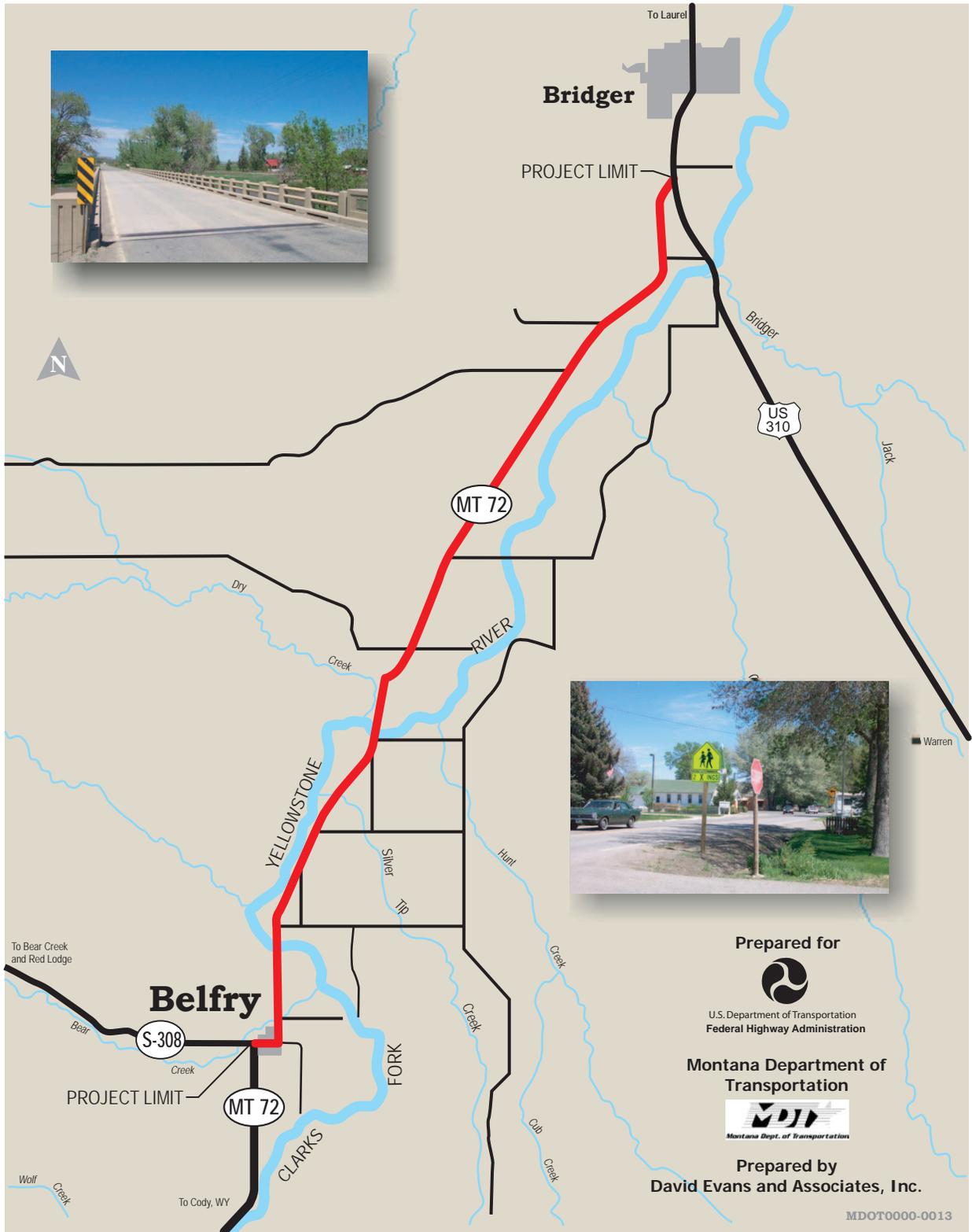


Environmental Assessment



Prepared for



U.S. Department of Transportation
Federal Highway Administration

Montana Department of
Transportation



Prepared by
David Evans and Associates, Inc.

