	III	0.00 ³	0.00
Total		1.74 ha (4.30 ac)	1.59 ha (3.93 ac)
Railroad Grade East of Cheadle			
30	II	0.00 ³	0.00
102	II	0.00 ³	0.00
103	II	0.15 ha (0.37 ac)	0.15 ha (0.37 ac)
104	II	0.04 ha (0.10 ac)	0.04 ha (0.10 ac)
105	III	0.02 ha (0.05 ac)	0.02 ha (0.05 ac)
106	II	0.00 ³	0.00
107	II	0.24 ha (0.59 ac)	0.24 ha (0.59 ac)
108*	III	0.36 ha (0.89 ac)	0.36 ha (0.89 ac)
109	II	0.08 ha (0.20 ac)	0.08 ha (0.20 ac)
110	II	0.28 ha (0.69 ac)	0.28 ha (0.69 ac)
111	II	0.06 ha (0.15 ac)	0.06 ha (0.15 ac)
112	II	0.80 ha (1.98 ac)	0.80 ha (1.98 ac)
113	II	1.05 ha (2.59 ac)	1.05 ha (2.59 ac)
114	III	0.12 ha (0.30 ac)	0.12 ha (0.30 ac)
115	III	0.07 ha (0.17 ac)	0.07 ha (0.17 ac)
116	II	0.16 ha (0.40 ac)	0.16 ha (0.40 ac)
17	III	0.09 ha (0.22 ac)	0.09 ha (0.22 ac)
118*	III	0.13 ha (0.32 ac)	0.13 ha (0.32 ac)
119*	III	0.70 ha (1.73 ac)	0.70 ha (1.73 ac)
120	III	1.32 ha (3.26 ac)	1.32 ha (3.26 ac)
121	II	0.20 ha (0.49 ac)	0.20 ha (0.49 ac)
122	IV	0.07 ha (0.17 ac)	0.07 ha (0.17 ac)
123	II	0.19 ha (0.47 ac)	0.19 ha (0.47 ac)
124	II	1.07 ha (2.64 ac)	1.07 ha (2.64 ac)
125	III	0.05 ha (0.12 ac)	0.05 ha (0.12 ac)
126	III	0.04 ha (0.10 ac)	0.04 ha (0.10 ac)
127	II	0.07 ha (0.17 ac)	0.07 ha (0.17 ac)
128	II	3.31 ha (8.18 ac)	3.31 ha (8.18 ac)
129	II	7.15 ha (17.67 ac)	7.15 ha (17.67 ac)
130*	III	1.05 ha (2.59 ac)	1.05 ha (2.59 ac)
131	II	0.14 ha (0.35 ac)	0.14 ha (0.35 ac)
132*	III	0.31 ha (0.77 ac)	0.31 ha (0.77 ac)
Total		19.32 ha (47.74 ac)	19.32 ha (47.74 ±ac)

Note: * indicates that wetland area is likely to be non-jurisdictional.

1. Includes the portion of the wetland within a 30.5 m (100.0±ft) corridor on each side of the existing or proposed roadway centerlines. The total wetland size may be larger.
2. Based on construction limits with 6:1 fill slopes.
3. Wetland is located outside of the 30.5 m (100.0± ft) study corridor investigated on each side of the existing and proposed roadway centerlines.

Figure 7 Wetlands Inventory



US 87 Corridor Refined Alternatives

- Existing Alignment
- Preferred Alternative
- Railroad Grade at Divide
- New Alignment at Divide
- Railroad Grade East of Cheadle
- △ Jurisdictional Wetlands
- Likely to be Non-Jurisdictional Wetlands

NOTE: * Wetland 19 is impacted by the Existing Alignment, Railroad Grade at Divide and the New Alignment at Divide

Wetlands 6,9 and 10 are impacted by the Existing Alignment and the Railroad Grade at Divide

Wetland 12 is impacted by the Existing Alignment and the New Alignment at Divide

— = Major Highway

All of the alternatives follow the Existing Alignment where not otherwise indicated.

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Wetland impacts to 70 delineated wetland areas along the Preferred Alternative would affect 3.0 ha (7.5± ac) based on the preliminary design, with construction limits having standard 6:1 cut and fill slopes. Based on the preliminary design, 1.6 ha (4.0± ac) of Category II, 1.1 ha (2.8± ac) of Category III, and 0.3 ha (0.7± ac) of Category IV wetlands would be impacted.

Wetland impacts to 73 wetland areas along the Existing Alignment would affect 3.6 ha (8.8± ac) based on the preliminary design, with construction limits having standard 6:1 cut and fill slopes. Based on the preliminary design, 2.3 ha (5.4± ac) of Category II, 1.1 ha (2.7± ac) of Category III, and 0.3 ha (0.7± ac) of Category IV wetlands would be impacted.

Wetland impacts to 66 delineated wetland areas along the New Alignment at Divide would affect 4.8 ha (11.8± ac) based on the preliminary design, with construction limits having standard 6:1 cut and fill slopes. Based on the preliminary design, 3.1 ha (7.7± ac) of Category II, 1.3 ha (3.3± ac) of Category III, and 0.3 ha (0.8± ac) of Category IV wetlands would be impacted.

Wetland impacts to 80 delineated wetland areas along the old Railroad Grade at Divide Alignment would affect 7.6 ha (18.9± ac) based on the preliminary design, with construction limits having standard 6:1 cut and fill slopes. Based on the preliminary design, 5.3 ha (13.2± ac) of Category II, 2.0 ha (5.0± ac) of Category III, and 0.3 ha (0.7± ac) of Category IV wetlands would be impacted.

Wetland impacts to 76 delineated wetland areas along the Railroad Grade East of Cheadle Alignment would affect 21.4 ha (52.8± ac) based on the preliminary design, with construction limits having standard 6:1 cut and fill slopes. Based on the preliminary design, 16.0 ha (39.6± ac) of Category II, 5.2 ha (12.7± ac) of Category III, and 0.2 ha (0.5± ac) of Category IV wetlands would be impacted.

No wetland impacts would occur under the No-Build Alternative; therefore, no avoidance/minimization or mitigation would be required.

Wetland Avoidance and Minimization

Wetlands are regulated by Section 404 of the Clean Water Act, Executive Order (E.O.) 11990 (“Protection of Wetlands”), and E.O. 11988 (“Floodplain Management”). E.O. 11988 requires federal agencies to take floodplain management into account when formulating or evaluating land use plans. Compensatory mitigation of wetland impacts in the form of restoration, creation, and enhancement is pursued only after all practicable avoidance and minimization techniques have been exhausted. The proposed avoidance and minimization measures for this proposed project have been developed in accordance with the *Interagency Operating Procedure for the Conservation of Wetland Resources Associated with Transportation Construction Projects in the State of Montana* (Montana Interagency Wetlands Group (IAWG) 1996).

Avoidance of all identified wetland areas in the project corridor was deemed not practicable based on several factors, including the need to design the proposed project to current state and federal highway standards. Opportunities to avoid and minimize impacts with the proposed project corridor were investigated in detail during the preliminary road design analysis for the proposed project. Wetland impacts will be avoided and minimized by designing the preferred

alignment alternative on or adjacent to the existing roadway centerline through the majority of the project, with only necessary or minor adjustments of the horizontal alignment in select areas. Design measures proposed to minimize wetland impacts to high quality wetland areas in the project corridor include reducing the proposed construction limits from the standard 6:1 side slopes to 4:1 side slopes in areas with Category II wetlands. BMPs will be utilized in the wetland areas to minimize impacts from erosion and sedimentation of road fill slopes and other disturbed soils so as to not unnecessarily affect wetlands. These disturbed areas will be stabilized and revegetated following construction.

The No-Build Alternative will fail to meet the needs of the traveling public and, as no practicable alternative exists, the impact of the build alternatives on the identified wetlands will occur in compliance with Executive Order 11990.

Mitigation

The best opportunities to create, restore, or enhance wetlands occurs in the floodplain of North Fork McDonald Creek and, to a lesser extent, at Alkali Creek. A dam constructed across the floodplain of North Fork McDonald Creek at the confluence with Alkali Creek has backed up water and inundated the floodplain. Opportunities to mitigate wetland impacts include impounding tributaries to Alkali Creek and the North Fork McDonald Creek and side channels of the both drainages, and by enlarging existing wetlands by excavating the surrounding upland habitats. MDT and the contractor will comply with 124 SPA, 318, and 404 permitting requirements.

Threatened and Endangered (T&E) Species

Impacts

In accordance with *Section 7 of the Endangered Species Act (16 U.S.C. 1531-1543)*, this project was evaluated to determine the potential effects on plant and animal species listed by the United States Fish and Wildlife Service (USFWS) as threatened, endangered, proposed, or candidate.

According to conversations with Montana Fish, Wildlife and Parks (MFWP) and the Montana Natural Heritage Program (MNHP), no threatened or endangered species have been identified within the project corridor. However, a letter from the USFWS lists the following species that could potentially occupy suitable habitat within the project corridor:

- Bald Eagle (Threatened)
- Black-Footed Ferret (Endangered)
- Mountain Plover (Proposed Threatened)
- Black-Tailed Prairie Dog (Candidate)

Table 9 provides summary information for these species.

**Table 9
 Federally Listed Species Summary**

Common Name	Scientific Name	Status	Known Distribution in Project Area
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened	No known nesting in project corridor. Spring and fall migrants and wintering eagles known to occur in the project corridor.
Black-footed Ferret	<i>Mustela nigripes</i>	Endangered	Not known to occur along the project corridor. Closest habitat associated with prairie dog colonies located approximately 8 to 16 km (5 to 10 mi) north of the project corridor at the east terminus, and 16 to 24 km (10 to 15 mi) northeast and south of Grass Range.
Mountain Plover	<i>Charadrius montanus</i>	Proposed Threatened	Not documented within the project corridor. Closest habitat associated with prairie dog colonies located approximately 8 to 16 km (5 to 10 mi) north of the project corridor at the east terminus, and 16 to 24 km (10 to 15 mi) northeast and south of Grass Range.
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>	Candidate	Not documented within the project corridor. The closest colonies are located approximately 8 to 16 km (5 to 10 mi) north of the project corridor at the east terminus, and 16 to 24 km (10 to 15 mi) northeast and south of Grass Range.

Source: USFWS, 2000

Bald Eagle

According to MFWP, bald eagles would likely occur in the project corridor as spring and fall migrants, and wintering eagles. The closest nesting pair is 14 km (9 ± mi) east of Roundup on the Musselshell River. There are no known nests in the project corridor. No bald eagle sightings were recorded during the field surveys of the project corridor.

Black-Footed Ferret

According to MFWP, the black-footed ferret is not known to occur along the project corridor. Habitat for the black-footed ferret lies to the north and south of the eastern edge of the project corridor where prairie dog colonies are known to exist. The closest prairie dog colonies are located approximately 8 to 16 km (5 to 10 mi) north of the project corridor at the east terminus.

Mountain Plover

According to MFWP, the mountain plover is not known to occur within the corridor. The closest habitat for the mountain plover is associated with prairie dog colonies, which are located approximately 8 to 16 km (5 to 10 mi) north of the project corridor at the east terminus. During the field surveys, no mountain plover or suitable habitat (prairie dog colonies) were observed.

Black-Tailed Prairie Dog

According to MFWP, based on the findings of a 1998 prairie dog study funded by MFWP, no prairie dog colonies were located along the project corridor. The closest prairie dog colonies are located approximately 8 to 16 km (5 to 10 mi) north of the project corridor at the east terminus. No prairie dog colonies were observed during the field surveys of the project corridor.

Impacts

Table 10 presents the determination of effect on the T&E proposed and candidate species identified by USFWS as probably occurring in the corridor.

**Table 10
 Determination of Effect on Threatened and Endangered Species**

Common Name	Scientific Name	Status	Determination of Effect
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened	May Affect, Is Not Likely To Adversely Affect
Black-footed Ferret	<i>Mustela nigripes</i>	Endangered	No Effect
Mountain Plover	<i>Charadrius montanus</i>	Proposed Threatened	No Effect

Source: USFWS, 2000

Mitigation

No mitigation/coordination measures are required for the black-footed ferret, mountain plover, or black-tailed prairie dog based on lack of suitable habitat and no known occurrences of the species within the project corridor.

Based on known occurrences of migrating and transient bald eagles using suitable habitat within the corridor, the following mitigation/coordination measure will be employed:

- If power lines in the study area are not properly constructed, they could pose electrocution hazards for migrating bald eagles. To protect these large raptors, any power lines that are relocated as a result of the project will be raptor-proofed in accordance with MDT policy (MDT Memorandum #208).

Biological Resources

The Biological Resources Report (BRR) prepared for the proposed project provides a detailed accounting of the terrestrial and aquatic species, and species of concern, that are known to occur or could occur within the proposed project area. The information below is a summary of potential impacts and mitigation measures for biological resources. All mitigation measures listed are required, the recommended mitigation measures can be found in the BRR.

Terrestrial Resources

Impacts

For small mammals with limited mobility and those with dens and nests within the project construction limits, such as shrews, voles and mice and burrowing animals such as Richardson’s ground squirrel, direct mortality and loss of habitat is expected during the construction of the new road alignment. Reconstruction of the existing alignment should not result in appreciable increases in avoidance and displacement of individuals and populations, direct mortality, or population or habitat fragmentation of small mammal species.

Mid-sized (i.e., rabbit, skunk, Porcupine, Raccoon) to large mammals (i.e., Mountain lion, deer, Elk, Moose) will be displaced from habitats in the vicinity of the construction activities although direct mortality of these species is not anticipated.

Amphibian and reptile species will be directly impacted by excavation and placement of fill materials in wetland and riparian areas that provide seasonal, over wintering, and breeding habitats. The direct loss of these habitats will also cause the displacement of individuals and populations. The Railroad Grade East of Cheadle, Railroad Grade at Divide, and New Alignment at Divide Alignments would have a greater direct impact to suitable amphibian and reptile habitats than would the reconstruction of the existing alignment.

Bridge removal activities, clearing and grubbing, and other ground disturbing activities between April 1 and July 15 and within 0.4 km (0.25 mi) of the Red-tailed Hawk at Boyd Creek east of Lewistown would likely result in abandonment of the nest, and may result in the incidental take of eggs or nestlings. If this nesting pair continues to use this nest or an alternate nest site in close proximity, a temporal and spatial restriction on construction activities (i.e., clearing and grubbing of the right-of-way, bridge removal activities, and other ground disturbance activities) near the nest site will be required to prevent the loss of eggs or nestlings. A reasonable timing and spatial construction restriction would be from April 1 to July 15 within 0.4 km (0.25 mi) of the nest tree. Exceptions to the temporal and spatial restriction could occur if the abovementioned activities are conducted during the non-nesting season, or an incidental take permit is received from the USFWS for disturbance of the nest during the nesting season.

Direct impacts to bird species nesting in the project corridor is expected as the result of construction activities occurring in wetland, riparian, and grassland nesting habitats. Construction associated with the removal of the 16 timber bridges will directly impact nesting Cliff and Barn Swallows and would result in the taking of individuals if conducted during the nesting season. To protect nesting Cliff and Barn Swallows at the 16 timber bridges in the project corridor, a construction timing restriction on bridge demolition activities is recommended from May 1 to August 1. Exceptions to the temporal restriction could occur if the abovementioned activities are conducted during the non-nesting season, or chicken wire, or other similar mesh wire fencing is placed on the underside of the bridge decking prior to the nesting season and retained throughout the nesting season to prevent nesting, or incidental take permits are obtained from the USFWS for disturbance of the nests during the nesting season.

Mitigation

The following mitigation/coordination measures are required to prevent or reduce wildlife-vehicle collisions and wildlife passage, prevent the destruction of occupied Cliff and Barn Swallow nests at the 16 timber bridges, and direct disturbance to an occupied Red-tailed Hawk nest.

- To protect Cliff Swallow and Barn Swallows nesting at the 16 timber bridges in the project corridor, one of the following will occur: the bridges will be removed during the non-nesting season (September 1 to March 15); or, if the bridges can not be removed during the non-nesting season, existing nests will be removed and fine mesh netting, chicken wire fencing, or other suitable material to prevent birds from establishing new nests (as approved by the

USFWS) will be placed on the underside of the bridge decking during the non-nesting season (September 1 to March 15) to prevent nesting and will be maintained throughout the nesting season, or until the structures can be removed.

- To protect a nesting Red-tailed Hawk at approximately RP 83.3, one of the following will occur: the nest tree will be removed during the non-nesting season (August 1 to March 15); or a temporal and spatial restriction will be in place from April 1 to August 1 for all ground disturbance activities within 0.4 km (0.25 mi) of the nest tree. USFWS will determine what permit(s) are necessary to remove the nest tree.

Aquatic Resources

Impacts

There are a total of 16 structures on the existing alignment; five structures cross named streams, and the remaining structures are utilized for storm drainage and stock passage. All of the existing bridges are constructed of treated timber and would be replaced with appropriate bridges, pipes, or culverts. Depending on the demolition method, a fair amount of in-stream work might be required to remove the existing timber piers.

A total of 30 culvert crossings were mapped along the existing alignment. These culverts serve both irrigation and drainage crossings. All 30 culverts would be replaced with appropriate pipes or culverts, or extended to the construction limits.

Stream work would likely have the greatest affect on the intermittent flow waterways, including the two bridge replacements over Boyd Creek, one bridge replacement over Parr Creek, and the bridge replacements over both the North Fork and South Fork McDonald Creek. Little impact is anticipated for the bridge replacements over the stock pass and other drainages (all dry at the time of the site visit in July 2001). Replacements of the culverts associated with the wetland drainages and intermittent drainages may temporarily impact aquatic species and their habitat during culvert replacement. Little impact is anticipated for the 20 ephemeral drainages and the five dry irrigation drainages.

Removal of bridges and culverts will likely require instream work and could result in temporary increased erosion potential, and temporary increases in turbidity within the project area. Turbidity affects aquatic species both directly and indirectly. Elevated turbidity can decrease the ability of aquatic species to locate and obtain food and conversely reduce the risk of predation for fish from bird and mammals. Extremely high levels of turbidity can also cause physiological problems and may alter habitat for aquatic species.

Mitigation

Because some in-stream work will be necessary if the project is built, the following conservation measures will be implemented to minimize temporary impacts to aquatic resources:

- Guidelines established in MDT's Highway Construction Standard Erosion Control Workplan will be adhered to.

- Streambeds and banks will be reclaimed as close as possible to their pre-disturbed conditions and elevations.
- Disturbed wetland and streamside areas will be revegetated with native plant material at the earliest practicable date.
- The use of BMPs will be required to minimize the increase in sediment loads from entering wetland and stream habitats potentially used by the Northern Leopard Frog and other aquatic species.
- Removed culverts and other items will be stockpiled according to permit conditions.
- Use of fertilizers, hydrofertilizers, or hydromulching near any stream, intermittent drainage, or wetland will be restricted according to permit conditions.
- Staging and storing areas will be located according to permit conditions.

Species of Concern

Species are evaluated and ranked based on their global and statewide rarity by the MNHP. Global ranking is denoted by “G” and statewide ranking by “S.” Numbers (1-5) following the “G” or “S” signify the relative rarity of a given species. Low numbers correspond to rare occurrence and high numbers correspond to abundant occurrence. Rankings are used to develop conservation priorities.

Impacts

Based on initial consultation with the MNHP and MFWP, it is unlikely that terrestrial and aquatic species of concern would be adversely impacted as a result of the proposed project. Although there is suitable habitat for the species mentioned below within the vicinity of the proposed project, it is unlikely that highway improvements alone would greatly impact the species habitat. Table 11 summarizes impacts to species of concern.

Mitigation

- Vegetation disturbances outside the construction limits of the project will be avoided and minimized where practicable. Areas disturbed, including those used for construction staging, borrow sites, and disposal sites will be reclaimed with desirable vegetation.
- Unavoidable impacts to jurisdictional wetlands will be mitigated in the project corridor or in the same watershed to reduce and replace lost functions and values, including the loss of possible foraging, roosting, and nesting habitat.
- See aquatic resources section for additional mitigation/coordination measures.