ENVIRONMENTAL ASSESSMENT
and
Nationwide Programmatic Section 4(f) Evaluations
for
F STPP 72-1(1)10
BELFRY – NORTH
(P.M.S. Control No. 1016)
in
Carbon County, Montana

This document is prepared in conformance with the *Montana Environmental Policy Act* (MEPA, **75-1-201 M.C.A.**) 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 accordance with both the *National Environmental Policy Act* (*NEPA*, **42 U.S.C. 4231**, et seq.) requirements for an Environmental Assessment under 23 CFR 771.119, and *Section 4(f)* of the 1966 *U.S. DEPARTMENT OF TRANSPORTATION ACT* (**49 U.S.C. 303**) under 23 CFR 771.135.

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.**

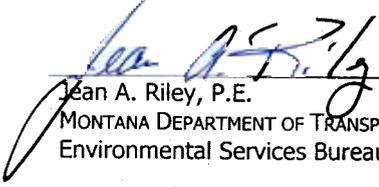
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U.S. DEPARTMENT OF TRANSPORTATION, Federal Highway Administration
and the

MONTANA DEPARTMENT OF TRANSPORTATION

Cooperating Agencies:

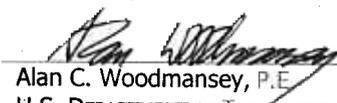
U.S. Army Corps of Engineers
U.S. Department of the Interior – Bureau of Land Management
U.S. Fish and Wildlife Service
Montana Department of Environmental Quality
Montana Fish, Wildlife & Parks
Belfry K-12 Schools: Districts 34 and 3

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Comments on this environmental assessment are due by February 28, 2005 and should be sent to Tom S. Martin, P.E., Montana Department of Transportation, at the address above. This document may also be viewed on the MDT web page, www.mdt.state.mt.us/environmental/eis-ea.

TABLE OF CONTENTS

SUMMARY 1

- Introduction and Background S-1
- Purpose of and Need for Action S-1
- No-Build Alternative S-2
- Build Alternatives S-2
 - Belfry Area: Railroad Alignment Alternative (Preferred Alternative).....S-2*
 - Belfry Area: Broadway Avenue Alternative.....S-3*
 - Rural Corridor: Modified Existing Alignment Alternative (Preferred Alternative)S-3*
 - Rural Corridor: Ridgeway North Alternative.....S-3*
 - Rural Corridor: Ridgeway South AlternativeS-4*
 - Typical Section: 9.6-m (= +/- 32-ft) Width AlternativeS-4*
 - Typical Section: 12-m (= +/- 40-ft) Width AlternativeS-4*
- Impacts S-4
 - Comparison of Typical Sections ImpactsS-4*
 - Comparison of Alignment Alternatives Impacts.....S-5*
- Conclusion..... S-6
- Mitigation.....S-23

CHAPTERS

1.0 Purpose of and Need for Action 1-1

- 1.1 Project Area 1-1
- 1.2 Project Background 1-3
- 1.3 Project Schedule 1-3
- 1.4 Purpose of and Need for the Proposed Project 1-4
 - 1.4.1 Crash Locations..... 1-4*
 - 1.4.2 Need to Reduce Roadway Deficiencies..... 1-6*
 - 1.4.3 Roadway Intersections..... 1-9*
 - 1.4.4 Safety at Belfry School..... 1-11*
 - 1.4.5 Pedestrian and Bicycle Safety..... 1-12*

2.0 Alternatives 2-1

- 2.1 Background to Alternatives Development.....2-1
- 2.2 Typical Sections.....2-3
 - 2.2.1 Urban Typical Sections.....2-3*
 - 2.2.2 Rural Typical Section.....2-4*

2.3	Belfry Area Alternatives (S-308 to North Dutch Lane).....	2-5
2.3.1	<i>No-Build</i>	2-5
2.3.2	<i>Railroad Alignment Alternative (Preferred)</i>	2-5
2.3.3	<i>Broadway Avenue Alternative</i>	2-9
2.4	Rural Corridor Alternatives (North Dutch Lane to US 310)	2-12
2.4.1	<i>No-Build</i>	2-12
2.4.2	<i>Modified Existing Alignment Alternative (Preferred)</i>	2-12
2.4.3	<i>Ridgeway North Alternative</i>	2-15
2.4.4	<i>Ridgeway South Alternative</i>	2-17
2.5	Selection of Preferred Alternative	2-19
2.5.1	<i>Alternatives Summary of Impacts</i>	2-19
2.5.2	<i>Preferred Alternative Summary</i>	2-20
2.6	Alternatives Considered but Eliminated from Further Review.....	2-21
2.6.1	<i>Belfry Area</i>	2-21
2.6.2	<i>Rural Corridor</i>	2-23
3.0	Impacts	3-1
3.1	Transportation.....	3-1
3.1.1	<i>Traffic</i>	3-1
3.1.2	<i>Access</i>	3-5
3.1.3	<i>Accident Occurrence</i>	3-9
3.1.4	<i>Pedestrians and Bicycles</i>	3-15
3.2	Social / Economic.....	3-18
3.2.1	<i>Land Uses</i>	3-18
3.2.2	<i>Parks and Recreation</i>	3-20
3.2.3	<i>Prime and Important Farmlands</i>	3-22
3.2.4	<i>Farm Operations</i>	3-26
3.2.5	<i>Irrigation</i>	3-29
3.2.6	<i>Social Conditions</i>	3-31
3.2.7	<i>Economic Conditions</i>	3-34
3.2.8	<i>Environmental Justice</i>	3-38
3.2.9	<i>Right-of-Way</i>	3-39
3.2.10	<i>Relocations/Acquisition</i>	3-42
3.2.11	<i>Utilities</i>	3-44
3.3	Environmental	3-45
3.3.1	<i>Cultural and Historic Resources</i>	3-45
3.3.2	<i>Air Quality</i>	3-52

3.3.3	Noise	3-52
3.3.4	Water Resources/Quality	3-57
3.3.5	Wetlands.....	3-62
3.3.6	Vegetation.....	3-66
3.3.7	Wildlife and Migratory Birds.....	3-68
3.3.8	Aquatic Species.....	3-74
3.3.9	Threatened and Endangered Species.....	3-77
3.3.10	Floodplains	3-78
3.3.11	Water Body Modifications.....	3-82
3.3.12	Hazardous Materials	3-84
3.3.13	Visual Resources	3-87
3.3.14	Section 4(f) and Section 6(f)	3-89
3.4	Construction Impacts	3-93
3.4.1	No-Build Alternative.....	3-93
3.4.2	Impacts Common to Build Alternatives.....	3-93
3.4.3	Transportation	3-93
3.4.4	Socioeconomics	3-94
3.4.5	Environmental.....	3-96
3.5	Cumulative Impacts.....	3-100
4.0	Permits.....	4-1
5.0	Distribution List	5-1
5.1	Federal Agencies	5-1
5.2	Tribal Consultation.....	5-1
5.3	State Agencies	5-2
5.4	Local Agencies	5-2
5.5	Other Organizations	5-2
6.0	Comments and Coordination.....	6-1
6.1	Agency Coordination.....	6-1
6.1.1	Agencies with Jurisdiction and/or Permitting Authority.....	6-1
6.1.2	Cooperating Agencies	6-1
6.1.3	Other Agencies and Groups.....	6-2
6.2	Public Involvement.....	6-3
6.2.1	Public Meetings in Belfry	6-3
6.2.2	North End Workshops.....	6-3
6.2.3	Summary of Issues Expressed at Public Meetings and Workshops ..	6-4
6.3	Other Public Involvement and Information Techniques	6-6