Table 11
Animal and Plant Species of Concern

Common Name	Scientific Name	Global and State Rank, and Federal Status	Known Distribution in Project Corridor
Mammal Species of Concern			
Swift fox	<i>Vulpes velox</i>	G3, S3	Not known to occur along the project corridor or in Fergus County.
Black-footed ferret	<i>Mustela nigripes</i>	G1, S1 Endangered	Not known to occur along the project corridor. The closest habitat associated with prairie dog colonies is located approximately 8.0 to 16.0 km (5.0 to 10 mi) north of the project corridor at the east terminus, and 16.0 to 24.0 km (10.0 to 15.0 mi) northeast and south of Grass Range.
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	G4, S3S4 Candidate	Not documented within the project corridor. The closest colonies are located approximately 8.0 to 16.0 km (5.0 to 10.0 mi) north of the project corridor at the east terminus, and 16.0 to 24.0 km (10.0 to 15.0 mi) northeast and south of Grass Range.
Preble's shrew	<i>Sorex preblei</i>	G4, S3	Not documented within the project corridor. Species prefers arid and semi-arid grass and sagebrush habitats, either in open expanses or in smaller openings within subalpine coniferous forests.
Dwarf shrew	<i>Sorex nanus</i>	G4, S3	Not documented within the project corridor. Adapted to a wide variety of habitats from high montane slopes to low elevation riparian and sagebrush-grasslands.
Merriam's shrew	<i>Sorex merriami</i>	G5, S3	Not documented within the project corridor. Species prefers dry sagebrush-grass habitats from the central to southeastern part of the state.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	G4, S2S3	Not documented within the project corridor. Species prefers to roost in cold caves and mine shafts. A wide variety of habitats are used from western mesic Douglas-fir forests to more arid Rocky Mountain juniper-limber pine-curl leaf mountain mahogany vegetative type.
Bird Species of Concern			
Bald Eagle	<i>Haliaeetus leucocephalus</i>	G4, S3B, S3N Threatened	No known nesting in project corridor. Spring and fall migrants and wintering eagles known to occur in the project corridor.
Mountain Plover	<i>Charadrius montanus</i>	G2, S2B, SZN Proposed Threatened	Not documented within the project corridor. Closest habitat associated with prairie dog colonies located approximately 8.0 to 16.0 km (5.0 to 10.0 mi) north of the project corridor at the east terminus, and 16.0 to 24.0 km (10.0 to 15.0 mi) northeast and south of Grass Range.
Northern Goshawk	<i>Accipiter gentilis</i>	G5, S3S4	Prefers forested habitats along Divide. One adult nest record for 18.0 km (11.0 mi) east of Lewistown (MNHP 2000). A Northern Goshawk observed at Wetland 67 on the Railroad Grade at Divide Alignment Alternative.
Amphibian Species of Concern			
Northern leopard frog	<i>Rana pipiens</i>	G5, S3	Associated with higher quality wetlands in the project corridor.
Fish Species of Concern			
Northern redbelly finescale dace	<i>Phoxinus eos phoxinus neogaeus</i>	HYB, S3	Identified as a year-round resident in McDonald Creek downstream of Grass Range. Occurs from the mouth of McDonald Creek to Chippewa Creek. No record of an occurrence in the project area.

Table 11
Animal and Plant Species of Concern (concluded)
Plant Species of Concern

Roundleaf water-hyssop	<i>Bacopa rotundifolia</i>	G5, S1	No known occurrences within the project corridor although found in Fergus County. Closest record to project corridor is approximately 24.0 km (15.0 mi) northeast of Grass Range. Found along muddy shores of ponds and streams.
Entire-leaved avens	<i>Dryas integrifolia</i>	G5, S1	No known occurrences within the project corridor although found in Fergus County. Found in stony, limestone derived soils of exposed ridges and plateaus in alpine zones.
Northern rattlesnake-plantain	<i>Goodyera repens</i>	G5, S3	No known occurrences within the project corridor although found in Fergus County. Found on north facing, mossy-forested slopes in the montane zone.
Hot spring phacelia	<i>Phacelia thermalis</i>	G3G4, S1	No known occurrences within the project corridor although found in Fergus County. Found on sparsely vegetated soil in grasslands and open woodlands on the plains.
Little Indian breadroot	<i>Psoralea hypogaea</i>	G5T4, S2	No known occurrences within the project corridor although found in Fergus County. Found on sandy soil in grasslands and open woodlands on the plains.

Source: URS Biological Resource Report, 2002

Cultural/Archaeological/Historic Resources

A cultural resource inventory was completed by Ethnoscience, Inc. in September 2002 and identified ten NHRP-eligible properties in the study area. Table 12 below summarizes the cultural/archaeological/historic resources found in the study area that would be impacted by the proposed build alternatives.

The impacts in Table 12 are for the Preferred Alternative. Detailed impacts for each alternative are included in the Ethnoscience, Inc. cultural resource inventory.

The Judith Divide Mining District would be impacted by all of the build alternatives. Other types of sites recommended for NRHP eligibility that would be impacted include one farmstead, two abandoned railroad tunnels, and one historic road. In addition, four prospect pits and a coal mine are not deemed NRHP eligible standing alone, but are considered to be contributing elements of the NRHP-eligible Judith Divide Mining District.

Impacts

The Preferred Alternative is in the area of four NRHP-eligible sites and the eligible mining district (including one contributing site). Table 12 outlines the effect of the Preferred Alternative on each of the sites.

Four eligible sites and the mining district (including two contributing sites) are in the area of the Existing Alignment(site numbers; 24FR0636, 24FR0886, 24FR0890, 24FR0901, 24FR0909, 24FR0917, and 24FR0921).

The New Alignment at Divide is in the area of two sites and the mining district (site numbers; 24FR0886, 24FR0889, 24FR0909, and 24FR0921).

The Railroad Grade at Divide Alignment impacts three sites and the mining district (site numbers; 24FR0886, 24FR0889, 24FR0896, 24FR0900, 24FR0909, 24FR0916, 24FR0921). The Railroad Grade East of Cheadle Alignment is in the area of four sites and the mining district (site numbers; 24FR0636, 24FR0886, 24FR0890, 24FR0901, 24FR0909, 24FR0917, and 24FR0921).

Table 12
Cultural/Archaeological/Historic Impacts for the Preferred Alternative

Site Number	Description	NRHP Eligibility	Determination of Effect
24FR0636	Coal Mine	Recommended Eligible as Part of Mining District	No Adverse Effect
24FR0886	Farmstead	Feature 12 (barn) Recommended under Criterion C	No Effect
24FR0890	Culture Material Scatter	Recommended Eligible Under Criterion D	Adverse Effect
24FR0901	Prospect Pits	Recommended Eligible as Part of Mining District	No Adverse Effect
24FR0909	Road	Recommended Under Criterion A	No Effect
24FR0916	Tunnel	Recommended Under Criterion C	No Effect
24FR0917	Tunnel	Recommended Under Criterion C	No Effect
24FR0921*	Mining District	Recommended Under Criterion A	No Adverse Effect

Source: Ethnoscience, 2001

*Site 24FR0921 is the Judith Divide Mining District. The district includes five separate mining related sites within the project area alignment alternatives (24FR0636, 24FR0896, 24FR0900, and 24FR0901). Although each of the five separate mining sites lack individual distinction, they are distinguishable entities that contribute to the Judith Divide Mining District.

Although there has been an Adverse Effect determination on the cultural material scatter, Section 4(f) of the Transportation Act does not apply when FHWA, SHPO, and ACHP have determined that the “archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place.” In this particular case, SHPO has approved the Data Recovery Plan, and no further protection for the site will be afforded under Section 4(f). The Advisory Council on Historic Preservation (ACHP) has also been contacted to request their comments. (See letter in Appendix C).

Mitigation

Techniques used to mitigate the identified impacts to cultural/historic/archaeological resources are being developed in coordination with the State Historic Preservation Office (SHPO). A Data Recovery Plan has been approved by SHPO (see letter in Appendix C). Memoranda of Agreements (MOA) between property owners, FHWA, MDT, and SHPO will be developed as necessary to ensure impacts are minimized as much as practicable.

Noise

The traffic noise study for the Preferred Alternative was conducted according to Title 23 of the U.S. Code of Federal Regulations, Part 772 (23 CFR 772) – *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, and the Montana Department of Transportation’s (MDT) *Traffic Noise Analysis and Abatement: Policy and Procedure Manual, June 2001*. The potential noise impacts at two noise-sensitive receptor locations due to vehicles traveling on US 87 were studied. Beginning at RP 95, the noise study area included approximately 1.6 km (1 mi) or Preferred Alignment located east of Lewistown. Two residences were identified within approximately 250 m (820 ft) of the existing roadway centerline and within approximately 150 m

(492 ft) of the proposed centerline of the Preferred Alignment. A noise analysis was not needed for the other alternatives as there are no major alignment changes or capacity increases proposed.

Impacts

The noise sensitive receptors along the study corridor fall under Category B, which includes residences, parks, recreation areas, medical facilities, churches, outdoor areas that have regular human use and where a lowered noise level would benefit the public. These criteria do not apply to the entire tracts surrounding an activity, but only to those portions on which activity normally occurs, for example, an outdoor patio or stationary recreational equipment.

Noise levels are quantified using units of decibels (dB). Noise levels can also be expressed as A-weighted decibels (dBA). Humans typically have reduced hearing sensitivity at low frequencies compared with their response at high frequencies, and the A-weighting of noise levels closely correlates to the frequency response of normal human hearing.

For environmental noise studies, ambient noise levels and noise impact criteria are typically based on A-weighted equivalent noise levels, Leq, during a certain time period. The equivalent noise level is defined as the steady state noise level that has the same acoustical energy as the actual, time-varying noise signal during the same time period.

Federal guidelines (23 CFR 772) outline the procedures to determine if traffic noise impacts will occur for a project and when traffic noise abatement measures will be considered. FHWA and MDT identify traffic noise impacts according to Noise Abatement Criteria (NAC) for various land uses and zoning. Table 12 summarizes the NAC used in the consideration of traffic noise impacts.

Federal guidelines (23 CFR 772) and MDT's traffic noise policy state that traffic noise impacts occur when the predicted Leq(h) noise level at a receptor location in a projects' Design Year approaches or exceeds the NAC values listed in Table 13, or when the predicted traffic noise levels in the Design Year substantially exceed the existing ambient noise levels at a receptor. MDT defines "approach" as 1 dBA, and "substantially exceed" as 13 dBA. For residential properties, the NAC is 67 dBA, and therefore noise impacts would occur at 66 dBA or at levels in the Design Year that are 13dBA greater than the existing noise levels. When traffic noise impacts are identified at a receptor location, MDT requires that reasonable and feasible noise abatement measures be considered to reduce the traffic noise levels at the receptor.

**Table 13
 Noise Abatement Criteria (NAC)**

Activity Category	L _{eq} (h)	Description of Activity Category
A	57 dBA (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 dBA (exterior)	Residences, motels, schools, churches, libraries, picnic areas, recreation areas, playgrounds, active sports areas, parks, and hospitals.
C	72 dBA (exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	-- dBA (exterior)	Undeveloped lands.
E	52 dBA (interior)	Residences, motels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Existing and design year 2026 noise levels were predicted for two receivers along the project corridor for each alternative (No-Build and Preferred). Existing and predicted noise levels are provided in Table 14.

**Table 14
 Receptors and Predicted Noise Levels for the
 No-Build and Preferred Alternatives**

Receptor	Description	No-Build Alternative			Preferred Alternative	
		2001 L _{eq} (h) (dBA)	2026 L _{eq} (h) (dBA)	Potential Impact in 2026?	2026 L _{eq} (h) (dBA)	Potential Impact in 2026?
Residence	Single-family residence at Mile Post 95, located north of U.S. 87.	52	54	No	59	No
Residence	Single-family residence at Mile Post 96, located north of U.S. 87.	43	45	No	55	No

Mitigation

The traffic noise levels were studied at two residences located within approximately 150 m (492 ft) of the proposed Preferred Alternative. The receptors are also located within approximately 250 m (820 ft) of the existing US 87 centerline. The receptors and the predicted traffic noise levels at the receptors are summarized in Table 14. No traffic noise impacts are predicted at the receptors due to the Preferred Alternative, and therefore, traffic noise abatement measures do not need to be considered.

Visual

Impacts

Visual impacts from the build alternatives would be associated with the following factors:

- loss of vegetation;
- proposed new approach ways; and
- new alignment segments.

Only vegetation within the construction limits, or “clear zone,” of the build alternatives would be removed/cut back. (The “clear zone” is the area where objects may be struck by vehicles leaving roadways, or pose obstructions to drivers’ views.) The visual impacts would vary by alternative, based on their distance from the existing alignment and the type of vegetation to be impacted/removed.

Any visual changes would be the direct result of changes in the roadway profile, construction of bridge structures, removal of existing trees, widening of shoulders for the existing alignment and flattening of side slopes. Specific visual impacts associated with the alignment alternatives are discussed below.

The Preferred Alignment strays from the existing roadway in two segments one is for 2.3 km (1.4 mi) paralleling it on a ridge. The vegetation in this area is comprised of trees (primarily Ponderosa Pine), grasses and scrubs. The views for travelers along this alignment would be more favorable than along the current alignment. The second time that this alignment strays from the existing roadway is near Cheadle. The alignment deviates from the existing alignment for 6.2 km (3.8 mi). Part of the alignment is along the original railroad grade, which would require extensive cuts and fills due to the narrow width (6.1 m, or 20 ft) of the railroad bed. This alternative traverses an area where the vegetation is comprised of trees (primarily Ponderosa Pine), grasses and scrubs. A principal landowner along this alignment suggested it as a way to reduce impacts to prime farmland in this area.

The Existing Alignment extends 47.7 km (29.6 mi) between Lewistown and Grass Range. Vegetation along this alignment is comprised of trees (primarily Ponderosa Pine), grasses and scrubs. Extensive cuts would occur at Phillips Hill and at West Divide Road.

The New Alignment at Divide strays from the existing roadway for 10.2 km (6.4 mi) and traverses the Divide Road area, a mountainous area where the vegetation is comprised of trees (primarily Ponderosa Pine), grasses and scrubs. Extensive cuts and fills would be necessary along this alignment. Farmsteads, ranches and other land uses occur in this region, and this alternative would negatively impact view sheds for residents.

The Railroad Grade at Divide Alignment deviates from the existing roadway for 11.5 km (7.2 mi) and traverses the Divide Road area, a mountainous area where the vegetation is comprised of trees (primarily Ponderosa Pine), grasses and scrubs. The original railroad alignment crossed beneath West Divide Road in a tunnel, so extensive cuts and fills would be necessary to construct a roadway through this area. Because of the narrow width of the old railroad bed (6.1 m, or 20 ft), extensive cuts and fills would also be necessary east of West Divide Road. Farmsteads, ranches and other land uses occur in this region, and this alternative would negatively impact view sheds for residents.

The Railroad Grade East of Cheadle Alignment strays from and parallels the Existing Alignment for 26.6 km (16.5 mi) and traverses relatively flat terrain along the original railroad alignment. The vegetation in this area is primarily comprised of grasses and scrubs. The view corridor modifications would not be substantially different than those associated with the Existing Alignment.

The No-Build Alternative would have no impacts to the appearance of the corridor.

Mitigation

All of the proposed build alternatives would require some degree of mitigation for visual impacts. Techniques that will be employed, if practicable, to mitigate the visual impact of typical rock cuts, brush and tree clearing, and bridge abutments include creating natural looking rock cuts with non-linear edges that have rounded formations resembling adjacent, existing bluffs and outcroppings. Also, brush and trees will be cleared in a manner that will not create a linear woodland edge, but instead provide a random meandering edge.

Other practices of revegetation will include reintroducing native plant species, creating pockets in newly graded slopes for plantings, and revegetating in ways that do not result in a linear edge. For streams and ditches that would be impacted, rocks of various sizes and shapes will be randomly placed along stream banks and channel bottoms. Meandering stream channels with nonlinear edges will be created when relocating stream channels. Also, desirable plantings will be reintroduced along stream edges.

Air Quality

Impacts

This proposed project is located in an unclassified/attainable area of Montana for air quality under 40 CFR 81.327, as amended. As such, this proposed project is not covered under the EPA's "Final Rule" of September 15, 1997 on Air Quality Conformity. Therefore, the project's No-Build and build alternatives comply with Section 176(c) of the Clean Air Act (42 U.S.C. 7521(a), as amended).

Mitigation

No long-term negative impacts to air quality are anticipated; therefore, no mitigation measures are required.

Hazardous Materials

Impacts

Three types of "hazardous" materials were found in the project area.

- Hazardous materials related to regulated facilities (underground and aboveground storage tanks, PCBs in transformers, regulated solid waste landfills);
- Unlicensed solid waste dumps; and
- Materials and features related to coal mining.

The hazardous materials related to regulated facilities are inherently most hazardous to human health and the environment. However, because these materials are regulated, there is more control over their location, use, and remediation of any spills or leaks. Twelve distinct sites were identified in relation to the five build alternatives.

Unregulated solid waste dumps present two potential hazards: (1) there may be hazardous materials included in the discarded materials, such as hydraulic fluid in old machines, freon in junked refrigerators, and old pesticide or herbicide drums, and (2) these fluids and hazardous materials may have impacted soils, surface and ground water. Four distinct sites were identified in relation to the five build alternatives.

The mine features themselves present a hazard; there is a potential for caving and instability with any of the underground workings. The mine waste materials are not inherently hazardous, but have the potential to generate acid mine drainage and must be managed to minimize that possibility. These sites vary in terms of the level of hazard, but they impact each of the alternatives that pass through the Divide area.

Table 15 indicates the number and type of impacts per hazardous material site for each of the build alternatives. Under the No-Build Alternative hazardous materials impacts would not occur; therefore, no mitigation would be required.

**Table 15
 Hazardous Materials Impacts**

Alignment Alternative	Number of Regulated Facilities			Number of Unregulated Facilities			
	Underground Storage Tanks	PCBs	Landfills	Solid Waste Dumps	Coal Mine Waste	Potential Subsidence	Storage Tanks (AST)
Preferred Alignment	10 ^{1,2}	3	3	3	2	2	3
Existing Alignment	10 ^{1,2}	3	3	0	1	1	2
New Alignment at Divide	10 ^{1,2}	3	3	0	1	1	2
Railroad Grade at Divide	10 ^{1,2}	3	3	1 ³	2	3	2
Railroad Grade East of Cheadle	10 ^{1,2}	3	3	3	1	1	2

Source: Hyalite Environmental, 2002

1. Leaking Underground Storage Tank (LUST) - 4 within 0.5 miles of the Lewistown end of the Existing Alignment; one more or less adjacent to the site (Town Pump).
2. Underground Storage Tank (UST) - 6 on property either crossed or adjacent to property crossed by the proposed alternative alignment.
3. Solid waste is scattered - not site specific.

Mitigation

Avoiding contaminated property is the preferred mitigation option; however, this is not always possible. Sites with known contamination, or contamination that is discovered during construction, must be managed and mitigated to protect human health and the environment. Mitigation measures include the following: construction methods to protect workers and the public from exposures and to control inadvertent releases of contaminants; and direct appropriate treatment and disposal options for contaminated materials, soil and ground water.

Likely mitigation practices for soils potentially contaminated with hydrocarbon, if encountered, include direct disposal or an on-site application treatment (land farming). Contaminated soil may be re-used at the direction of DEQ and MDT. Disposal of soils potentially contaminated with hydrocarbon fuel compounds will be done in accordance with guidance and approvals obtained from the DEQ, Teton County, and Pondera County, which are decided on a case-by-case basis.

Solid Waste/Roadway Materials. Each of the build alternatives includes pavement removal. Pavement will be milled or excavated and recycled or reused, in accordance with DEQ regulations. MDT requires construction specifications to donate any salvaged treated timber, that is generated by the project, to MDT Maintenance, MFWP, or Fergus County. Treated timbers should not be buried or burned and should be disposed of in a Class II Landfill with advanced written approval from the manager. A special provision will be needed prior to construction.

Widespread Minor Hazardous Materials/Solid Waste. Any of the build alternatives may encounter a farm or residential underground storage tank, aboveground storage tank, septic tank or drainfield. If any of these elements are encountered and require removal, contents of the tanks and/or pipes must be removed, tested for surface contamination or cleaned, and categorized for disposal by the appropriately licensed contractors in accordance with Montana regulations. Soils surrounding the removed facilities must be tested for contamination. If the soils are contaminated, soils must be excavated for disposal and/or remediated and underlying ground water, if encountered, will require testing and remediation as well. If the contaminated soils are encountered and are saturated, excavation will require de-watering and treatment of any impacted water. If soils are not contaminated by hazardous waste, they may be left in place.

Hazardous Materials/Solid Waste of Regulated Facilities. Each of the build alternatives may encounter hazardous materials impacts related to regulated facilities. Any contaminated soils or ground water adjacent to these regulated facilities may require testing, excavation and disposal and/or remediation.

Hazards and Issues Related to Mines. The Existing Alignment, Preferred Alternative, Railroad Grade at Divide, and New Alignment at Divide alignments may encounter abandoned and reclaimed coal mines and coal prospect pits. The types of environmental issues that are related to mines include the following:

- Acid mine drainage and contaminated waters;
- Sterile soils;
- Collapsing structures;
- Hazardous shafts and adits;
- Subsidence holes in yards, streets and fields;
- Mine fires;
- Erosion; and
- Potential for flooding.

Acid mine drainage, contaminated waters, potential for flooding and sterile soils related to coal mines are addressed under the discussion of mitigation of water quality impacts. The issues related to the structures and mine workings – collapsing structures, hazardous shafts and adits, subsidence holes, mine fires and erosion – are considered in this section in discussion of hazardous or solid waste, and mine workings.

Hazardous Materials/Solid Waste from Unregulated Dumps and Mine Impacts. Solid waste, whether from mines or unregulated trash dumps, will require assessment and disposal in the

appropriate manner. The Existing Alignment, Preferred Alternative, Railroad Grade at Divide, and New Alignment at Divide alternatives may encounter mine wastes. Unlicensed/unregulated solid waste dumps would require mitigation for the Preferred Alternative, and Railroad Grade East of Cheadle Alignment.

Assessment of solid wastes encountered by roadway alignment must include identification of materials in the waste and may require testing. Solid waste materials in the unlicensed/unregulated dumps will likewise require assessment for identification of any potentially hazardous materials. For example, liquid contents of drums, carburetors, gas tanks, refrigerator coolant systems, and hydraulic fluid systems must be drained and disposed. Surfaces that were exposed to the hazardous materials must pass a wipe test if they would be disposed of as non-hazardous materials. Coal mine wastes must be assessed for potential to generate acid mine drainage.

Solid waste materials that are not related to hazardous materials will be assessed for remediation or disposal as well. The appropriate categories of materials and disposal of each category are included in Administrative Rules of Montana, Title 17, Chapter 50, Sub-Chapter 5. Group III materials (wood waste, concrete sans rebar, clean fill, gravel) and Group IV wastes (construction and demolition debris, waste asphalt) may be used as fill in construction. Group II materials – concrete with rebar, plaster and metal, and household garbage should be reused, recycled and/or disposed of in a licensed Class II landfill or incinerator.

Physical and Safety Issues Related to Mines. The Existing Alignment, Preferred Alternative, Railroad Grade at Divide, and New Alignment at Divide alternatives may encounter subsidence related to underground mine workings and/or the abandoned railroad tunnels. Subsidence features will require stabilization and fill where they may impact the roadway. If subsidence features are not currently evident, geotechnical investigations will evaluate the roadway substrate for stability. Underground workings or tunnels that are not currently evident or unstable may still require fill and/or grouting for appropriate roadway stabilization and safety.

Additional demolition of mine structures and closure/grading of adits, tunnels, shafts and prospect pits may be required to limit liability of MDT on acquired properties. Demolition and closure of these structures and mine workings will improve safety, reduce the potential for mine fires or flooding, and increase protection of human health and the environment from these features.

3.4 Construction Impacts

Construction activities from any of the proposed build alternatives would cause temporary inconveniences to the traveling public and recreationists. These would occasionally result in longer travel times, detours, temporary closures, and noise and dust due to the use of heavy machinery. These disruptions would occur intermittently for the construction period, which could take from one to three years, depending upon which alternative is selected. The existing highway would remain in use for continued access during the construction process; therefore, traffic interruptions would be minimized.

Asphalt plants and gravel crushers that may be required for roadway construction for any of the alternatives would require air quality permits. Construction activities are required to use dust suppression and control measures to minimize short-term impacts related to construction dust.

There would be minor, temporary noise impacts related to construction of any of the alternatives. The project's contractor would be subject to all state and local laws to minimize construction noise by having mufflers on all equipment. Dust control would also be implemented by using either water, or another approved dust-suppressant.

During construction, surface water runoff could be contaminated by spills of petroleum products, lubricants, and hydraulic fluid from construction equipment. There would be a spill prevention and emergency containment plan made to provide for mitigation of any impacts related to such spills. In general, Best Management Practices would be used to minimize the effect of sedimentation and/or run-off during the roadway construction periods.

Mitigation

There is potential for short-term water quality impacts due to increased erosion and sedimentation during construction activities. Mitigation measures such as erosion control, settling basins, and silt fences, shall be included in the SWPPP to ensure that any impacts are minimal.

All advance warning and detour signing would be in accordance with the Manual on Uniform Traffic Control Devices. Therefore, construction impacts from any of the proposed build alternatives will be minimized.

Utilities

The location of utilities was considered for the Preferred Alternative. An underground copper telephone line is located along most of the existing US 87 corridor, as well as a fiber optic line located along the entire corridor. Additional consultation is necessary on-site with the telephone company in order to verify the precise location and type of cable. Impacts to the telephone lines are possible for the Preferred Alternative.

There are several power distribution line crossings across US 87 with highway clearances ranging from 6.4 m (21 ft) to 8.7 m (28 ft, 6 in). Several poles may need to be relocated due to the change in profile of the roadway for the Preferred Alternative. West of Boyd Creek Road, the power lines are underground along US 87.

Impacts to utilities from construction of any of the other five build alternatives would be similar to those for the Preferred Alternative. The No-Build Alternative would have no impact on utilities.

Mitigation

Utility relocations would be coordinated with these lines' owners, and done prior to this proposed project's construction. Notification of service interruptions due to these relocations would be the responsibility of these utility lines' owners. Each of the disruptions is normally minor and are usually limited to the customers on the affected lines.

3.5 Cumulative Impacts

Cumulative impacts are impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future action regardless of responsible agency or person.

The past, present, and reasonably foreseeable future actions were determined based on conversations with local city officials and MDT staff. The actions that are included in this EA cumulative impacts discussion are:

- P-43 Traffic Safety Enhancement Project
- Lewistown-West Overpass Project
- Hobson-East, CN 4368
- McDonald Creek SW of Grass Range CN 3997
- Hobson-Utica CN 4485
- Bohemian Corner, CN 1743
- Assisted Living Facility
- Basin State Bank

P-43 Traffic Safety Enhancement Project

MDT currently has an action pending on P-43, a Minor Urban Arterial in Lewistown. The local street name is 1st Avenue North, and the project area begins at RP 0.0 and ends at RP 0.3. A Traffic Safety Enhancement project, STPP-NH 7199(14), has been nominated (#12010) for this project area. The project is intended to address several recommendations from an earlier traffic study on the 1st Avenue corridor from Kendall Road through the Main Street intersection. These recommendations include the following:

- Eliminate parking on 1st Avenue from Janeaux to Kendall Road. The width of the roadway would remain as is, and a two-way, left-turn lane would replace parking;
- Add traffic signals at the intersections of 1st and Boulevard and 1st and Kendall Road; and
- Modify radii and realign/add turn lanes at the intersections of 1st and Main and 1st and Kendall.

All widening required at the intersections for new turn lanes would be included in the signal project. Permanent markings would implement the recommendations of the traffic study.

This Traffic Safety Enhancement project is approximately 2.4 km (1.5 mi) west of the Lewistown city limits, which is the western terminus of the Lewistown to Grass Range Environmental Corridor Study.

Lewistown-West Overpass

This project is located on US 87 beginning at RP 79.0 and extending approximately 3.1 km (2.0 mi) westerly to RP 80.9. The project (NH 57-3(30)70) involves the complete reconstruction of the existing roadway, including the improvement of two intersections, to meet current design criteria for a Rural Principal Arterial. The Lewistown-West Overpass project is approximately

3.5 km (2.1 mi) west of the western terminus of the Lewistown to Grass Range Environmental Corridor Study.

Hobson-East CN 4368

The environmental document for this overlay and widening project is currently being completed and the project is expected to go to construction summer 2006.

McDonald Creek SW of Grass Range CN 3997

This is a bridge replacement project that was recently completed.

Hobson-Utica CN 4485

This is an overlay and widen and bridge replacement project. The project will go to construction in the fall of 2004.

Bohemian Corner CN 1743

This project is currently under construction and is an overlay and widen project.

New Horizons Assisted Living Facility

The second building of the assisted living facility was completed October 2002. The building has 14 rooms and is located at the intersection of McKinley Street and F Street.

Basin State Bank

The Lewistown branch of Basin State Bank based out of Stanford, Montana was completed November 2002. The bank located at the intersection of Entrance Avenue and US 87. The bank is a full service bank offering drive-up, walk in, and automated teller services.

Based on the analysis contained in the main body of the EA the Lewistown to Grass Range Project will not contribute to any cumulative impacts in the following areas:

- Pedestrian/Bicycle
- Parks and Recreation
- Environmental Justice
- Right-of-Way
- Local/Regional Economics
- Floodplains
- Threatened & Endangered Species
- Biological Resources
- Species of Concern
- Noise
- Visual Resources
- Air Quality

The EA has identified minor impacts in the following areas which contribute to the cumulative impacts in the area.

Farmland

The Lewistown to Grass Range Corridor Preferred Alternative will require 71.7 ha (177.1 ac) of farmland. Other projects within the vicinity of this project are within the urbanized area of Lewistown or involved minor impact to Prime, Unique or Statewide/Locally Important Farmlands. The Preferred Alternative for the Lewistown to Grass Range Project was designed to minimize impacts to all resources as were the proposed action on other area projects.

Floodplains

An increase in impervious surfaces associated with mainline widening will generate additional runoff volume during storm events. Consequently, 100-year flood surface elevations downgradient from the project area could change. This type of secondary impact is primarily of concern as a cumulative impact. The customary measures taken by MDT to preserve historic drainage patterns and to minimize increased runoff associated with this project will therefore be of special importance in preventing substantial cumulative impacts to 100-year floodplains. Temporary impacts due to construction in the floodplains will be minimized through BMPs.

Water Quality

The acid mine drainage in the Lewistown to Grass Range Corridor is a site specific problem and has not been encountered in other projects. This will not be a concern relative to cumulative impacts.

Wetlands

Cumulative impacts to wetlands have occurred, and are occurring, in Fergus County due to land conversion. However, other transportation projects in the area, and the reconstruction and widening of US 87 are not expected to contribute substantially to the cumulative loss of wetlands in Fergus County. This is due to MDT's and FHWA's commitment to avoidance, minimization, and compensatory wetland mitigation.

Cultural/Archaeological/Historic Resources

In all projects, the Cultural Resource Impacts will be mitigated through coordination with SHPO. Through proper mitigation, there will be no cumulative impacts.

Hazardous Materials

Avoiding contaminated property is the preferred option; however, this is not always possible. The Lewistown West Overpass Project also has the potential to encounter hazardous materials. Mitigation measures will include the following: construction methods to protect workers and the public from exposures and to control inadvertent releases of contaminants; and direct appropriate treatment and disposal options for contaminated materials, soil, and ground water. Any hazardous material encountered will be handled by MDT in coordination with DEQ.

MDT projects have safety enhancement and improved operations as key objectives. Their implementation could have positive cumulative effects on safety, but it is unlikely that they would have cumulative environmental impacts because of their distance from each other. There

are no other MDT projects in the Lewistown area that would contribute to substantial cumulative impacts when considered in conjunction with the Lewistown to Grass Range project.

In summary, none of the build alternatives, or the No-Build Alternative, would induce substantial land use changes or promote unplanned growth, or result in any significant contribution to cumulative impacts in the general project vicinity. Provision of a reconstructed and upgraded roadway under any of the build alternatives would result in positive impacts of improved access for all area residents, businesses, travelers, and service and emergency vehicles, which rely heavily on US 87.

3.6 Permits Required

Prior to construction activities, MDT and the construction contractor will be responsible for obtaining all necessary permits. The proposed action would be in compliance with both the water quality provisions of 75-5-318 M.C.A. for Section 318 authorizations, and stream protection under Sections 87-5-501 through 509 M.C.A., inclusive. A 124 SPA Stream Protection Permit would be required from the MFWP. An on-site review of the proposed area with representatives from MFWP and MDT would be scheduled if necessary. All comments, suggestions, and/or conditions resulting from review of existing data and/or on-site inspections would be documented, included in the proposed project's files, and taken into account in the final design specifications.

The proposed action would also require the following permits or authorizations under the Clean Water Act (33 U.S.C. 1251-1376, as amended):

- A Section 402/Montana Pollutant Discharge Elimination System (MPDES) authorization from the DEQ's Permitting & Compliance Division;
- A Section 404 permit from the U.S. Army Corps of Engineers and determination whether this project qualifies for a nationwide permit under the provisions of 33 CFR 330; and
- A FEMA floodplain development authorization from Fergus County's floodplain administrator.

4.0 COMMENTS AND COORDINATION

4.1 Public Agencies

MDT contacted the following agencies and parties in preparing this EA.

Agencies with Jurisdiction and/or Permitting Authority

Department of the Interior - Bureau of Land Management
Department of the Interior - U.S. Fish & Wildlife Service (USFWS)
Fergus County (FEMA Floodplain Development Permit, Weed Control District)
Montana Department of Environmental Quality (DEQ, MPDES authorization)
Montana Fish, Wildlife & Parks (MFWP, 124SPA Permit)
U.S. Army Corps of Engineers (COE, Clean Water Act - Section 404 Permit)
U.S. Environmental Protection Agency

Other Agencies, Groups, or Persons Contacted

Advisory Council on Historic Preservation
Fergus County Commissioners
Fergus County Planning Director
Grass Range Town Council
Lewistown Planning Director
Lewistown's City Manager
Lewistown City Commissioners
Lewistown Growth & Development Plan Focus Groups
Lewistown Public Works Director
Lewistown School District, Transportation Planner
Mayor of Grass Range
Montana Department of Natural Resources & Conservation (DNRC)
Montana Natural Heritage Program (MNHP)
State Historic Preservation Office
U.S. Fish & Wildlife Service (USFWS)
U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS)

4.2 Public Involvement

Stakeholder Interviews

Stakeholder interviews were conducted from June 19, 2000 through June 21, 2000. The purpose of the interviews was to identify community concerns and get input for the development of a public involvement program. The following persons were interviewed: the City Manager of Lewistown, Lewistown City Commissioners, the Lewistown Planning Director, the Lewistown Public Works Director, the Public Facilities and Transportation Focus Group of Lewistown, Fergus County Commissioners, the Fergus County Planning Director, the Mayor of Grass Range, and the Grass Range Town Council. Interview topics included issues identified along the US 87 corridor between Lewistown and Grass Range, suggestions for the public involvement process--including recommended contacts, notification methods, and places appropriate to hold public meetings. (See the interview summary in Appendix F.)

Public Meetings

Four rounds of public meetings were held: one each in October 2000, February 2001, August 2001, and March 2002. Both verbal and written comments were solicited from meeting attendees. In addition, comment sheets and postcards were available so people could mail in comments later. Appendix F includes meeting minutes, a copy of meeting handouts, and written comments received during meetings or received via mail after the meetings.

October 2000 Public Meetings

Public meetings were held in Grass Range and Lewistown on October 4, 2000 and October 5, 2000, respectively. Thirty people attended each meeting. The purpose of these meetings was to introduce the project to the public, identify issues/concerns along US 87, and provide a basis for developing potential alternative alignments. The meetings' format included an open house, a brief presentation, and a question/comment period. (See Appendix F.)

February 2001 Public Meetings

Public meetings were held in Grass Range and Lewistown, Montana on February 20 and 22, respectively. Thirteen people attended the Grass Range meeting, and 27 attended the Lewistown meeting. The primary purpose of these meetings was to present the conceptual alternatives that were developed based on concepts and comments received during the October 2000 public meetings, and to solicit feedback on these alternatives. Criteria for evaluating the project alternatives were presented and discussed. The project schedule was also discussed. (See minutes in Appendix F.)

August 2001 Public Meetings

Public meetings were held in Grass Range and Lewistown, Montana on August 28 and 30, respectively. Seventeen people attended the Grass Range meeting, and 33 attended the Lewistown meeting. The purpose of these meetings was to provide additional design detail on the alignment alternatives that were retained after the February 2001 public meetings and to present preliminary environmental information for each alternative. (Meeting minutes are provided in Appendix F.)

March 2002 Public Meetings

Public meetings were held in Lewistown and Grass Range, Montana on March 12th and 14th respectively. Thirty-three people attended the Lewistown meeting and 19 people attended the Grass Range meeting. The purpose of these meetings was to provide additional design detail on the alignment alternatives (including two new alternatives) that were retained after the August 2001 public meetings, and to present detailed environmental information for each alternative. (Meeting minutes are provided in Appendix F.)

Press Releases and Mailings

Press releases announcing the public meetings occurred on September 7, 2000, January 23, 2001, August 23, 2001, and March 9, 2002. The public meetings were announced in the *Lewistown News Argus*, the *Billings Gazette*, and the *Great Falls Tribune*. The meeting dates and times were also broadcast on several local radio stations, including Station KXLO/KLCM in Lewistown. In addition, one flyer, one postcard and two newsletters were mailed out to property

owners, Lewistown focus group members, meeting attendees, federal and state agencies with jurisdiction, and local policymakers. The specific dates, descriptions of content, and the number distributed for each mailing are highlighted below.

September 24, 2000 Postcard

Postcards were mailed to 623 individuals in the Lewistown/Grass Range area. The postcard announced the date, time and place of the public meetings and indicated the purpose of the meetings, which was to get public input on concerns relating to US 87 and possible roadway improvements. A contact for persons with impaired hearing or those requiring ADA accommodations was also provided.

September 24, 2000 Flyer

Flyers were sent to 96 local businesses along Main Street and other public locations in Lewistown and Grass Range. The flyer was a "Notice of Public Meeting" and contained information similar to that presented on the postcards sent out on the same day.

February 3, 2001 Newsletter

Newsletters were distributed to 496 individuals in the Lewistown/Grass Range area. The newsletter included information on the following topics: how to keep informed, a summary of the October 2000 public meetings, project corridor accident data, project status, and how to be included on the project mailing list. In addition, the upcoming February 20 and 22 meetings were announced and the public was invited to attend. The purpose of these meetings was described, which was to share information and comments gathered to date from the communities, and to obtain public comments on the conceptual alternatives that had been developed.

August 10, 2001 Newsletter

Newsletters were distributed to 513 individuals during this mailing. Subjects presented in the newsletter included the following: proposed improvements to US 87 between Lewistown and Grass Range, a brief summary of the October 2000 public meetings, a more detailed summary of the February 2001 public meetings that included public comments gathered, alignment alternatives considered, evaluation criteria developed, typical section alternatives evaluated, and consultant team recommendations. Also included was a discussion on the project status along with an announcement and invitation to the August 2001 public meetings.

February 26, 2002 Newsletter

Newsletters were distributed to 455 individuals in the Lewistown area during this mailing. Subjects presented in the newsletter included the following: a project description; meeting purpose; project purpose; summaries of past public meetings held in October 2000, February 2001, and August 2001; newsletter distribution, criteria used to evaluate alternatives; evaluation process results table; and who to contact and how to be included on the project mailing list. Also included was a discussion of the project status, along with an announcement and invitation to the March 2002 public meetings.

Future Public Involvement Events

A Public Hearing on the Environmental Assessment will be held in the fall of 2003.