6.3.1 *Local Officials Briefings* 6-6

6.3.2 *Newsletters* 6-6

6.3.3 *Media* 6-6

6.4 Future Public Involvement and Information Activities 6-6

6.5 Opportunities for Review of and Comment on Environmental Assessment 6-7

7.0 List of Preparers **7-1**

8.0 List of Sources / Documents **8-1**

9.0 Appendices **9-1**

LIST OF APPENDICES

Appendix A - Environmental Overview Maps

Appendix B - Farmland Conversion Impact Rating

Appendix C - Cultural Resources

Appendix D - Noise

Appendix E - Section 4(f) Correspondence for MW&S Railroad Maintenance Shop and Belfry School Picnic Area

Appendix F - Programmatic Section 4(f) Evaluations

Appendix G - Agency Coordination

INDEX OF FIGURES

Figure 1.1 Belfry-North Project Area Map 1-2

Figure 1.2 Skewed Access, Narrow Shoulders, and Steep Side Slopes 1-7

Figure 1.3 Lynn’s Corner 1-8

Figure 1.4 Clarks Fork “North” Bridge 1-8

Figure 1.5 Existing Intersection Geometry at MT 72/US 310 Intersection 1-10

Figure 1.6 View of Existing MT 72/US 310 Intersection 1-10

Figure 1.7 School Crosswalks on Wisconsin Street (looking south) 1-11

Figure 1.8 Curve in Front of Belfry School (looking south) 1-12

Figure 2.1 Map of MT 72 Segments with Alternatives 2-2

Figure 2.2 Railroad Alignment Alternative Urban Typical Section 2-4

Figure 2.3 Broadway Avenue Alternative Urban Typical Section 2-4

Figure 2.4 MDT’s Rural Typical Section (9.6-m (32-ft) roadway) 2-5

Figure 2.5 Railroad Alignment Alternative (Preferred) 2-8

Figure 2.6 Broadway Avenue Alternative 2-11

Figure 2.7 Modified Existing Alignment Alternative (Preferred) 2-14

Figure 2.8 Ridgeway North Alternative 2-16

Figure 2.9 Ridgeway South Alternative 2-18

Figure 2.10 Preferred Typical Section (12-m (40-ft) Subgrade with a 9.6-m (32-ft) Paved Top and Flattened In-slope) 2-21

Figure 2.11 All Alternatives Considered 2-24

Figure 3.1 Prime Farmland (if Irrigated) and Farmland of Statewide Importance 3-23

Figure 3.2 Floodplains 3-80

INDEX OF TABLES

Table S.1	Summary of Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane).....	S-7
Table S.2	Summary of Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	S-15
Table S.3	Mitigation Measures Identified for the Preferred Alternative.....	S-23
Table 1.1	Accident and Severity Rates (per million vehicle miles) (1992 through 2001)	1-5
Table 1.2	Crash Summary by Segment (1-1-1992 through 12-31-2001)	1-5
Table 1.3	Belfry-North Existing Conditions	1-6
Table 2.1	Variations in Urban Typical Sections.....	2-3
Table 3.1	Traffic Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane).....	3-3
Table 3.2	Traffic Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-4
Table 3.3	Access Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-7
Table 3.4	Access Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-8
Table 3.5	Crash Summary by Segment (1-1-1992 through 12-31-2001)	3-9
Table 3.6	Recommended Safety Improvements	3-11
Table 3.7	Safety Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-12
Table 3.8	Safety Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-14
Table 3.9	Pedestrian and Bicycle Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-17
Table 3.10	Pedestrian and Bicycle Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-17
Table 3.11	Carbon County Land Use Classifications.....	3-19
Table 3.12	Parks and Recreation Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-21
Table 3.13	Prime and Important Farmland Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-25
Table 3.14	Prime and Important Farmland Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-26
Table 3.15	Farm Operations Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-27
Table 3.16	Farm Operations Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)	3-28
Table 3.17	Irrigation Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane).....	3-30
Table 3.18	Irrigation Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-31
Table 3.19	Social Conditions Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-33
Table 3.20	Social Conditions Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)	3-34
Table 3.21	Economic Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-37
Table 3.22	Economic Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-38
Table 3.23	Existing Right-of-Way Widths.....	3-39