4.3 Distribution List

Federal Agencies

U.S. Army Corps of Engineers
301 South Park, Drawer 10014
Helena, MT 59626
Attn: Allan Steinle
Montana Program Manager

U.S. Department of the Interior
Bureau of Land Management
Lewistown Field Office
Airport Road, P.O. Box 1160
Lewistown, MT 59457-1160
Attn: Dave Mari, Field Manager
Gary E. Slagel, Assistant Field Manager
Loretta Park, Lewistown Office Staff

U.S. Department of the Interior
Fish & Wildlife Service
2900 4th Avenue North, Room 301
Billings, 59101-1266
Attn: Lou Hanebury, Biologist

U.S. Environmental Protection Agency
Region VIII, Montana Office
Federal Building, 10 NW 15th Street, Suite 3200
Helena, MT 59626-0096
Attn: John F. Wardell, Director

State Agencies

Montana Department of Environmental Quality
1520 East 6th Avenue, P. O. Box 200901
Helena, MT 59620-0901
Attn: Jan P. Sensibaugh, Administrator
Permitting & Compliance Division

Montana Department of Natural Resources & Conservation
Southern Land Office, Airport Park, Building IP9
Billings, MT 59105
Attn: Don Kendall, Area Manager

Montana Environmental Quality Council
Office of the Director
Capitol Post Office
P. O. Box 215
Helena, MT 59620

Montana Governor's Office
Executive Office
Room 204, State Capitol
Helena, MT 59620-0801

Montana State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202
Attn: Dr. Mark Baumler, Historian

Montana Department of Natural Resources & Conservation
1625 11th Avenue
P.O. Box 201601
Helena, MT 59104-0437
Attn: Bud Clinch, Director

Montana Department of Natural Resources & Conservation
1371 Rimtop Drive
Billings, MT 59105
Attn: Keith Kerbel, Regional Manager

Lewistown Office
1620 Airport Road, P.O. Box 491
Lewistown, MT 59457
Attn: Doug Lutke, Maintenance Chief

Montana Fish, Wildlife & Parks
4600 Giant Springs Road
Great Falls, MT 59405
Attn: Mike Aderhold, Regional Supervisor
Steve Leathe, Fish Manager
Graham Taylor, Wildlife Manager

Montana Fish, Wildlife & Parks
1420 East 6th Avenue, P.O. Box 200701
Helena, MT 59620-0701
Attn: M. Jeff Hagener, Director
Glenn R. Phillips, Chief of Habitat and Protection Bureau Fisheries Division

Montana Fish, Wildlife & Parks
Lewistown Area Resource Office
P.O. Box 938, 2358 Airport Road
Lewistown, MT 59457
Attn: Anne Tews, Fisheries Biologist
Tom Stivers, Wildlife Biologist

Montana Transportation Commission
748 Highway 89 N
Livingston, MT 59047
Attn: Acting Chairman Commissioner

Montana State Library
1515 East 6th Avenue, P.O. Box 201800
Helena, MT 59620-1800
Attn: Roberta Gebhardt

Local Agencies

City of Lewistown
305 West Watson
Lewistown, MT 59457
Attn: Kevin Myhre, City Manager
Duane Ferdinand, Planning Director

Fergus County Commissioners
712 West Main Street, 2nd Floor
Lewistown, MT 59457
Attn: Vernon Petersen, County Commissioner

Fergus County Planning Office
712 West Main Street
Lewistown, MT 59457
Attn: Linda Gillett, Fergus County Planning
Director

Town of Grass Range
P. O. Box 22
Grass Range, MT 59032
Attn: George Dengel, Mayor of Grass Range

Lewistown City Commissioners
505 West Main Street, Suite 209
Lewistown, MT 59457
Attn: Brad Parrish, Chairman Commissioner
Town Council of Grass Range
P. O. Box 807
Grass Range, MT 59032
Attn: Ed Geary, Town Council Member
Ron Ahlgren, Town Council Member
Don Parks, Town Council Member
Frank Dengel, Town Council Member

Individuals/Special Interest Groups

Boni Braunbeck
Housing Focus Group Chairman
Family Services
300 First Avenue North, Suite 201
Lewistown, MT 59457

Jim Chalmers
HC 85, Box 4162
Lewistown, MT 59457

Shannon Iverson
Land Use Focus Group Chairman
1118 W. Water
Lewistown, MT 59457

John Turner
Parks/Open Space Focus Group Chairman
P.O. Box 777
Lewistown, MT 59457

George and Jim Zellick
714 2nd Avenue South #C5
Lewistown, MT 59457

Mark Byers
At-Large Focus Group Member
P.O. Box 986
Lewistown, MT 59457

Nancy Hedrick
Historic Preservation Focus Group Chairman
Lewistown Art Center
801 W. Broadway
Lewistown, MT 59457

Mike Rinaldi
Public Facilities/Transportation Focus Group
Chairman
Central Montana Health District
305 W. Watson
Lewistown, MT 59457

Shari Westphal
P. O. Box 72
Grass Range, MT 59032

Dee Boyce
P.O. Box 802
Lewistown, MT 59457

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APPENDICES

A. LIST OF PREPARERS

The responsibilities and qualifications of the consultant team that prepared the Lewistown to Grass Range Corridor Study Environmental Assessment are listed below:

Preparer/Affiliation	Role	Education and Experience
Carl James Transportation Specialist FHWA	Joint Lead Agency	30 + years experience in planning, design, construction, environment, and right-of-way.
Alan Woodmansey, P.E. Operations Engineer FHWA	Joint Lead Agency	B.S. Environmental Engineering, M.S. Engineering Management. Eight years experience in transportation engineering.
Karl M. Helvik, P.E. Consultant Design MDT	Joint Lead Agency, Project Manager	B.S., Civil Engineering. Consultant Project Manager with over 28 years experience in road design and consultant project management.
Bruce Barrett Billings District Administrator MDT	Joint Lead Agency, Project Management, Public Participation	37 years with MDT, with experience in construction, equipment, and maintenance.
Dave Hill Manager of Environmental Services MDT	Joint Lead Agency, Project Management	B.S. Wildlife Biology. Fourteen years experience working in a variety of professions related to the environment, including: water quality permitting and compliance, project management, biological impact analysis and mitigation, and environmental analysis and review. Over five years experience with MDT.
Jean A. Riley, P.E. Engineering Section Supervisor Environmental Services MDT	Joint Lead Agency, Project Management	B.S., Civil Engineering. Over six years experience in environmental in coal mining, 11.5 years with DEQ in environmental compliance and regulatory requirements, and 4+ years with MDT in project management and environmental.
Gary Neville, P.E. Billings District Engineer MDT	Joint Lead Agency, Public Involvement	A.S. Civil Engineering Technology. Over 20 years of experience in Transportation in the Engineering, Management & Construction field; 17 years with MDT, and five years in the private Consulting and Construction sector.
Darryl L. James, AICP HKM Engineering, Inc.	Project Management, Public Participation	M.P.A., with an Environmental Concentration; B.A., Public Affairs and Political Science. Senior consultant with over ten years experience in transportation planning, environmental analysis, and technical report writing.
Kathleen L. Collins, AICP URS Corp.	Project Coordination, Socioeconomic Conditions, Pedestrian and Bicycle, Document Preparation	Masters, Urban Regional Planning; B.A., Mathematics. Transportation Planner with three years experience in environmental technical documentation, public involvement, and community development.
Jennifer Peterson HKM Engineering, Inc	Project Coordination, Document Preparation	B.S., Civil Engineering. Over four years experience in environmental technical documentation, public involvement, and traffic engineering.
Jan Newton, Ph.D.	Project Documentation, Public Involvement	Ph.D., Economics. Senior Project Manager with over 30 years experience in economic impact analysis and studies, NEPA documentation and report preparation, public involvement, and QA/QC.
Dave Hedstrom, P.E. URS Corp.	Hydrology and Hydraulics	B.S., Civil Engineering. Water Resources Engineer with 12 years of experience in hydrology and hydraulics related to transportation, including watersheds, and structure opening analysis, river and floodplain modeling, and scour evaluation.
Kirk Eakin URS Corp.	Biological Resources, Wetlands	B.S., Fish & Wildlife Science. Senior Biologist with 13 years of experience in fish and wildlife surveys, threatened and endangered species surveys, biological assessments, wetland delineations and evaluations, and environmental technical documentation. Worked five years as a Project Biologist for MDT Environmental Services.

Preparer/Affiliation	Role	Education and Experience
Sten Bolander, P.E. URS Corp.	Preliminary Design, Alternatives Development	B.S., Civil Engineering. Over 11 years experience in highway and transportation development and design as well as project coordination.
Andrea Hallman URS Corp.	Biological Resources	M.S., Environmental Studies; B.S., Biology and Environmental Science. Environmental Planner with seven years experience in wetlands evaluation, biological assessments, and threatened and endangered species surveys.
Nate Larson, P.E., AICP URS Corp.	Traffic Analysis	M.S., Civil Engineering; B.S., Civil Engineering. Transportation Engineer with six years experience in Transportation engineering and planning, including operations analysis, alternatives evaluation, preliminary design, simulation modeling, and data collection and management.
James Strait Ethnoscience, Inc.	Cultural/Historic Resources	B.S., Anthropology; M.A., Archaeology. Over 7 years experience in prehistoric and historic archaeological research and fieldwork.
Carol Lee-Roark, Ph.D. Hyalite Environmental, LLP	Hazardous Waste/ Water Quality	Ph.D., Geology. Over 20 years experience in scientific investigations and NEPA compliance, focusing on environmental and natural resource issues.
Chris Thelen, P.E. Hyalite Environmental, LLP	Hazardous Waste/ Water Quality	M.S., Environmental Engineering; B.S., Civil Engineering. Experience in environmental NEPA compliance including Phase I/II site assessment, water quality assessment, wetland delineation/mitigation and environmental permitting.

B. CORRESPONDENCE

DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION
NORTHEASTERN LAND OFFICE



STATE OF MONTANA

(406) 538-7789 Telephone
(406) 538-7780 FAX

February 13, 2002

613 NE MAIN
PO BOX 1021
LEWISTOWN, MONTANA 59457-1021

URS Corporation
1225 17th Street #200
Denver CO 80202

Attn: K.C. Collins

SUBJ: Lewistown to Grass Range Environmental Corridor Study
Fergus County Montana
NH 57-3(31)83
Control No. 4067

Dear Ms. Collins:

This letter serves as an answer to the questions raised in your letter to our Department dated September 20, 2000.

1. A cultural survey of the state lands along this corridor was completed a couple of years ago by Mid-Rivers Telephone Coop, Inc., for a fiber optic cable project. There are no significant cultural artifacts that I am aware of. Our Land Use Specialists have been over these particular tracts repeatedly. There have not been any cultural resources documented.
2. There are no active mineral leases or mining activities within the project vicinity.
3. There are no specific land uses that would be adversely impacted by the proposed project.
4. This project area is not within the reaches of any navigable waterway.
5. One section of state land does have timber on it. There was a sale on this tract about 5 years ago. What is left will not be merchantable for some time. Disposal arrangements with the State of Montana would have to be made if any timber would need to be removed.
6. There are no state lands along the corridor that are significant, state or local parks, wildlife refuges or recreation areas.
7. None of these tracts would fall under the National Land & Water Conservation Fund Act.
8. There are no ongoing projects or planned projects for this particular area that would be affected by the proposed action.

Sincerely,

A handwritten signature in cursive script that reads "Barny D. Smith".

BARNY D. SMITH
Lewistown Unit Manager
Northeastern Land Office

"AN EQUAL OPPORTUNITY EMPLOYER"



**Montana Fish,
Wildlife & Parks**

RECEIVED
FEB - 5 2001
B.R.W., Inc.

Lewistown Area Resource Office
P.O. Box 938
2358 Airport Road
Lewistown, MT 59457

February 2, 2001

Debra Perkins-Smith, AICP; Project Manager
BRW, 17th Street Plaza
1225 Seventeenth St. Suite 200
Denver, CO 80202

Subject: Lewistown to Grass Range Environmental Corridor Study

Dear Ms. Perkins-Smith:

Last fall I received an information request for fisheries data along the proposed Lewistown to Grass Range Environmental Corridor. Hopefully at this late date, you will still be able to use this information.

I do not have data in my files about either Boyd or N. Fk. McDonald Creek. I assume that you are familiar with the Montana Rivers information system on the Internet. That database, which can be accessed from www.nris.state.mt.us (go to water information) has some additional information and indicates that a species of special concern, northern redbelly x finescale dace has been found in McDonald Creek downstream from Grass Range. Since the stream above Grass Range has had limited (if any sampling) by Montana Fish, Wildlife and Parks, it is possible that this species may be present above Grass Range as well. Additional data needs to be collected to make sure this and other species will not be impacted by construction activities.

If you have any questions feel free to call. Please keep me in the loop regarding this project.

Sincerely:

A handwritten signature in black ink that reads "Anne Tews". The signature is fluid and cursive, with the first name being more prominent.

Anne Tews
Fisheries Biologist
406 538-4658
antews@state.mt.us



United States
Department of
Agriculture

Natural Resources
Conservation
Service

Lewistown Field Office
211 McKinley - Suite 3
Lewistown, Montana 59457-2020

BRW Inc.
Seventeenth Street Plaza
1225 Seventeenth Street
Suite 200
Denver, Colorado
80202

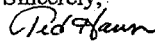
October 25, 2000

RECEIVED
NOV - 6 2000
B.R.W., Inc.

re: Lewistown to Grass Range Environmental Study
Proposed Highway Project

Dear Sirs,

I am in receipt of your letter regarding the proposed highway project from Lewistown to Grass Range Montana. The project may impact an undetermined amount of Prime Farmlands and Farmlands that would be Prime if irrigated. I have enclosed Important Farmland Maps of Fergus County for your review. The impacts to these farmlands is not discernible until the appropriate design criteria is complete. The proposed project also may encounter wetlands in certain areas. As the project progresses, please contact NRCS for information on these issues or other issues as appropriate. My phone number is 406-538-7401, ext.116.

Sincerely,

Ted Hawn
District Conservationist

cc: P. Philipps,ASTC ,Great Falls

AN EQUAL OPPORTUNITY EMPLOYER

RECEIVED



Montana Fish
 Wildlife & Parks

OCT 13 2000

MONTANA DEPT. OF TRANSPORTATION
 BILLINGS DISTRICT
 BILLINGS, MONTANA

Montana Dept. of Transportation
 424 Morey St.
 Billings, Mt. 59104.

Oct. 13, 2000

Sirs,

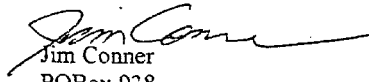
NH 57-3(31) 83
 CN 4067

Date	Recd	Preconst	10-20-00
Act.	Info	MAIL ROUTE	Initial
		30 Preconst Engr	
		30 Assistant	
		30 Office Mgr	
		31 Safety Mgmt.	
		32 Road Design	
		33 Environment	
		34 Hydraulics	
		35 Survey & Mapping	
		36 Traffic Eng	
		38 Consultant Gen.	

I would like to comment on the proposed construction project for the corridor area on Hwy. 87 between Lewistown and Grass Range. I give you this perspective as one of the State Game Wardens for the Lewistown area and the numerous times I drive this road for work and play. The points I would like to make are the following:

1. There should be a passing lane on both sides of the divide, the area approximately 8 miles east of Lewistown. I hope you also straighten out the curves in the divide area at that time.
2. There area also some curves, dips and hills from 12 miles to about 20 miles east of Lewistown that have shown to me to be dangerous especially when it its time to pass another vehicle.
3. Lastly I think the new road kill form you have sent out will show the extreme number of deer killed on this whole 30 mile stretch of road. From Pamida east to the junction. I believe this stretch is second in dead deer only to a stretch on Upper Spring Creek road in my area. I would like to see some innovative work done to try and reduce the incidences of vehicle vs. deer collisions. I understand that on stretches of the interstate around Billings there are plans to design some fencing and other structure to reduce the collisions. There are spots I will certainly help identify that seem to have deer crossing a lot. I would hope some fencing, used to funnel deer to an underpass, would be feasible. The area I described in #2 above would be ideal to clear up both problems. Fill in the dips between the ridges with the underpasses and use the underpasses not only to allow the deer to cross safely, but to also allow the rancher who may own land on both sides of the road the opportunity to move their cattle back and forth safely.

I hope these comments are constructive. I can be contacted through our office here in Lewistown. Thank you for you time.


 Jim Conner
 POBox 938
 Lewistown, Mt.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

RECEIVED
OCT 16 2000
B.R.W., Inc.

M.44 MDOT (I)

October 10, 2000

Debra Perkins-Smith
BRW
1225 Seventeenth Street, Suite 200
Denver, Colorado 80202

Dear Ms. Perkins-Smith:

This responds to your letter dated September 20, regarding the environmental corridor study for US Highway 87 from the eastern edge of Lewistown to north of Grassrange in Fergus County, Montana (NH 57-3(31)83; Control No. 4067). Your letter requested a list of threatened and endangered (T/E) species that may occur in the vicinity of this corridor. In addition, you requested that the US Fish and Wildlife Service (Service) be a Cooperating Agency with regards to this project. The Service received your letter on September 25.

In response to a previous letter from BRW dated July 24, the Service provided a list of T/E species that may occur near this proposed project corridor in a letter to your office dated August 4. A copy has been enclosed for your reference.

Because of the nature of the proposed project and the small amount of staff time the Service's Montana Field Office has available, it will not be possible for the Service to participate in this project as a full Cooperating Agency. It will be necessary to limit the extent of the Service's involvement with this project to the review of, and response to, documents required for compliance with the §.7 consultation process, pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et. seq.), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.).

If you have questions regarding this letter, please contact Mr. Scott Jackson at (406)449-5225, ext. 201.

Sincerely,

Acting Field Supervisor

enclosure



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
HELENA REGULATORY OFFICE
301 SOUTH PARK, DRAWER 10014
HELENA, MONTANA 59626-0014

October 3, 2000

RECEIVED

OCT - 9 2000

B.R.W., Inc.

Helena Regulatory Office
Phone (406) 441-1375
Fax (406) 441-1380

Subject: Lewiston to Grass Range Environmental Corridor Study

Ms. Debra Perkins-Smith
Dames and Moore - BRW
Seventeenth Street Plaza
1225 17th Street
Suite 200
Denver, Colorado 80202

Dear Ms. Perkins-Smith,

The Corps of Engineers agrees to be a Cooperating Agency for the Lewiston to Grass Range Environmental Corridor Study. The point of contact for the Helena Regulatory Office is Todd Tillingier. His phone number and address are listed above.

Sincerely,

A handwritten signature in cursive script that reads "Allan Steinle".

Allan Steinle
Montana Program Manager



United States Department of the Interior

FISH AND WILDLIFE SERVICE
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

M.44 MDT (I)

August 4, 2000

Ms. Andrea Hallman
BRW
Seventeenth Street Plaza
1225 Seventeenth Street, Suite 200
Denver, Colorado 80202

Dear Ms. Hallman:

This responds to your letter dated July 24, in which you requested a list of threatened and endangered (T/E) species that may occur along the US Highway 87/200 corridor between Lewistown and Grassrange in Fergus County, Montana. These comments were prepared under the authority of, and in accordance with, the provisions of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et. seq.) and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.).

In accordance with §7(c) of the Act, the US Fish and Wildlife Service (Service) has determined that the following listed, proposed and candidate species may be present in the vicinity of the proposed roadway improvement feasibility study:

<u>Listed Species</u>	<u>Expected Occurrence</u>
bald eagle (<i>Haliaeetus leucocephalus</i>); threatened	spring or fall migrant
black-footed ferret (<i>Mustela nigripes</i>); endangered	prairie dog complexes
<u>Proposed Species</u>	<u>Expected Occurrence</u>
mountain plover (<i>Charadrius montanus</i>); proposed as threatened	potential occurrence in shortgrass prairie habitat
<u>Candidate Species</u>	<u>Expected Occurrence</u>
black-tailed prairie dog (<i>Cynomys ludovicianus</i>)	shortgrass prairies of eastern MT
swift fox (<i>Vulpes velox</i>)	prairie grasslands of eastern MT

This is your future. Don't leave it blank. - Support the 2000 Census.

Section 7(c) of the Act requires that Federal agencies proposing major construction activities complete a biological assessment to determine the effects of the proposed actions on listed and proposed species and use the biological assessment to determine whether formal consultation is required. A major construction activity is defined as "a construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in the National Environmental Policy Act (NEPA)" (50 CFR Part 402). If a biological assessment is not required (i.e. all other actions), the Federal agency is still required to review their proposed activities to determine whether listed species may be affected. If such a determination is made, formal consultation with the Service is required.

For those actions wherein a biological assessment is required, the assessment should be completed within 180 days of initiation. This time frame can be extended by mutual agreement between the Federal agency or its designated non-Federal representative and the Service. If an assessment is not initiated within 90 days, this list of T/E species should be verified with the Service prior to initiation of the assessment. The biological assessment may be undertaken as part of the Federal agency's compliance of §102 of NEPA and incorporated into the NEPA documents. We recommend that biological assessments include the following:

1. A description of the project.
2. A description of the specific area that may be affected by the action.
3. The current status, habitat use, and behavior of T/E species in the project area.
4. Discussion of the methods used to determine the information in Item 3.
5. An analysis of the affects of the action on listed species and proposed species and their habitats, including an analysis of any cumulative effects.
6. Coordination/mitigation measures that will reduce/eliminate adverse impacts to T/E species.
7. The expected status of T/E species in the future (short and long term) during and after project completion.
8. A determination of "is likely to adversely affect" or "is not likely to adversely affect" for listed species.
9. A determination of "is likely to jeopardize" or "is not likely to jeopardize" for proposed species.
10. Citation of literature and personal contacts used in developing the assessment.

If it is determined that a proposed program or project "is likely to adversely affect" any listed species, formal consultation should be initiated with this office. If it is concluded that the project "is not likely to adversely affect" listed species, the Service should be asked to review the assessment and concur with the determination of no adverse effect.

Pursuant to §7(a) (4) of the Act, if it is determined that any proposed species may be jeopardized, the Federal agency should initiate a conference with the Service to discuss conservation measures for those species. For more information regarding species of concern occurring in the project

Page 3

area, including proposed and candidate species, please contact the Montana Natural Heritage Program, 1515 East 6th Ave., Helena, 59601, (406) 444-3009.

A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare biological assessments. However, the ultimate responsibility for §7 compliance remains with the Federal agency and written notice should be provided to the Service upon such a designation. We recommend that Federal agencies provide their non-Federal representatives with proper guidance and oversight during preparation of biological assessments and evaluation of potential impacts to listed species.

Section 7(d) of the Act requires that the Federal agency and permit/applicant not make any irreversible or irretrievable commitment of resources which would preclude the formulation of reasonable and prudent alternatives until consultation on listed species is completed.

Any power lines in the vicinity, if not properly constructed, could pose electrocution hazards for bald eagles. To conserve this species, and other large raptors protected by Federal law, we urge that any power lines that need to be modified or reconstructed as a result of this project be raptor-proofed following the criteria and techniques outlined in the publication, "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996." A copy may be obtained from: Jim Fitzpatrick, Treasurer, Carpenter Nature Center, 12805 St. Croix Trail South, Hastings, MN 55033. The use of such techniques would likely be most beneficial adjacent to expected raptor foraging areas (i.e. stream crossings or wetlands that support populations of waterfowl).

If wetlands might be impacted by the proposed construction project, Corps of Engineers (Corps) §404 permits may eventually be required. In that event, depending on permit type and other factors, the Service may be required to review permit applications and will recommend any protection or mitigation measures to the Corps as may appear reasonable and prudent based on the information available at that time.

If you have questions regarding this letter, please contact Mr. Scott Jackson at the address above or by phone at (406) 449-5225, ext. 201.

Sincerely,



Acting Field Supervisor

Copy to: Lou Hanebury, FWS-ES, Billings Suboffice
Dave Hill, MDT, Environ. Services, 2701 Prospect, Helena, MT 59620-1001



IN REPLY TO:

2800

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Lewistown Field Office
Airport Road
P.O. Box 1160
Lewistown, Montana 59457-1160

RECEIVED
OCT - 4 2000
B.R.W., Inc.

October 2, 2000

Debra Perkins-Smith, AICP
Project Manager
BRW, Inc.
Seventeenth Street Plaza
1225 17th Street, Ste 200
Denver CO 80202

Dear Ms. Perkins-Smith:

This letter will convey our intent to act as a Cooperating Agency on the proposed project known as the Lewistown to Grass Range Environmental Corridor Study.

Loretta Park will be your contact on this project; her phone number is 406-538-1910. If necessary, you may reach me at 406-538-1950. Please continue to keep us informed regarding the progress of the project.

Sincerely,

Gary E. Slagel
Assistant Field Manager

C. SHPO CONCURRENCE ON CULTURAL RESOURCES

ultural



MONTANA HISTORICAL SOCIETY

225 North Roberts ♦ P.O. Box 201201 ♦ Helena, MT 59620-1201
♦ (406) 444-2694 ♦ ~~PO Box 444269~~ ♦ www.montanahistoricalsociety.org ♦

October 31, 2002

NOV 06 2002

ENVIRONMENTAL

MASTER FILE
COPY

JON AXLINE
MDT
2701 PROSPECT AVENUE
PO BOX 201001
HELENA MONTANA 59620 1001

RE: NH 57-3(31)83 Lewistown - Grassrange Control No. 4067

Dear Jon,

It was a little bit of a job to sort thru this updated report, so I hope I have it all straight. I will be following the order you have in your letter to us, so first, we concur that site 24FR0890 is eligible for the register, but sites 24FR0899, 24FR0904, 24FR0908, and 24FR0912 are now considered ineligible for the Register. We acknowledge that sites 24FR0897 and 24FR0898 are outside of the current APE and along with site 24FR0905 will remain unresolved.

Since site 24FR0410 is covered under the PA, it will remain unresolved. We concur that due to site 24FR0881 being a feature of the road, it would be covered under the PA and will remain unresolved. Since I could find no additional information on site 24FR0882 it will have to remain unresolved. As a bridge we will need some assurance from the locals that it has no local significance.

On site 24FR0892, we don't have to have testimony from locals to dismiss this site because I think it is eligible, so if you still disagree you will have to appeal to the Keeper. In view of the fact that site 24FR0893 has been a private home we can go on the local verbal testimony that it is not eligible. With site 24FR0895, you will have to append the site form if you have information about its age, which was not reported to us, other than as a statement in your latest letter. Site 24FR0907 according to the latest site form has had buildings moved around within the recent past so we concur it is not eligible.

In conclusion we concur with you that sites 24FR0889, 24FR0916, 24FR0817, 24FR0890, and 24FR0921 are eligible. Sites 24FR0636, 24FR0889, 24FR0896, 24FR0900, and 24FR0901 all contribute to site 24FR0921.

If you have any questions about any points that I have made, you may call me at (406) 444-0388.

Sincerely,

Josef J Warhank
Review & Compliance Officer

file: MDT/2002

STATE HISTORIC PRESERVATION OFFICE ♦ 1410 8th Ave ♦ P.O. Box 201202 ♦ Helena, MT 59620-1202
♦ (406) 444-7715 ♦ FAX (406) 444-6575



Montana Department of Transportation
 2701 Prospect Avenue
 PO Box 201001
 Helena MT 59620-1001

David A. Galt, Director
 Judy Martz, Governor

December 26, 2002

MASTER FILE COPY

*Copy to BLW
 12/30/02*

Mark Baumler
 State Historic Preservation Office
 1410 8th Avenue
 P.O. Box 201202
 Helena, MT 59620-1202

Subject: NH 57-3(31)83
 Lewistown - Grassrange
 Control No. 4067

Enclosed is the Determination of Effect for the above project in Fergus County. We have determined that the proposed project would have No Effect to the South Fork of McDonald Creek Bridge (24FR882) and the Trepp Place (24FR886). There would be No Adverse Effect to Judith Divide Historic Mining District (24FR921), and an Adverse Effect to the archaeological site 24FR890 for the reasons specified in the document. We request your concurrence. A proposed Data Recovery Plan for 24FR890 is also enclosed for your review and comments.

If you have any questions, please contact me at 444-6258.

Jon Axline
 Jon Axline, Historian
 Environmental Services

cc: Bruce Barrett, Billings District Administrator
 Carl Peil, P.E., Preconstruction Bureau
 Gordon Stockstad, Resources Section

Date Recd		Preconst	12-30-02	
Act	Info	MAIL ROUTE	Attach	Inter
	<input checked="" type="checkbox"/>	30 Preconst Engr		
	<input checked="" type="checkbox"/>	30 Assistant		
		30 Office Mgr		
		31 Safety Mgmt		
		32 Road Des		
		33 Environment		
		34 Hydraulics		
		35 Survey & Mapping		
	<input checked="" type="checkbox"/>	35 Traffic Eng		
		39 Consultant Dsn.		
	<input checked="" type="checkbox"/>			





US Department
Of Transportation
Federal Highway
Administration

RECEIVED
SEP 26 2003
ENVIRONMENTAL

Montana Division
2880 Skyway Drive
Helena, Montana 59602

September 24, 2003

Advisory Council on Historic Preservations
c/o Don Klima
12136 West Bayaud Avenue, Suite 330
Lakewood, CO 80228

Subject: NH 57-3(31)83
Lewistown - Grassrange
Control No. 4067

Dear Mr. Klima:

The Federal Highway Administration intends to assist the Montana Department of Transportation (MDT) with a highway reconstruction project in Fergus County, Montana. As presently conceived, the proposed project would include impacts to the Cowan Mine (24FR636) and to an archaeological sit (24FR890). Both sites have been determined eligible for the National Register of Historic Places (NRHP) by the MDT and Montana SHPO. Impacts would include the possible destruction of the Cowan Mine, which is a contributing component to the Judith Divide Historic Mining District (24FR921), and the archeological site (24FR890) to expand and improve the existing substandard roadway.

This letter is to inquire if you wish to be involved in the consultation process during which alternatives to the planned action will be examined and mitigation measures identified. Attached is supporting documentation between the MDT and SHOP.

Sincerely,

A handwritten signature in black ink, appearing to read "Dale W. Paulson".

Dale W. Paulson
Program Development Engineer

Attachment

cc: Jon Axline - MDT
Mark Baumler - SHPO

File: NH 57-3(31)83 dp/lr

D. FARMLAND PROTECTION POLICY ACT – AD 1006 FORM

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date of Land Evaluation Request 2/19/02						
Name of Project Lewistown to Grass Range, Montana		Federal Agency Involved USDoT - Federal Highway Administration, and the Montana Department of Transportation						
Proposed Land Use Highway Right-of-Way		Fergus County, Montana						
PART II (To be completed by SCS)		Date Request Received by SCS						
Does the site contain (1) the unique, statewide or local important farmland? Yes <input type="checkbox"/> No <input type="checkbox"/> (If no, the FFA does not apply; do not complete additional parts of this form)		Acres Irrigated		Average Farm Size				
Major Crops		Farmable Land in Govt. Jurisdiction (Acres)		Amount of Farmland as Defined in FFA (Acres)				
Name of Land Evaluation System Used		Name of Local Site Assessment System		Date Land Evaluation Requested by SCS				
PART III (To be completed by Federal Agency)		Alternative Site Rating						
		No Build	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6
A. Total Acres to be converted directly		0	216	222	203	216	178	169
B. Total Acres to be converted indirectly		0	0	0	0	0	0	0
C. Total Acres in Site		0	506	592	637	506	552	710
PART IV (To be completed by SCS) Land Evaluation Information								
A. Total Acres Prime and Unique Farmland								
B. Total Acres Statewide and Local Important Farmland								
C. Percentage of farmland in County or Local Govt. lands to be converted								
D. Percentage of farmland in Govt. Jurisdiction with same or higher rating status								
PART V (To be completed by SCS) Land Evaluation Criteria Relative Value of Farmland to be Covered (Scale of 0 to 100 Points)								
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.8(b))		Max. Pts.						
1. Area Nonurban Use		15	14	14	14	14	14	14
2. Perimeter in Nonurban Use		10	9	9	9	9	9	9
3. Percent of Site Being Farmed		20	15	15	15	15	15	15
4. Protection Provided by State and Local Govt.		20	0	0	0	0	0	0
5. Distance from Urban Builtup Area		N/A	--	--	--	--	--	--
6. Distance to Urban Support Services		N/A	--	--	--	--	--	--
7. Size of present farm unit compared to average		10	10	10	10	10	10	10
8. Creation of nonfarmable farmland		25	9	9	9	9	9	9
9. Availability of farm support services		5	5	5	5	5	5	5
10. On-farm investments		20	5	5	5	5	5	5
11. Effects of conversion on farm support services		25	0	0	0	0	0	0
12. Compatibility with existing agricultural use		10	5	5	5	5	5	5
TOTAL SITE ASSESSMENT POINTS		160	72	72	72	72	72	72
PART VII (To be completed by Federal Agency)								
Relative value of farmland (From Part V)		100	72	72	72	72	72	72
Total Site Assessment (From Part VI above or a local site assessment)		160						
TOTAL POINTS (Total of above 2 lines)		260						
Site Selected:		Date of Selection		Was a Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>				
Reason for Selection:								

(See instructions on reverse side)

Form AD-1006(10-83)

No Build - No Action alternative, as required under NEPA
 Alt. 1 - Existing Corridor alternative, with minimal changes
 Alt. 2 - New Alignment at Divide alternative
 Alt. 3 - Railroad Grade at Divide alternative

Alt. 4 - Snow Ridge Alignment alternative
 Alt. 5 - West of Cheadle Alignment alternative
 Alt. 6 - Railroad Grade East of Cheadle alternative

FIGURE 5:
 FARMLANDS INVENTORY
 (1 OF 2)

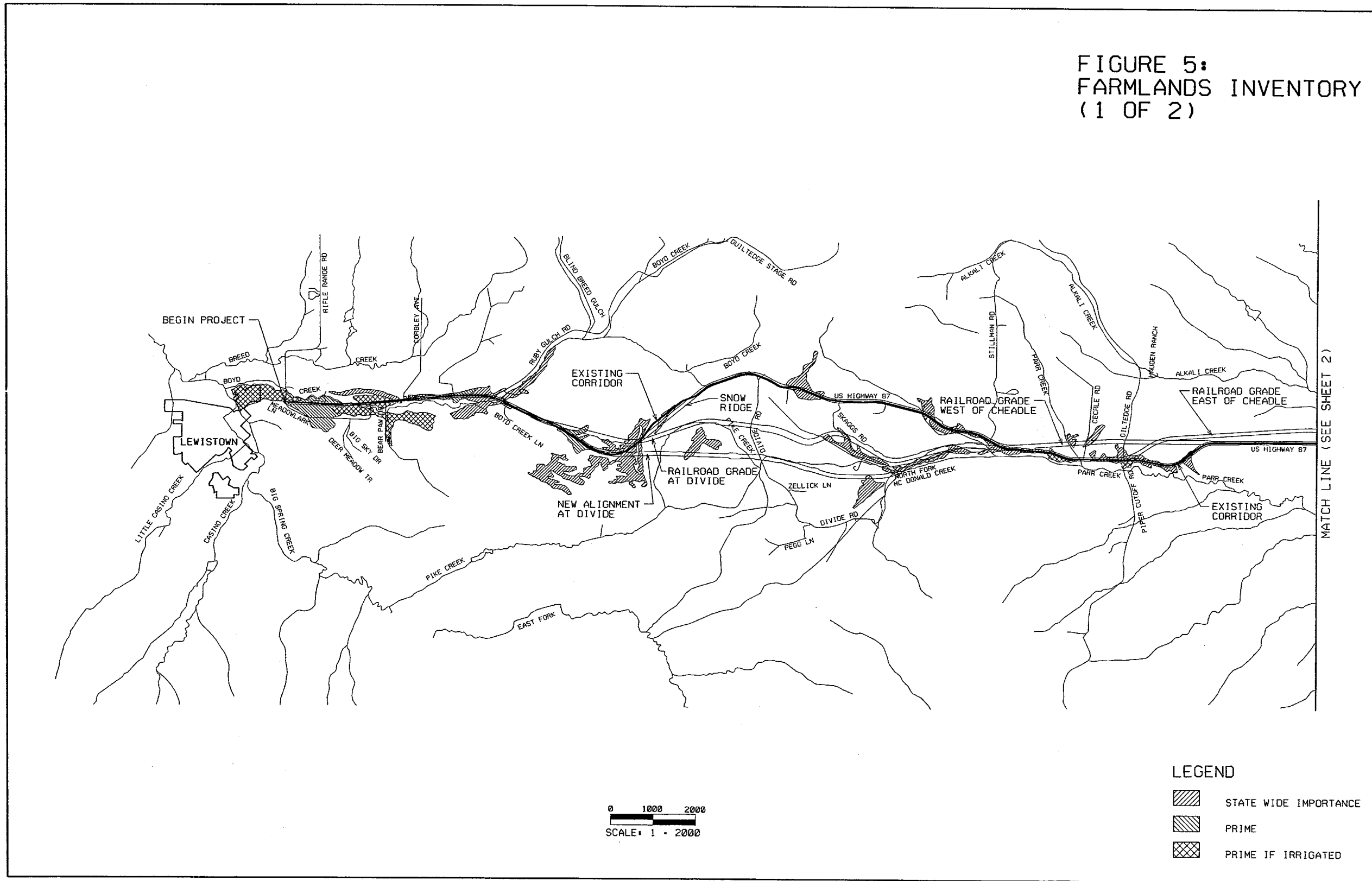
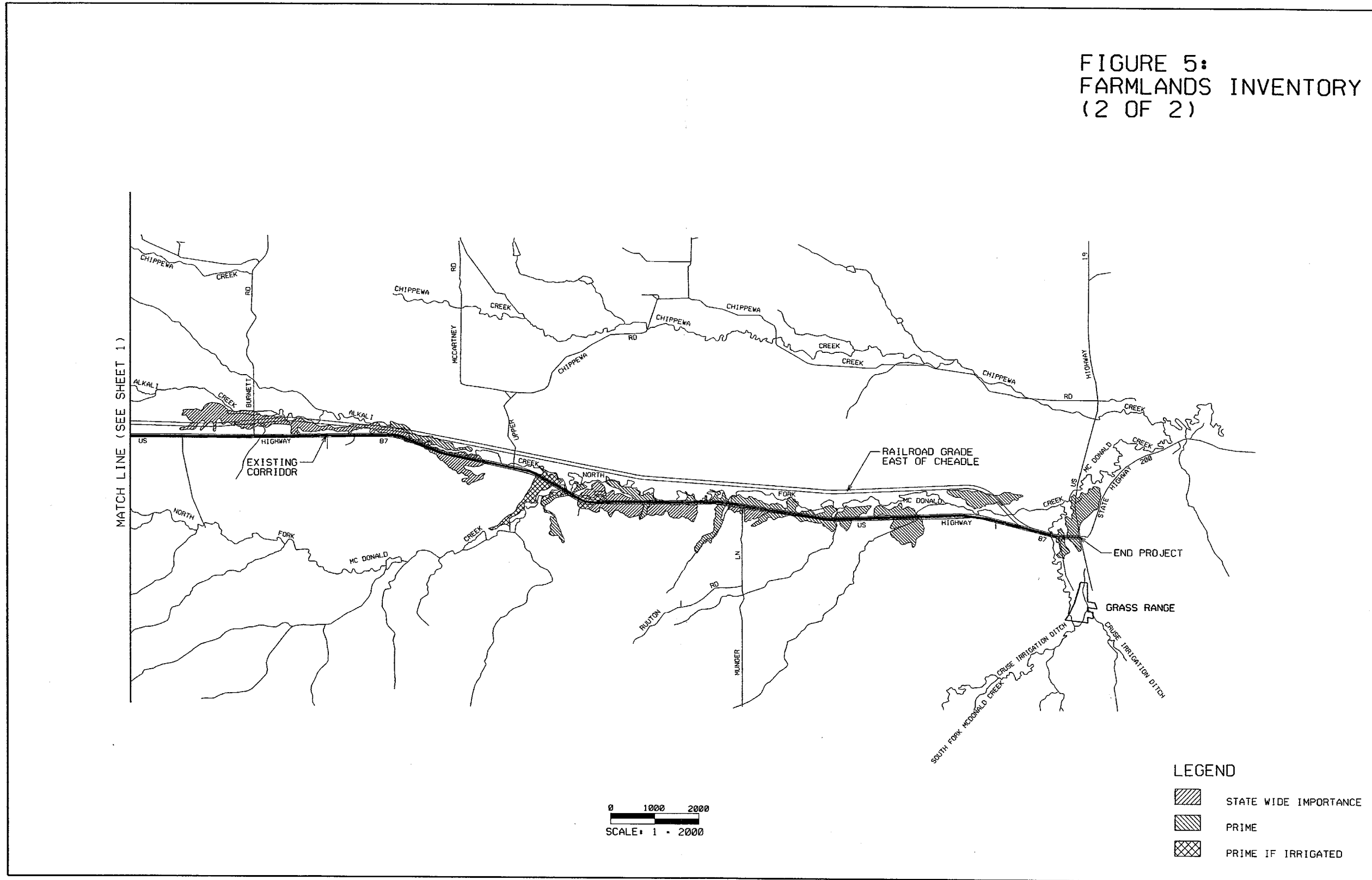


FIGURE 5:
FARMLANDS INVENTORY
(2 OF 2)



E. SOURCES AND SUPPORTING DOCUMENTS

Websites

Census Bureau

1990 <http://venus.census.gov/cdrom/lookup/>

Census and Economic Information Center, Montana Department of Commerce

2001 <http://commerce.state.mt.us/ceic/demog/mtbynumb.htm>.

Montana Department of Environmental Quality

2001 <http://water.montana.edu/docs/tmdl/303d/303dlist.htm>.

Montana Natural Heritage Program

2001 <http://nris.state.mt.us/mtnhp/index.html>

United States Department of Agriculture, Natural Resource Conservation Service

2001 <http://www.mt.nrcs.usda.gov/soils/mtsoils.html>

U.S. Department of Commerce, Bureau of Economic Analysis

2001 <http://www.fs.fed.us/rl/planning/econ/easy/library/>

Technical Documents/Mapping

Benchmark Mapping Services, Inc.

2000 Aerial Photographs of US 87 Lewistown to Grass Range

Big Sky Acoustics, LLC

2002 Final Lewistown to Grass Range Traffic Noise Study

BRW, Inc.

2001 *Biological Resources Report*

2001 Lewistown to Grass Range Draft Hydrology Report

Ethnoscience, Inc.

2002 A Cultural Resource Inventory of the Proposed Lewistown to Grass Range Environmental Corridor Study Area, Fergus County, Montana

Hyalite Environmental, LLP

2002 Initial Site Assessment Lewistown to Grass Range Environmental Corridor Study

United States Geological Survey

1986 Quadrangles, Fergus County Montana: *Lewistown, Pike Creek, Fish Dam, Horsethief Coulee West, Horsethief Coulee East, Grass Range*

Planning Documents

City of Lewistown Department of Planning and Historic Preservation
2000 Draft Lewistown and Vicinity Growth Policy

Clark, Coleman, & Rupeiks, Inc.

1971 *Comprehensive Plan for Lewistown, Montana*

Johnson, Dave

1998 *Proposed Commercial Vehicle Bypass Route for the City of Lewistown, Montana*

Morrison-Maierle, Inc.,

1974 *Lewistown Topics: A Traffic Operations Improvement Plan for the Lewistown Urban Area*

Sand Creek, the Ranch Preservation Company, LLC

2000 Chalmer Residence Conceptual Master Plan

F. PUBLIC INVOLVEMENT



**LEWISTOWN TO GRASS RANGE
ENVIRONMENTAL CORRIDOR STUDY
Interview Summary
JUNE 19, 2000 THROUGH JUNE 21, 2000**

The following is a summary of comments for the stakeholder interviews conducted in Lewistown and Grass Range. Input from these interviews provides a basis for identifying community concerns and developing the public involvement program for this project.

Persons interviewed: *the City Manager of Lewistown, Lewistown City Commissioners, the Lewistown Planning Director, the Lewistown Public Works Director, the Public Facilities and Transportation Focus Group of Lewistown, Fergus County Commissioners, the Fergus County Planning Director, the Mayor of Grass Range, and the Grass Range Town Council.*

Issues Identified along the US 87 Roadway Corridor

1. Safety concerns at corners near Divide Road and corner at Ayers Ranch Colony going west - especially in the winter.
2. The roadway segment between either ends of Divide Road has blind hills, and is narrow.
3. Accidents occur along the whole stretch of the roadway between either ends of Divide Road.
4. It is almost impossible to keep the roadway clear of snow and ice as trees shade the roadway.
5. Blind approaches along the Divide.
6. Black ice is a problem at Divide Road.
7. Fatality occurred at US 87 and Divide Road.
8. Intersection at US191 and US 87 dangerous where cars heading west run out in front of trucks heading south.
9. Safety concerns at curve entering Lewistown at B& B.
10. Safety concerns east of Gilt Edge Road.
11. Safety concerns at the bottom of Divide Road.
12. At First Avenue to Main Street, the turn is bad for a left turn heading southeast on First Avenue to Main Street.
13. Intersection of US 87 and SH19 at Grass Range is a safety concern – westbound cars pull out in front of trucks heading south – six people killed there fairly recently.
14. Road is heavily used for commuters, especially people from the Grass Range area who commute to Lewistown.
15. High School kids drive too fast along the US 87 corridor and at Brassey Street in Lewistown.
16. Deer crossings are frequent along the corridor.
17. Traffic slowed due to vehicles traveling under the speed limit.
18. Heavy use of trucks between 11:00AM and 4:00AM.
19. Many trucks traveling locally with grain and horses and cattle – no way to pass and they are usually slow moving. Same for trucks and RVs.
20. Some RVs will pull-off road at chain-up areas.
21. Tourists do not have experience driving on roads without shoulders; concern about hitting pedestrians on roadway.
22. Very satisfied with roadway maintenance.



23. Concern about school bus stops and turn-arounds. School bus district ends at Cheadle (Gilt Edge Road). Stops are at: Cheadle, Burnett Road, Missile Site, Munger Road, and Ayers Ranch Colony.
24. Local truck stop Eddy's Corner is only stop on US 87 between Great Falls and Billings.
25. Lewistown losing rail service in town to a grainery at Mocassin, 25 - 30 miles west of town. Lewistown would like rail service to continue but with fewer railroad crossings. Lewistown would like to develop an industrial park west of town for rail service. Timber hauling prevalent - railroad goes to Pacific Steel and Berg Lumber. Soon to be closed according to BN railroad. The Charlie Russell Train can not access Lewistown directly. Some interviewees suggested that if the railroad lines were abandoned in town, this would provide an opportunity for use of these corridors as potential roadways.
26. Regarding Fergus County, no zoning requirements exist, improving the roads will increase traffic and fuel development of subdivisions and commercial enterprises. Forest Grove Road may be a prime development area. County is starting a GIS system.
27. For landowners on the existing highway, access would need to be maintained with all alternatives.
28. Suggested Improvements
 - Truck climbing lanes at Divide Road to provide safe passing capability.
 - Passing lanes are needed on both the east and west sides of the roadway segment between the ends Divide Road.
 - Pull-off areas for slow moving vehicles.
 - Wider shoulder and flatter slopes to help with sight distances.
 - Deer fencing at Divide.
 - Provide sidewalk to Simms Parks - (CTEP project on north bike path) provide bike route to parks.
 - Surface seal in some areas only - no other improvement necessary.
29. Suggested Alternative Routes
 - Philips Hill - first hill east of Lewistown Coulee to the north where old road was then straight route from Boyd Creek through Divide Road using old railroad grade (MP 87 to MP 94) - take Boyd Creek and stay north to railroad tunnel and then stay south after railroad tunnel.
 - New alignment from top of pass to east of Divide Road.
 - Consider S 238 that would eliminate going over Divide - Look at railroad grade into Heath.
 - Look at improving the highway east of town as it approaches the east of town.
 - No improvements needed - possibly some surface seal in selected areas.

Suggestions for the Public Involvement Process

Not much attendance would be expected at public meetings.

Residents have public meeting burnout.

Public meetings

Newspaper articles

Newsletters

Many area residents have internet access and if not at home, have access at the library, so a website may be a possible communication tool for the project.



Additional contacts recommended:

- Sheriff – Ron Rawton
- Delivery drivers using the route such as mail carriers, UPS drivers, water truck drivers coke/beer distributor drivers, etc.
- School bus drivers
- Landowners along the corridor – form a Citizen Advisory Council
- Fergus County Planning Board
- Chamber of Commerce - J.R. Strand
- School district officials.

Notification methods suggested include:

Lewistown

Radio KXLO contact Joe Zahler – News Director, needs 2 weeks notice.
Flyers posted at restaurants, hotels, library, city hall, county courthouse.
Newspaper notices in Great Falls Tribune, Billings Gazette, Lewistown News Argus – Greg Little
Newsletters would not be read.
Newsletters

Grass Range

Mailing to Post Office 500 – Post Cards
In mailing notices, should take into consideration that people pick up their mail only once a week.
(Therefore, Grass Range residents may need more advance notice.)
Post notices at the Grass Range Café, Gas Station-Little Montana, and the hardware store.

Places to hold meetings that were recommended include:

Lewistown

High School during school year
Library
Community Center
County Court House
Yogo Inn
Sheriff Complex
Civic Center

Grass Range

High School
Masonic Hall



Summary of Public Meetings October 4th and 5th, 2000

Public meetings were held in Grass Range and Lewistown, Montana on October 4th and 5th, 2000 respectively, in relation to the Lewistown to Grass Range Environmental Corridor Study. The Grass Range meeting was held from 7pm – 9pm in the multi-purpose room of Grass Range High School, and the Lewistown meeting was held at the Yogo Inn Mocassin Mountain room from 6pm-8pm. Thirty attended the Grass Range meeting and 30 attended the Lewistown meeting (not including project team members). See the attached lists of written comments and attendees, along with a copy of the handout, and copies of other information presented at the meetings.

Project Team Attendees:

Bruce Barrett, MDT
Doug Lutke, MDT (October 4th meeting only)
Joe Olsen, MDT (October 4th meeting only)
Debra Perkins-Smith, BRW/URS
Dave Hilliard, BRW/URS
Colt Wise, BRW/URS (October 5th meeting only)
KC Collins, BRW/URS
Mark Zitzka, FHWA (October 5th meeting only)

Meeting Format and Presentation

The meeting format was similar for both meetings held, which included open house, formal presentation, and question/comment periods.

For the first half hour of the meetings, attendees signed in and were free to review wall displays depicting the project process, a USGS map of the study area, accident data for the study area, and potential project issues. During this time many attendees went up to the study area map and identified problem areas which were then recorded by BRW/URS project team members.

After the initial sign-in and review of presentation information, Bruce Barrett of the Montana Department of Transportation (MDT) spoke and introduced the project purpose and intentions, the project schedule, and project funding. Mr. Barrett indicated that the purpose of these meetings was to get public comment from landowners and other interested citizens on potential roadway improvements and/or alignments for US 87 between Lewistown and Grass Range. The project would not be planned for reconstruction until sometime after 2003. Funding for the project currently covers only this initial phase for planning



and environmental documentation. At this time, there is no funding identified for construction. The NEPA process was explained including descriptions of a Categorical Exclusion, an Environmental Assessment, and an Environmental Impact Statement.

Next, Debra Perkins-Smith of BRW/URS invited attendees to fill out comment sheets and postcards, and to take additional comment postcards with them to share with neighbors and friends who could not attend the meetings. Debra then discussed the project process and the two phases of the project that would take between 18 months to two years. Also discussed was a summary of issues identified during policymaker interviews that were conducted in June, 2000. Comments received in June, 2000 included bad curves, sight distance problems at intersections, need to provide passing areas along the Divide area, school bus safety, and collisions with deer. The comments received during these October, 2000 public meetings would help to define potential alternatives for US 87 improvements.

Question and Comments Period

A question/comment period took place. The following are the questions/comments from both meetings and the responses provided by Bruce Barrett.

Why pick this section when it was recently resurfaced?

US 87 is an important roadway because it is part of the National Highway System (NHS). The existing roadway is not up to NHS standards. Resurfacing typically lasts only 7-15 years. The reconstructed roadway once built with grade improvements would be intended to last 60-80 years before corridor needs would be reassessed.

How much more right-of-way (ROW) would be required?

The MDT standard for NHS is 160 ft, but segments could require more than 160 ft if they are subject to high cuts or fills. Since the improvements have not been designed yet, the exact ROW requirements could not be given at this time.

Would most of the road be on the existing alignment?

The existing alignment had a 50/50 chance of being preserved. The roadway would be built to standards similar to the newly reconstructed road north of Roundup.

Move the road up to the ridge to avoid using more ROW in agriculturally productive land. Would it cost more to move the road up there? The highway now goes through the most productive land –widening the



existing alignment would only make it worse. Support for the ridge location was seconded.

A ridge alternative would be looked into during this phase.

Bruce discussed the condemnation process. He indicated that the state does have the right to condemn property, but that it is rarely done, about 1% of the time. The state has many Federal Highway Administration (FHWA) requirements, that have to be met in order to take this action. Most acquisitions are negotiated between MDT and the landowners.

What is the chance the roadway would be moved through the Divide area?

To stay on the existing alignment for the whole corridor would be a virtual impossibility. We do want to look at options at the hill (Divide area). This is a long-term investment for the next 60-80 years.

Do you foresee subdivisions along the corridor?

Regarding future subdivisions, limited access control would be utilized (every 1000 ft or so) between approaches.

Guardrails along the corridor cause problems with wide loads and farm equipment.

Guardrails can be bad in some instances, but situations are sometimes worse without them. Improvements in roadway geometry would most likely do away with the need for guardrails in most areas.

School bus mitigation plans – what are they?

MDT will work with schools and provide turn-around locations where needed. Some stops may allow for loading and unloading of school children off of the road. School buses are safer for now remaining on the existing roadway with lights on, than being half off and half on the roadway. Improving the roadway geometrics would improve safety for school bus stops.

One particular school bus location is very dangerous, and a potential accident area. Need to put a sign up (West Divide Road).

Signage is not always effective, but that location will be evaluated for improvements.

Use the old RR route north of the existing roadway for the new alignment. If existing alignment used – potential subdivisions would be built on haygrounds, the most productive land.



John Humphrey, ex-mayor of Lewistown, made a statement at the October 5th meeting in Lewistown:

We need curves straightened on US 87; opposed to guardrails; need to plan for a truck bypass; Main and First is a dangerous intersection; overpass west of town needs work – is very dangerous; need excellent railroad crossing; overpass long overdue; this project not broad enough; refreshing to hear of 40 ft width planned for improved roadway; bridges need widening; extend the project further west; reconstruct entire US 87 corridor all the way to Glendive; also include Highway 191 and 19 north and south; bids on projects have been lost due to lack of appropriate transportation infrastructure.

At milepost 101 – six-seven cars parked there sometimes, need a loading and unloading area for the school buses.

Mailbox clusters need turnoffs.

Fencing needs to be discussed between landowners and MDT.

Grain traffic causes ruts in roads – need stronger paving materials.
Stronger paving materials are now available.

Who takes care of the old access roads?
MDT would maintain the old access roads.

What is the status of the truck bypass?
It is a long way off into the future – MDT will look at feasible alternatives for now as a separate project.

Specific Issues Identified Along the Project Corridor

At the end of the question/comment period attendees were invited to review the project area USGS map and point out issues along the alignment or identify information that would be useful to the project team.

The following issues and information by location were identified by the meeting attendees:

- Pamida turnoff – 3 lanes end too soon.
- Fergus electric is an area of near misses – need continuous turn lane/acceleration lane (people stop to take pictures of Lewistown Arch).



- Gulch/Boyd Creek Road needs to be squared up.
- At Horseshoe Bend there are many accidents at the bottom of the hill because vehicles turn off road and get rearended for going too slow.
- Just east of MP 86 bridge is on an angle and ices up; deer follow the creek at this location.
- Put speed limit along Divide.
- At MP 88 there are icing problems on the hill.
- Dean Kovacich of Grass Range indicated that land was surveyed for a route - a straight line between MP 88 and Divide Road (213) - that was never built.
- Passing lane too short on segment west of west end of Divide Road.
- Blowing and drifting snow on west side of passing lane area (mentioned above).
- Deer crossing area east of passing lane area mentioned above.
- Open area west of Divide (west entrance) to the sun (icing problems in shaded corners).
- At Divide Road eliminate west leg of the 'Y' due to a sight distance problem (school bus stop) - bring school bus stop up to the level of the road.
- Just east of western Divide Road entrance- there are icing problems with hill and curve; trucks go too fast down hill; chain-off area results in slow moving trucks pulling onto highway which conflicts with cars increasing speed as they crest the hill.
- Need passing lanes, as there will be more truck traffic with the new grain elevator in Moccasin. Climbing lanes need to be longer and more frequent or curves need straightening.
- Guardrail problems on both sides of Koch property and needs a new stockpass (west of MP 94).
- East of MP 94 the school bus stop may need parking at the stop as the bus sometimes crosses the road to pick up on the north side of the road in the AM going east.
- Consider a south alignment - diverge at old school house.
- Stockpass in active use (guardrail) west of Gilt Edge Road.
- Bad curve west of MP 97.
- Access has poor sight distance at east of MP 97.
- Poor visibility for access at Burnett Road southbound to eastbound.
- Poor visibility (west) west of MP 100.
- Artesian well just east of Burnett Road and stockpass 50 yards from US 87 (BM 3810.8 on USGS map).
- Stockpass active at drainage after MP 101, livestock only.
- Stockpass active near MP 103, livestock only.
- Sharp curve west of Ayers Ranch Colony - sight distance problems - need geometric improvements.



- State school land (640 ac – 1 section) north of US 87 west of MP 105.
- Approaches for four miles along the project corridor are a problem (near MP 105): need gravel, grade improvements, and ranch access is poor.
- At Ayers Colony pull in for school bus pick up – don't stop on US 87. Stockpass in use.
- At MP 106 access on southside is poor due to grade, especially for farm equipment.
- Irrigation east of MP 108.
- One mile west of Munger Lane is a sharp curve.
- Deer crossing area east of MP 109.
- West of MP 109 there is a hill/vertical curve.
- At MP 111 there is a dual use crossing for cattle and drainage.
- Safety of intersection US 87/SH19 – US 87 as through route – intersection is a safety concern.



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NH 57-3(31) 83 CN 4067
Draft Summary of Public Meeting Minutes
February 20, 2001 and February 22, 2001

Public meetings were held in Grass Range and Lewistown, Montana on February 20th and 22nd respectively, in relation to the Lewistown to Grass Range Environmental Corridor Study. The Grass Range meeting was held from 7 pm - 9 pm in the multi-purpose room of Grass Range High School, and the Lewistown meeting was held from 6 pm - 8 pm at the Yogo Inn Sapphire Room. Thirteen attended the Grass Range meeting, and 27 attended the Lewistown meeting. See attached lists of written comments and attendees, along with a copy of the handout and copies of other information presented at the meetings.

Project Team Attendees:

Bruce Barrett, MDT
Doug Lutke, MDT
Brent McCann, MDT
Gary Neville, MDT
Joe Olsen, MDT (Feb. 22nd meeting only)
Duane Hartman, MDT (Feb. 22nd meeting only)
Karl Helvik, FHWA (Feb. 22nd meeting only)
Debra Perkins-Smith, BRW/URS
Dave Hilliard, BRW/URS
KC Collins, BRW/URS

Meeting Format and Presentation

The meeting format was similar for both meetings held, which included open house, formal presentation, and question/comment periods.

For the first portion of the meetings, attendees signed-in and were free to review wall displays presenting: a list of comments gathered from October 2000 public meetings; project evaluation criteria; alignment alternatives; alignment evaluation; cross section alternatives; cross section evaluation; and aerial photography of the project corridor that highlighted points of interest, wildlife information and alignment alternatives.

After the initial sign-in and open house, Bruce Barrett of the Montana Department of Transportation (MDT) spoke and began by introducing project team members that were present. Next, Mr. Barrett spoke of the meetings' purpose, which was to present what was assembled from concepts and comments received from

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Summary of Public Meeting Minutes

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Questions:

What would be the right-of-way (ROW) width?

Minimum ROW would be 160 feet and the widest could range from 250-300 feet.

Why would you put the highway through the best land?

We may not need extensive additional ROW- we will evaluate for farmland impacts. We won't take more than we need. The Devil's Basin project used a lot of ROW, we cut slopes a lot. We have some slopes on half of this project – not as much as Devil's Basin.

Would it be possible to trade existing ROW for out of production farmland?

If it is feasible –we would need to develop alternatives in more detail. We could look at shifting the roadway 30 - 50 feet to the north or south.

Have you seen the railroad grade? How would you fit a three-lane highway up on the high narrow railroad grade? We don't need two roads.

The project team would evaluate the railroad grade for construction close to the highway. Reconstruction of the roadway would be required versus just widening.

Geology changes are significant – we need to avoid deterioration.

Tunnel grade – ¾ mile long with lakes on both sides is a duck habitat, with beaver and mule deer at lakes. Please preserve this wildlife habitat.

The east side of Divide to the south has beaver ponds, wetlands and habitat. Detailed analysis will uncover what to avoid. Wetlands biologist will do surveys in spring. Environmental regulations protect resources.

*What are the reasons to improve the roadway?
What would impact be cost wise?*

It has been determined that the roadway requires horizontal and vertical re-alignment in some areas due to safety concerns related to sight distances. Doing a corridor study is cost effective and efficient. This process will determine the best improvements and will provide a spread sheet of analysis. MDT wants to make a sound and informed decision.



When will an alignment decision be made?

In August or late summer a detailed analysis will be completed and presented to the public. The entire process is an 18 month process. Approximately 1 year from now the final environmental assessment will be done.

My family has 2 homesteads from 1906/1908. Any movement south cuts property into two. Land value would decrease, but am in agreement that the roadway needs to be widened and that intersections at Divide need to be improved.

Impacts on individual landowners would be considered.

How about changing the speed limit versus widening the roadway?

Design speeds would be higher from Cheadle to Grass Range and reduced in mountainous areas of the Divide.

Design speed and speed limits are two different things. Setting a speed limit is a legislative action and design speed is a geometric consideration. To change speed limits – MDT would have to conduct a study to present to the Transportation Committee or legislative body.

Weather conditions change from west to east – there is often snow in the west and less moisture to the east.

The Divide is beautiful – designate it as a scenic highway and put speed limit down to 60 mph.

*Truck Traffic - where is it from?
Do more trucks use Eddie's Corner or US 87?*

A transportation study, which is in the works, will answer these questions.

What about an NHS route US 87 4 lanes between Billings and Great Falls?

This is not feasible due to unique routes and railroad underpass between Rye Gate and Lavina.

Montana 3 is a NAFTA corridor and needs to be upgraded to a NHS roadway.



General Public Comments

Stay on existing alignment and improve curves.

At the vet clinic and storage facility there is a safety concern – lanes provided are uncertain as how to negotiate them.

We need a center turn-lane from Boyd Creek Road (Ruby Gulch) to Lewistown more than an acceleration/deceleration lane. At Corbley Lane large trucks are hauling waste. At Ruby Gulch re-channel Boyd Creek.

At Horseshoe Drive – one needs to get a running start from the other side of the road.

At Phillips Hill bring to the south slightly if you need to straighten the curve.

At west Divide Road and area to the west remove trees to solve shading problem and improve intersections.

Along Divide Road is the Skagg Schoolhouse built in 1916 and last used in 1973.

Divide Road east hayfields have arrowheads. East side of Divide Road has archaeological resources.

Maintenance Suggestions:

- Blowing snow was reduced with snow fencing (near the railroad tunnel)*
- The Phillips Hill area is the worst area to plow – snow continually drifts and icing due to shade is a problem.*

At the Divide are elk, wild turkey, black bear, mountain lion, and occasional moose. Two hunting districts along the project corridor are top districts for hunting. Haylands attract white tail deer FYI - all sections numbered 16 and 36 are school sections in the state of Montana.

Deer exist for the entire length and are concentrated near sawmill through Phillips Hill. Maintenance needs to clear dead deer faster.

Guardrail is straight at ends – needs to have flair – from Cheadle into Grass Range.

At Grass Range – currently cross US 87 – there is a stockpass that is inaccessible. Request a useable stockpass.



Suggested Alignment Alternatives

Rancher at Cheadle suggested using railroad grade near Cheadle area – it is not needed all the way east – just between Divide Road and curve. Best hayfields are along the existing roadway – could use route to the north – old railroad grade, or route to the south – old county road. All this property is owned by one entity.

Alternative to stay on ridge along Divide Road alignment.



Written Comments Received by Mail

As of the meeting of Feb. 20th, I feel you have done what it takes to improve the Grass Range road. After all, what do ranchers know about building or improving roads? Likewise, what do you know about raising cattle? So go ahead with your plan, it sure is okay with us.

2/21/01

I still fail to understand why the state would want two roads over the divide. It seems to me that the cost of maintaining two highways would be cost prohibitive. Certainly the present road needs major revamping which I hope will be done with as little impact as possible to the farmland and rangeland on each side of the road. I think everyone working on this project could have walked the two proposed routes before presenting them to the public. How can you suggest making such a big impact to this community before visiting it first? My suggestion would be to retain the existing highway and to:

- A. Lay down good shoulders
- B. Construct passing lanes on each side of the divide
- C. Straighten the sharp curves on top of the divide
- D. Make the approaches safer along the entire corridor

I hope you will use common sense when deciding the future of Hwy 87. Make it safer while at the same time keep the integrity of the area intact. Also consider the fact that many of the residents make their living on the land.

2/24/01

Things to consider:

1. Perhaps it would have been better for your consulting firm to actually walk the area before releasing the map in public meetings.
2. The proposal to follow the old railroad grade is totally ridiculous. you might as well build another Great Wall of China. It would require an enormous amount of fill and shaving of hillsides and hilltops (on the east side of the Divide). It would open up numerous abandoned mines, leaking even more toxic material into the watershed. Unless you are planning a tunnel on the east side, you would need to create an extensive switchback. Much of the railroad grade on the east side is adjacent to wetlands, that include beaver ponds and stream areas. The entire east side is hilly, convoluted, and heavily forested. The area gets most of the snow. That is probably the reason the original trails and historic routes were abandoned. The present route of Hwy 87 is constructed above the wet and forested area to avoid this problem. The soil that forms many of

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the railroad embankments consists of unstable clay. Several years ago someone attempted to construct a dam on the east side. After filling with water, the dam broke, causing great destruction downstream. In addition to all of these factors, the east side with its forested hill and deep gullies is a magnet for wildlife. Deer populations have been historically high in this area. Lions, an occasional bear, and all manner of smaller animals inhabit the Divide area. The streams do contain small fish. I am not so sure the native western cutthroat (a protected species) isn't one of them. Carving a new highway route through here would be detrimental. Deer/auto collisions would at least triple, possibly causing fatal accidents for motorists.

The most sensible and economical proposal would be to improve the existing route. Straighten some curves, add a passing lane, reroute the approach on top of the divide etc. Creating an entire new route to the south of the existing route would be a boondoggle project, a route to nowhere. In conclusion, this new route would disturb at least 6-7 structures/homes in the area.

2/28/01

In regards to the new alignment on divide east of Lewistown, I must voice my disagreement with it. It would alter our main water supply for our ranch possibly forever. It would also alter our farm ground. Since the existing corridor could be reconstructed, a new alignment across our ranch is not an option.

3/5/01

As a landowner who will be deeply affected by a proposed new alignment, I must oppose this option and voice my support for the existing corridor to be reconstructed. The new alignment option would cross our ranch and affect our main water supply, alter our existing farm ground, taking out valuable hay production most likely forever. Hay and water are already in short supply and this would be a devastating impact on our ranch.

3/6/01

Meeting held Feb. 22, 2001 in Lewistown, MT. We attended this meeting, and do not want this change to go through our property. It would destroy Pike Creek. Water starts on us, and we depend on it for stock water. Also, it would destroy our good farmland. Also change the value of our property.

3/27/01



This project would decrease land value, damage the water supply and destroy good farm ground.

We oppose this project going through in every respect.
3/3/01

Dear Mr. Barrett:

We want to express our strong objection to any proposed relocation of US 87 corridor between Grass Range and Lewistown, especially as proposed over the Divide. We want the existing US 87 between Grass Range and Lewistown to remain in the same location.

We believe it would be harmful to the headwaters of McDonald Creek.

We think that taxpayer dollars would be saved and more properly utilized by:

1. Improving, straightening and widening the existing road;
2. Developing climbing and/or passing lanes where applicable;
3. Improving the East and West Divide Road approaches;
4. Reducing the speed from the east side of the Divide Road approach (Traveling West toward Lewistown);
5. Improving signage. The present signs are inadequate in size placement and message.
6. Resurfacing the existing highway after completion of improvements.

After the presentation at the recent meeting on Lewistown-Grass Range corridor, it seems to me that improving this road in its present location would be the most sensible solution. Upon learning if the new alignment at the Divide was built there would be two routes to maintain and keep clear of snow that makes it cost prohibitive. To this I would strongly object.
3/2001

Dear Mr. Barrett,

We are writing concerning the Grass Range - Lewistown Corridor Highway 87. We are strongly opposed to the rerouting of Highway 87 especially that section of highway over the Divide. We are landowners on the Divide Road (county graveled road) and wish to express our disapproval over the proposed change.

If the state feels that changes are absolutely necessary and that your funding for this and other such projects will be irretrievably lost, we believe

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that the improvement of the existing roadway would be the best of all worlds.

Our area is unique in its scenic beauty, wildlife, serenity, and natural wonders. It is our feeling that probably the most destructive eyesore man can put on the planet is a paved highway. Clear cuts, strip mines, landfills can't hold a candle to the long-term damage inflicted on our landscape by the construction of roads. That plus noise, garbage, and other oddities that accompany any highway add up to the fact that as long as you have already screwed up a good portion of the countryside, why go out of your way to tear up an equal amount only several hundred yards away.

We are asking that you strongly consider making improvements on the existing highway and reject the "new alignment at Divide" project.
3/6/01

Dear Mr. Barrett:

As landowners on the Divide Road located south of highway 87, we strongly object to any proposed relocation of highway 87 between Grass Range and Lewistown. We object to this relocation for three major reasons: economically it is a waste of taxpayer monies, aesthetically it would destroy a very beautiful mountain range area, and ecologically it would destroy a fairly extensive riparian area along the east side of the Judith Mountain Divide.

We believe that tax dollars would be better utilized by:

1. Using the existing right-of-ways.
2. improving the east and west Divide Road approaches by:
 - A. Cutting the timber back by a minimum of 100 feet on each side of the highway.
 - B. Cutting the crown of the hill down several feet.
 - C. Contouring the banks and borrow pits on each side of the highway.
 - D. Improve the signage.

3/2001

Bruce Barrett:

As a landowner on the Divide Road, I want to go on record as saying I object to moving of location US Hwy 87 from Lewistown to Grass Range.

I believe it is a major waste of taxpayer money for the following reasons:

- A. The present road bed is in place and would be adequate if widened and berms set back.

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- B. The purchase of new right-of-way from disgruntled landowners would be very expensive.
- C. The intersection of Divide Road and Hwy 87 at the top of the Divide can be vastly improved by cutting the timber, moving the banks and berms back considerably. Cutting the crown down several feet and put in a turning-lane coming east to west.

3/11/01

I am against the new road proposal. It sounds to me like you're losing the corners and gaining some pretty steep hills and coulees, which can be just as dangerous under wet or icy conditions.

Other concerns of mine are the disturbances of a natural spring at the head of Pike Creek, which we rely on, as do many neighbors, for watering livestock. Also the disturbance of many patches of noxious weeds, which we have been controlling for many years.

Postmarked 3/12/01

I would like to see the existing Highway 87 improved and brought up to safety standards. I would be opposed to the building of a new road, as it would cause too much stress for the wildlife and people living in those areas that are under consideration.

3/13/01

I want to lend my voice in support of the opinions expressed in this letter (see attached editorial by Kyle Morrow – Share opinions on Grass Range Corridor). Please take these suggestions seriously! Improve the existing grade if necessary, but please don't re-route it!

Postmarked 3/19/01

Dear Mr. Barrett:

We would like to see US 87 between Lewistown and Grass Range where it is. There are two bad spots and those are the east and west Divide Road approaches. We use the east Divide Road a lot and think possibly the road could be cut down and made wider to make more visibility there. No doubt cutting down and widening the road approaching the west Divide Road would make the traffic much more visible in that area. This is just one idea we have thought of, but I am sure there are a number of ways to make the highway safer and do it much cheaper than making a new road.

If I remember correctly, when the present US 87 was to be built many years ago, a survey was made to put the road south of Skaggs schoolhouse and on the

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west. However, because of the cost and the fact that the grade was not as good as where the road is now, that idea was abandoned.

Also, to put the road either on the railroad grade or south of Skaggs schoolhouse would not be satisfactory at all because there are too many homes in that area, as well as good farmland. Rebuilding US 87 between Lewistown and Grass Range where it is now would make an excellent highway and it would be much less costly.

3/17/01

Dear Mr. Barrett:

We are writing to you regarding the proposed relocation of US 87 corridor between Grass Range and Lewistown. Definitely, we strongly oppose this proposal. We want the existing US 87 between Grass Range and Lewistown to remain in the same location. It makes sense to the taxpayers, landowners, ranchers of the area to maintain one road, that being the existing one today.

The proposed relocation would have great impact on not only land value, but also our hay production and grazing of cattle. Also to note the land that you would disrupt on property was once settled by Native Americans. People still come to search for Indian arrowheads, hammer heads, etc. – and they are always in luck finding them! You would destroy 100-year old history. Some trails are still visible by way of covered wagon, thus this too would be destroyed.

Taxpayer dollars would noticeably be saved and more properly utilized by:
Improving climbing and/or passing lanes where applicable;
Reducing the speed from the Divide Road approach, traveling west to Lewistown; improving signage, more visible and appropriate messages.
3/2001

Dear Mr. Barrett:

I fully concur with their suggestion for a fix to this route and urge the highway department act on upgrading the existing route to suit.

I own property along existing US 87 and continually battle noxious weeds on my land spread by hay haulers using the road. I am opposed to unnecessarily exposing additional new acreage to the proliferation of weeds and would delete re-routing plans based on this reason alone.

3/8/01

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NH 57-3(31) 83 CN 4067
Draft Summary of Public Meeting Minutes
August 28, 2001 and August 30, 2001

Public meetings were held in Grass Range and Lewistown, Montana on August 28th and 30th respectively, in relation to the Lewistown to Grass Range Environmental Corridor Study. The meetings were held from 6 pm - 8 pm in Grass Range in the multi-purpose room of the high school, and in Lewistown at the Yogo Inn Judith/Snowy Mountains Room. Seventeen people attended the Grass Range meeting, and 33 attended the Lewistown meeting. See attached lists of written comments and attendees, along with a copy of the handout that was distributed at the meetings.

Project Team Attendees:

Bruce Barrett, MDT
Doug Lutke, MDT
Brent McCann, MDT
Gary Neville, MDT
Joe Olsen, MDT (August 28th meeting only)
Karl Helvik, FHWA (August 28th meeting only)
Dale Paulson, FHWA (August 28th meeting only)
Darryl James (August 28th meeting only)
Jan Newton, BRW/URS
Dave Hilliard, BRW/URS
Sten Bolander, BRW/URS
KC Collins, BRW/URS

Meeting Format and Presentation

The meeting format was similar for both meetings and included an open house, formal presentation, and question/comment periods.

For the first portion of the meetings, attendees signed in and were free to review wall displays. Information presented included a list of comments gathered from February 2001 public meetings, aerial maps of the alignment alternatives, project process flow charts, schematic map of the existing alignment and alignment alternatives, wetland impacts, cultural and historic resource impacts, hazardous material impacts, and table of contents for an Environmental Assessment.

After the initial sign-in and open house, Bruce Barrett of the Montana Department of Transportation (MDT) introduced project team members who were present. Next, Mr. Barrett described the meetings' purpose, which was to present

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information regarding alignment alternatives that were retained after the previous February meetings. Mr. Barrett indicated that the alignments have been and are going through a continual refinement process. The process will eventually eliminate alternatives as more information becomes available. Further refinements are being evaluated to determine if the realignments would provide long-term improvements. The alternatives that do not address roadway NHS standards and/or safety issues long term will be eliminated from further evaluation. An Environmental Assessment (EA) will be completed for this corridor. Once the project corridor is *cleared* with respect to environmental impacts, right-of way can be obtained and reconstruction of the highway could be done in segments as funding becomes available. It is anticipated that construction of this project would not commence any earlier than 2006.

Next, Jan Newton of BRW/URS spoke about environmental impacts related to the four retained alignment alternatives. Specific topic areas included impacts to wetlands, historic and cultural resources, and hazardous materials. The analyses completed to date indicated that impacts were not substantially different enough to rule out any of the alignment alternatives. Ms. Newton explained that this was an unusual discovery as alignment impacts usually differ to a greater degree than has occurred here. The number of wetlands impacted ranged from 53-62 and the acreage of wetlands totaled from 76-86 acres. Cultural resource impacts ranged from 32 – 39 sites for each alignment alternative. Hazardous materials data indicated that abandoned coal mines with small amounts of tailings were found within the study area. Coal mines were noted to have the potential for subsidence. Ms. Newton also described the process involved in producing an EA. Impacts are determined for the existing alignment, and mitigation measures are identified. The information about impacts gathered to date will be included in the EA, which will be available sometime in March 2001. In addition, social and economic impacts would need to be evaluated for all of the retained alternatives. Topic areas included would be impacts to wells, accesses, and farmlands. A Draft EA will be made available to the public for review with a 30-day review period provided. During this review period a public hearing will take place. The Final EA will include all public comments received at the public hearing with MDT responses to the comments. Ms. Newton stressed the importance of the 30-day review period and alerted attendees to take advantage of the opportunity to voice their concerns at the hearing. At the time of the public hearing, alignment alternatives are not cast in stone and the design process is still fluid.

Sten Bolander of BRW/URS spoke about the western alignment alternatives from Lewistown to Cheadle – including the Existing Alignment, the New Alignment at Divide, and the Railroad Grade at Divide.

The Existing Alignment begins in Lewistown at Meadowlark Lane just west of the Pamida shopping center. The typical section for this area up to the Fergus

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Electric plant is one 12' lane in each direction with 8' shoulders, separated by a two-way-left-turn-lane. This allows for access to both the north and south sides of the highway. A sidewalk could be incorporated on the south side of US 87 from Meadowlark Lane to just past the Pamida shopping center if agreed to by the City of Lewistown. The Meadowlark Lane access near Fergus Electric was realigned to meet the entrance to Fergus Electric. The access to view the Lewistown Arch was moved to the west so as not to conflict with the Fergus Electric entrance. At Boyd Creek Road, several access points were combined to increase safety in the area. Through the Divide segment there is a 40' wide roadway width (2-12' lanes and 2-8' shoulders) for all alternatives. The exhibits showing alternative alignments through the Divide area were presented. The Railroad Grade at Divide alternative was proposed because most of the existing railroad grade could be used for the highway. The New Alignment at Divide was proposed as an alternative to the Railroad Grade at Divide Alternative. There was a limit as to how far south the new alignment could be placed, so there would not be a deterrent relating to the longer travel time required compared to the existing alignment. When the alignment was placed near property lines, the proposed right-of-way take was split between both property owners. The two alternative alignments conform to the existing highway just east of the East Divide Road.

Dave Hilliard of BRW/URS spoke about the eastern alignment alternatives from Cheadle to Grass Range, which include the existing alignment, and the Railroad Grade East of Cheadle.

Bruce Barrett of MDT spoke again and indicated it has been determined that an additional round of public meetings will take place (one more before the public hearing), to be held either in late January, or early February 2002. He indicated that MDT and the consultant team still need to present to the public the social and economic impacts as well as evaluate two other sites where modifications in the alignment could take place. One alignment option to be evaluated is located west of Cheadle where a property owner has offered to donate land for right-of-way. This alignment would straighten the curvature of the existing road. Another area located near milepost 89 in the Divide section will be evaluated for shifting the alignment to the top of the ridge to reduce drifting snow. MDT looks at roads every 70 years or so and they want to reconstruct a road that will be beneficial to the communities for a long time.



The presentations ended with a question/comment period.

General Statements by the Project Team

Remember to take comment sheets and postcards with you. We will be sending out more newsletters and if you did not already, please sign-in.

Extensive evaluations of alternatives will be done to determine impacts such as how many wells, houses, and acres of farmlands, etc. will be effected by each alternative. Then the project team will propose a preferred alternative in the Draft EA.

We will be asking landowners for permission to have access to property in order to walk the additional alignment modifications sometime in the near future.

Questions and Comments:

Which alignment are you leaning towards? Can we take a vote?

Per Mr. Bruce Barrett, since the evaluation data collected did not vary greatly between alternatives, none have been eliminated from further study. We will need to determine social and economic analysis on the alignment alternatives, which would include costs. Cost, in this particular case, could possibly be the factor that points to the preferred alternative.

The railroad grade seems too narrow to be a feasible alignment alternative.

An adequate amount of earthwork could make the railroad grade a feasible alternative. However, costs may increase as a result.

The Railroad Grade East of Cheadle would be the best alternative, but there would be two roads.

MDT indicated they would not maintain two roads, but instead obliterate the existing alignment. The right-of-way of the existing alignment would then revert back to the original owner. The existing roadway can be removed, reground, and used for fill in constructing the new road.

Would all existing access be maintained - there is one area where there are ten accesses within a two-mile stretch?

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Mr. Barrett indicated that MDT would provide appropriate access. If leaving the same access would be a safety concern, it would not be provided in the same location. Access would be negotiated with landowners, but MDT would ensure that public safety issues are addressed.



Written Comments Received at the Public Meetings

Postcard

We need a bypass east of Lewistown and roads widened on 200 east of Jordan and Winnett more than the proposed project between Lewistown and Grass Range. How much money has been spent on this stretch of road in the last 20 years?

8/28/01

Comment Sheet

You fellas have more road to widen east before you mess with the road from Grass Range to Lewistown. Widen from Jordan to Brockway. Widen from Winnett to Musselshell River. I think money should be spent wisely improving road width on all roads rather than worrying about how steep the ditch is. People will always drink and drive and fall asleep. It's their fault!

8/28/01

I own land along both sides of the highway near Cheadle. I suggest the roadway alignment to the north of existing alignment along the ridge, just south of the railroad grade. This would be less impact to cultivated land and I would be willing to trade right-of-way.

8/28/01



Access as shown is okay, but we need a stock pass in that immediate vicinity. Dairy cattle need daily access across the railroad/new road grade. Need to add a large equipment crossing. We also ride on horseback. Water is located to the south and pasture is located to the north. Also, there is a stock pass to the east near McDonald Creek, and a stock pass to the west near county road.

8/28/01

Written Comments Mailed In

I will not be able to attend either public meeting on the proposed Lewistown-Grass Range Corridor reconstruction, the evenings of August 28th and 30th.

Briefly, I have been visiting with residents of the Cheadle to the Divide section of the present and proposed route, to the south of the existing route. We find it is in the best interest of those concerned here to concentrate your future efforts on straightening and widening the existing roadway. I believe you will find that route, and purchase of the necessary additional right-of-way, to be in the best interests of all concerned. Local residents will not be disrupted, the State will have less costs in procurement of the additional right-of-way, and the highway can certainly be made wider and safer from that route.

Thank you for your time and consideration, and please keep me informed on future proceedings of this project, as well as the others currently on the drawing board for this area.

Respectfully,

8/22/2001

[I am] Against old railroad road bed as a new highway. I see by the picture that there are a lot of trees on the over Divide roadway, which will cause shade. That causes ice. This roadway will separate pastures from water. The east end will come out near the REA switch yard and under the hill coming from the north. [I am] For widening the existing road. Road building to standard width with bad curves reduced and a three lane road on hills over the Divide.

8/29/01

I enjoyed the meeting you conducted. I met neighbors that I didn't know too well and that is good. Our stand is much the same as in our letter to you on March 2, 2001. We have added the word general in the first paragraph and eliminated the word existing in number 6.

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Again we want to express our strong objection to any proposed relocation of US 87 corridor between Grass Range and Lewistown, especially as proposed over the Divide. We want the existing US 87 between Grass Range and Lewistown to remain in the same **general** location.

As landowners on the Divide, the proposed relocation would have a great negative impact on us. It would cut through the middle of our 90-year-old homestead and destroy the aesthetic value of the area where our houses are located. We also believe it would be harmful to the headwaters of McDonald Creek which is located on our property.

We think that taxpayer dollars would be saved and more properly utilized by:

1. Improving, straightening and widening the existing road;
2. Developing climbing and/or passing lanes where applicable;
3. Improving the East and West Divide Road approaches;
4. Reducing the speed from the east side of the Divide Road approach (Traveling West toward Lewistown);
5. Improving signage. The present signs are inadequate in size placement and message.
6. Resurfacing the highway after completion of improvements.

If you wish to discuss this matter further, please contact us at (406) 538-9425. Thank you for your consideration. Your efforts are appreciated.

September 4, 2001

It was nice to have the opportunity to meet with you and your group last week to receive an update on the progress that has been made on your research on the Highway 87 corridor between Grass Range and Lewistown. We look forward to meeting with you again in January.

Again, I would like to reiterate that our preference is a full width roadway reconstruction in the same general area, as the highway exists today. It would be devastating to our 90-year-old homestead to relocate the highway to a new alignment over the Divide. Please see the attached article, it so very well articulates our feelings in this matter. (Attached article written by Kyle Morrow discussing the scenic beauty of the area and the western rural lifestyle that should be maintained. Mr. Morrow also invited those too with strong feelings about this project to write to Mr. Bruce Barrett of MDT).

I have some additional questions that I would like clarified:

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1. Regarding the wetlands level of importance designation.....during the review of our wetlands, we were informed that we had sandpipers living on our ranch. It was noted to us "it is not documented anywhere that sandpipers even live in this part of Montana". Yet the wetland was designated as "not important". I would like to have the designation of our wetlands revisited.
2. How does the wetlands survey and designation take into account the fact that we are in a 3-year drought? I'm guessing that the drought must have some impact on the current level of wildlife and marine life using the wetlands.
3. During the meeting your group provided drawings showing Montana State & Federal requirements for roadway width, passing lanes, ditches, etc. Is there a standard scenic highway? If so, could you please provide me with the standard scenic highway requirements? As the attached article clearly identifies, this is definitely a scenic area and is worthy of slowing traffic down.

Thanks again. If you have any questions regarding these items please feel free to call me.

September 13, 2001

BRW/URS e-mailed response to questions 1 and 2. MDT to respond to question #3.

Bruce Barrett forwarded your letter dated September 6, 2001 and asked that we clarify some issues surrounding the biological resource investigations in your area of the corridor.

I believe you had the opportunity to speak with Kirk Eakin, our wetland/wildlife biologist, who informed you that he had observed some sandpipers in your area. According to Kirk's research, there are two species of sandpiper that inhabit and/or breed in the area. One is an upland bird, and the other (the spotted sandpiper) is wetland dependent. While neither of these species is threatened or of biological concern, the existence of the spotted sandpiper does influence the valuation of the wetlands in the immediate area. Based on the general wildlife habitat, groundwater discharge/recharge, and other factors, the wetlands along the "divide" alternatives rate in the mid to high value range. Either our presentation material was unclear, or you were misinformed as to the quality of the wetlands in your area. We apologize for any confusion in the presentation of this material at the public meeting, but assure you that the characterization of your wetlands as "not important" was incorrect.

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With regard to drought impact on wetlands, the general soil, hydrology, and vegetation conditions that qualify an area as a wetland are still present along the Lewistown to Grass Range corridor. The wetland hydrology, although somewhat altered by the lack of normal levels of precipitation, has not appreciably altered the vegetation (i.e., willows, cattails, sedges, rushes, etc.) or soils in the wetland areas. Wildlife use of the wetland areas does not appear to be significantly affected by the drought, as northern leopard frogs, common snipe, great blue heron, spotted sandpiper, marsh wren, white-tailed deer, and black bear, were a few of the numerous species observed using the identified wetland areas.

If you have any further questions, or need further clarification, please do not hesitate to contact us.

Thanks for your interest and participation in the project.

Sincerely,

Darryl L. James

URS/BRW, Inc.
P.O. Box 220
Helena, MT 59624-0220
(406) 457-2902



Lewistown to Grass Range Environmental Corridor Study
NH 57-3(31) 83 CN 4067
Summary of Public Meeting Minutes
March 12, 2002 and March 14, 2002

Public meetings were held in Lewistown and Grass Range, Montana on March 12th and 14th, respectively, for the Lewistown to Grass Range Environmental Corridor Study. The meetings took place from 6 pm - 8 pm in Lewistown at the Yogo Inn Judith/Snowy Mountains Room, and in Grass Range at the multi-purpose room of the high school. Thirty-three people attended the Lewistown meeting, and 19 attended the Grass Range meeting. (See attached lists of attendees and written comments).

Project Team Attendees:

Bruce Barrett, MDT
Doug Lutke, MDT
Brent McCann, MDT
Gary Neville, MDT
Carol Lee-Roark, Hyalite Environmental (March 12th meeting only)
Joe Olsen, MDT (March 12th meeting only)
Darryl James (March 12th meeting only)
Jan Newton, BRW/URS
Sten Bolander, BRW/URS
KC Collins, BRW/URS

Meeting Format and Presentation

The meeting format was similar for both meetings and included an open house, formal presentation, and question/comment period.

For the first portion of the meetings, attendees signed in and were free to review wall displays. Information presented included a schematic map of the existing alignment and alignment alternatives, and tables with wetland, cultural/historic resource, farmland, and hazardous materials impacts. During the March 14th meeting aerial maps of the alignment alternatives and environmental impacts were also displayed.

Before proceeding with the meeting held in Lewistown for this project, Mr. Barrett briefly summarized the findings of another study that took place in Lewistown – the Lewistown Bypass Feasibility Study. The study indicated that constructing a bypass northeast of Lewistown was not feasible. Traffic analysis indicated that only 14 percent of trucks would be diverted from downtown Lewistown is a

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bypass was constructed. The remaining 76 percent would still pass through town. The benefit/cost ratio for the project was estimated to be -1.31 , which means that for every dollar spent on the project a loss of \$1.31 would occur. In addition, economic analysis indicated that the project would not be feasible now or for the next 20 years. According to the study, the traffic growth rate would need to increase to 16.5 percent to break even. The economic analysis concluded that the project has a zero percent chance of breaking even in this time frame. The study concluded that the bypass is not feasible.

After the initial sign-in and open house, Bruce Barrett of the Montana Department of Transportation (MDT) introduced project team members and local elected officials who were present. Next, Mr. Barrett described the meetings' purpose, which was to present information regarding alignment alternatives (including two new alignments) that were retained after the previous August 2001 meetings. Mr. Barrett indicated that the alignments went through a refinement process and that this process has been completed. The next step in the process will be to determine the preferred alignment for US 87 between Lewistown and Grass Range, which will be presented in the Environmental Assessment (EA) for this project. Prior to distributing the Draft Environmental Assessment (DEA), MDT, FHWA, and BRW/URS will meet to digest all the information for all the alternatives, and select a preferred alignment. The next public meeting will be a formal hearing to hear comments on the DEA. The DEA will be distributed sometime this summer. Roadway design will take approximately two years. Funding for the roadway is not anticipated to occur until after 2006. Montana's highway funding will decrease by approximately \$66 million, which may impact the timeframe for funding and construction of the project. If FHWA and Montana use their reserves, the decrease in funding would be decreased by approximately \$30 million. On September 30, 2003, a new transportation bill will be passed by Congress that could also impact potential funding for roadway improvements.

Next, Jan Newton of BRW/URS spoke about environmental impacts related to the six alignment alternatives. Specific topic areas included impacts to wetlands, historic/cultural resources, and farmlands. The analyses completed to date indicate that impacts do not differ enough between alternatives to rule out any of them. Wetland impacts range from 8.75 acres up to 16.8 acres, except for the East of Cheadle alignment, which would impact 52.78 acres of wetlands. Wetlands are designated as being in one of four functional categories, with Category I having the highest functional value and Category IV having the least. The number of historic/cultural resource site impacts ranges from 16 to 24 per alternative, and includes prehistoric sites (cairns, lithic scatter, cultural material scatters), farmsteads, depressions, prospecting pits, historic roads and bridges, windmill features, a coal mine, a historic rock alignment, a school house, a railroad and railroad tunnels. Farmland impacts range from 169.09 acres up to

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222.23 acres. Farmland is designated as being in one of three categories; farmland of statewide importance, prime farmland, and prime if irrigated farmland.

A Draft EA will be made available to the public for a 30-day review period. During this time a public hearing will be held. The Final EA will include all public comments received at the public hearing with MDT responses to the comments. Ms. Newton stressed the importance of the 30-day review period and alerted attendees to take advantage of the opportunity to voice their concerns at the hearing. Alignment alternatives are not cast in stone and the design process is still fluid.

Sten Bolander of BRW/URS spoke about the six alignment alternatives analyzed for this project.

The Existing Alignment begins in Lewistown at Meadowlark Lane just west of the Pamida shopping center. The typical section for this area up through the Fergus Electric plant is one 12' lane in each direction with 8' shoulders, separated by a 16-foot two-way-left-turn-lane. This allows for appropriate access to both the north and south sides of the highway. A sidewalk could be incorporated on the south side of US 87 from Meadowlark Lane to just past the Pamida shopping center if agreed to by the City of Lewistown. The Meadowlark Lane access near Fergus Electric was realigned to meet the entrance to Fergus Electric. The access to view the Lewistown Arch was moved to the west so as not to conflict with the Fergus Electric entrance. At Boyd Creek Road, several access points were combined to increase safety in the area. Through the Divide segment and continuing to Grass Range there is a 40' wide roadway width (2-12' lanes and 2-8' shoulders) for all alternatives.

The exhibits showing alternative alignments through the Divide area were presented. The Railroad Grade at Divide alternative was proposed because most of the existing railroad grade could be used for the highway. The New Alignment at Divide was proposed as an alternative to the Railroad Grade at Divide Alternative. There was a limit as to how far south the new alignment could be placed, so there would not be a deterrent relating to the longer travel time required compared to the existing alignment. When the alignment was placed near property lines, the proposed right-of-way take was split between both property owners. The two alternative alignments conform to the existing highway just east of the East Divide Road.

Another alternative analyzed was the East of Cheadle alignment, which would follow the existing railroad bed from approximately east of the US 87/Cheadle

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intersection to the north of the highway and tie back into the existing highway just west of US 87's intersection with SR19.

In addition, two new alignment alternatives were evaluated. The Snow Ridge Alignment would depart from the existing highway at about one mile west of Divide Road and place the highway up on the ridge and tie back into the existing roadway just west of the US 87/West Divide Road intersection. The intent of this alignment is to decrease the potential for snow blowing along this segment of the roadway, which was identified as a problem. The other new alignment that was analyzed is called the West of Cheadle alignment. There are also less wetland impacts along this alignment. This option was proposed by a landowner along the highway who preferred putting the highway further to the north to avoid impacts to his farmland. The West of Cheadle alignment would stray from the existing roadway just east of Divide Road East and parallel the existing highway to the north and tie back into US 87 east of Cheadle/Gilt Edge Road.

Next Carol Lee-Roark and KC Collins discussed potential hazardous materials impacts associated with the six alignment alternatives. The types of hazardous material impacts include three: regulated facilities (USTs, PCBs from transformers, regulated solid waste landfills), unlicensed solid waste dumps, and materials and features related to coal mining that could lead to acid mine drainage and/or subsidence. The potential hazardous materials sites per alternative ranged from 9 to 12.

Questions were raised as to who would pay for remediation costs associated with hazardous material impacts. Bruce Barrett answered that MDT would prefer to avoid these impacts where possible. A centerline for the preferred alternative has not yet been chosen, but MDT would try to shift the centerline to avoid potential hazardous materials if at all possible.

Jan Newton indicated the purpose of our impact analysis is to identify what hazardous material sites need to be avoided.

Another comment raised suggested that the wetlands were formed by the railroad grade. It was explained, that no matter how a wetland is formed, a wetland needs to be replaced if it is filled. Bruce Barrett indicated that the cost to replace a wetland can be as much as \$30,000 an acre, so avoiding wetland impacts is a major consideration in determining the alignment of the roadway. The money for this project comes from FHWA (87%) and the State of Montana (13%). The project would probably be built in 4 or 5 segments and would take approximately 5 to 8 years to build.



Before construction of this project begins, it would take 2 to 2.5 years to design the project. No funding is available yet, but is anticipated to be provided sometime between 2006 and 2008, depending on available funds.

An attendee asked if it were possible for MDT to chose to build two or more of the various alignment alternatives in association with the existing alignment. Bruce Barrett indicated that this would be a possibility.

Mr. Barrett wanted to clarify that the next meeting will be a public hearing and that it will be different from the public meetings held so far. The purpose of the meeting will be to record people's comments on the Draft EA. The Final EA would then address all the comments received at the public hearing.

It was noted that property access to the new roadway would be maintained although it might be in a different location.

An attendee suggested that the East of Cheadle alignment would not be desirable as it would require the maintenance of two roads instead of one.

Another concern was expressed about the land situated between the East of Cheadle Alternative and the existing roadway. MDT indicated that they would install a fence and negotiate with landowners. The option of reclaiming the land under the existing paved roadway back to hayland or farmland would be very costly; however, the East of Cheadle alignment can not be completely ruled out yet.

It appeared the attendees are very interested in finding out what the preferred alignment alternative will be.



Lewistown to Grass Range Public Meeting - Lewistown List of Attendees March 12, 2002			
Name	Address	Phone #	On Mailing List? Y or N
Duane Butler	111 Carroll Trail, Lewistown, MT 59457	(406) 538-8364	Y
Mary Butler	111 Carroll Trail, Lewistown, MT 59457	(406) 538-8364	Y
Carolyn Savoie	HC 85 Box 4213, Lewistown, MT 59457	(406) 538-7381	N
Marv DeBuff	HC 85 Box 4314, Lewistown, MT 59457	(406) 538-8469	Y
Darryl McKenzie	319 Boyd, Lewistown, MT 59457	(406) 538-3342	Y
Seigfred Seonnichsen	125 Marcella Avenue, Lewistown, MT 59457	(406) 538-2606	Y
George & Dorothy Zellick	714 2 nd Avenue S. #5, Lewistown, MT 59457	(406) 538-9425	Y
Bill Thomas	HC 81 Box 7, Hobson, MT 59452	(406) 423-5582	
Bob Goodan (Dairy Q)	104 E. Main Lewistown, MT 59457	(406) 538-8090	Y
Charlie Muchmore	Lewistown, MT 59457	(406) 538-2217	Y
Dean Kovacich	Box 803 Grass Range, MT 59032	(406) 428-2286	Y
Donald M. Kovacich	Gilt Edge Road, Box 4146, Lewistown, MT		
Derrel Kamp	HC 85 Box 4320 Lewistown, MT 59457	(406) 538-7608	N
Barney D. Smith	DNRC P.O. Box 1021, Lewistown, MT 59457	(406) 538-7789	Y
Mel Jackson	HC 85 Box 4130 Lewistown, MT 59457	(406) 538-9723	Y
Jane Timpano	1001 West Main Street, Lewistown, MT	(406) 538-5394	Y
Ben Tuss	319 Divide Road, Lewistown, MT 59457	(406) 538-9171	Y
Tom Stivers	126 14 th Avenue, S. Lewistown, MT 59457	(406) 538-8901	Y
Duane Ferdinand	305 W. Watson, Lewistown, MT 59457	(406) 538-7127	Y
Stanley Jaynes	315 SW Maple, Lewistown, MT 59457	(406) 538-7061	Y
Charley Karinen	HC 85, Box 4160 Lewistown, MT 59457	(406) 538-7890	Y
Allan Sicz	P.O. Box 209, Lewistown, MT 59457	(406) 538-4601	N
Joe Foran	P.O. Box 91 Grass Range, MT 59032	(406) 538-5006	N
Clair O. Clark	716 W. Ohio Street, Lewistown, MT 59457	(406) 538-8909	Y
Dorothy Kovacich	P.O. Box 803, Grass Range, MT 59032	(406) 428-2286	Y
Gary Gray	HC 85, Box 4213, Lewistown, MT 59457	(406) 538-7381	N
Paul Bunn	Yogo Inn, 211 E. Main Street, MT 59457	(406) 538-8721	Y
Don L. Ward	718 W. Barnes St., Lewistown, MT 59457	(406) 538-3768	Y
Susan Zellick	HC 85 Box 4135, Lewistown, MT 59457	(406) 538-2035	Y
David Zellick	HC 85 Box 4135, Lewistown, MT 59457	(406) 538-2035	Y
Tony Tuss	HC 85 Box 4142, Lewistown, MT 59457	(406) 538-5231	Y
Tim Hahn	P.O. Box 955, Lewistown, MT 59457	(406) 538-6666	N



Lewistown to Grass Range Public Meeting – Grass Range List of Attendees March 14, 2002			
Name	Address	Phone #	On Mailing List? Y or N
Rich Stahl	Box 77, Grass Range, MT 59032	(406) 428-2362	Y
Bill Stahl	Box 77, Grass Range, MT 59032	(406) 428-2362	Y
Joe Foran	Box 91, Grass Range, MT 59032	(406) 428-2156	N
Florence Griffith	P.O. Box 124, Grass Range, MT 59032	(406) 428-2144	Y
Dee Boyce	Box 802, Lewistown, MT 59457	(406) 538-2748	Y
Dean Kovacich	Box 803, Grass Range, MT 59032	(406) 428-2286	Y
George Dengel	Box 22, Grass Range, MT 59032	(406) 428-2245	Y
Raymond Koch	HC 85 Box 4302, Lewistown, MT 59457	(406) 538-9749	Y
Jay Acker	Lewistown News Argus, P.O. Box 900	(406) 538-3401	Y
Clint & Sharon Martin	HC 85, Box 4258, Lewistown, MT 59457	(406) 538-2398	Y
Beth Ann & William Fry	Rt 1, Box 1820, Lewistown, MT 59457	(406) 538-8329	Y
Dick Koch	HC 85 Box 4306, Lewistown, MT 59457	(406) 538-5583	Y
Ed Mack	HC 85 Box 4184, Lewistown, MT 59457	(406) 538-2524	N
Willes & Minabelle Olson	Box 73, Grass Range, MT 59032	(406) 428-2233	N
Dennis Descheemaeker	HC 85, Box 4254, Lewistown, MT 59457	(406) 428-2220	N
Paul Descheemaeker	HC 85, Box 4255, Lewistown, MT 59457	(406) 428-2417	N



Lewistown to Grass Range Environmental Corridor Study
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Written Comments

Consider extending the urban typical section with a 3-way left turn lane eastward from Fergus Electric to Boyd Creek due to the increase of traffic and development in this area.

Duane Hartman, MDT Lewistown
3/12/02

From the east end of the West of Cheadle Alternative follow the existing corridor to the west end of Doug Duffy's, then hook back up to the main highway or the East of Cheadle Alternative at the northeast corner of Doug Duffy's.

Dennis Descheemaeker
HC 85 Box 4254
Lewistown, MT 59457
3/14/02

We want the US 87 to remain in the same general location – please refer to letter.
(Attached is the letter submitted to MDT on September 4, 2001 – this letter can be found in the written comments associated with the August 2001 public meetings.)

George & Dorothy Zellick
714 2nd Avenue, #C5
Lewistown, MT 59457
4/15/02

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meetings held back in October 2000. This project would be the first of its kind – to do environmental documentation and evaluation for an entire corridor (33 miles) usually done for smaller segments of roadway . Also included in the evaluation would be recommendations of how to mitigate any environmental impacts resulting from the project's proposed action. Once the project corridor is *cleared* pertaining to environmental impacts, right-of way could be obtained and reconstruction of the highway could be done in segments as funding becomes available. *Clearing* the corridor refers to having environmental impact mitigation plans established, and would include any necessary relocation of utilities along the project corridor. It is anticipated that construction of this project would not commence any earlier than 2006.

Next, Debra Perkins-Smith from BRW/URS spoke and pointed out that comment cards and sheets were available for attendees to fill in and/or take home with them to fill out at a later time. The purpose and need of the project is to address safety concerns and improve the roadway. Ms. Perkins-Smith indicated that the number one issue raised during the last round of public meetings was safety. BRW/URS along with MDT developed alignment alternatives for US 87 based on comments received at the October 2000 public meetings. At the October 2000 meetings attendees identified issues, pointed out specific problem locations, and suggested alternative routes. Alignment alternatives were developed for both inside the US 87 corridor and outside of the corridor. In addition, each alignment alternative was compared to evaluation criteria developed for the project which were to improve safety on US 87; comply with MDT's route segment plan; address roadway deficiencies; and provide reasonable cost or cost-effective improvements. Of six alignment alternatives developed (the existing alignment, two new alternatives along the Divide, new alignment between Cheadle and Grass Range; and two alternative alignments to provide a new route south of the existing alignment – see attached meeting handout), three were recommended to be forwarded for more detailed evaluation. The three retained alignment alternatives included the existing alignment, and the two new alignments along the Divide (a no action alternative was also retained for baseline comparison). Passing and climbing lanes for these alignments would be provided where applicable. Comments on these alignment alternatives were solicited and would be recorded after the presentation.

Dave Hilliard of BRW/URS spoke and indicated that the next phase of the project would be to do *homework* to evaluate the various alternatives for environmental impacts such as noise, hazardous materials, wildlife, water quality and air quality. Mr. Hilliard reviewed five cross section alternatives that were developed for the project. The five cross sections included the existing cross section, an NHS standard section (which would provide 8-foot shoulders versus the existing 2 foot shoulders), an NHS standard climbing lane section, an NHS standard section with acceleration/deceleration lanes, and an NHS standard urban section with

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