Table 3.24	Right-of-Way Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane).....	3-40
Table 3.25	Right-of-Way Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-41
Table 3.26	Public Property Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-41
Table 3.27	Relocation/Acquisition Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-43
Table 3.28	Relocation/Acquisition Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-43
Table 3.29	NRHP-Eligible Cultural Sites along the Belfry-North MT 72 Highway Corridor	3-47
Table 3.30	Cultural Resources Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-49
Table 3.31	Cultural Resources Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)	3-50
Table 3.32	Noise Abatement Criteria.....	3-53
Table 3.33	Noise Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-55
Table 3.34	Noise Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-56
Table 3.35	Water Resources Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-60
Table 3.36	Water Resources Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)	3-61
Table 3.37	Approximate Direct Wetlands Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-63
Table 3.38	Approximate Direct Wetlands Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-64
Table 3.39	Vegetation Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane).....	3-67
Table 3.40	Vegetation Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-68
Table 3.41	Wildlife and Migratory Bird Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-72
Table 3.42	Wildlife and Migratory Bird Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)	3-73
Table 3.43	Hazardous Materials Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-86
Table 3.44	Hazardous Materials Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-87
Table 3.45	Visual Resources Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-88
Table 3.46	Visual Resources Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)	3-89
Table 3.47	Section 4(f) Resource Summary Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)	3-92
Table 3.48	Section 4(f) Resource Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection).....	3-92
Table 3.49	MDT Planned Projects in Belfry Area (2003 – 2005 Major Projects)	3-101
Table 3.50	Planned Projects in Belfry Area (2003 – 2005)	3-101

Conversion Factors	
Metric	English
1 meter	3.281 feet
1 meter ²	10.764 feet ² or 1.195 yard ²
1 kilometer	0.622 miles
1 hectare	2.471 acres
1 hectare = 10,000 meters ²	
1 kilogram	2.205 pounds
English	Metric
1 foot	0.305 meters
1 foot ²	0.092 meter ²
1 mile	1.609 kilometers
1 acre	0.45 hectares
1 acre = 43,560 feet ²	
1 pound	0.45 kg

LIST OF ACRONYMS AND ABBREVIATIONS

+/-	approximately
AADT	average annual daily traffic
AASHTO	American Association of State Highway and Transportation Officials
ac	acre
ADT	average daily traffic
aka	also known as
APE	area of potential effect
BFE	base flood elevation
BLM	US Bureau of Land Management
BMP	best management practice
BRR	Biological Resources Report
CAA	Clean Air Act
CBC	concrete box culvert
CEI	cost effectiveness index
CFR	Code of Federal Regulations
CFV	Clarks Fork Valley
Clarks Fork	Clarks Fork Yellowstone River

CMP	corrugated metal pipe
CO	carbon monoxide
COE	US Army Corps of Engineers
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibels
EA	environmental assessment
EIS	environmental impact statement
EMS	emergency medical services
EPA	US Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FFPA	Federal Farm Protection Act
FHPM	Federal Highway Program Manual
FHWA	Federal Highway Administration
FIRM	flood insurance rate maps
FONSI	Finding of No Significant Impact
ft	foot
GIS	Geographic Information Systems
GWIC	Ground Water Information Center
ha	hectare
ISA	initial site assessment
km	kilometers
Leq(h)	dBA equivalent noise level
LOS	level of service
LUST	leaking underground storage tank
LWCF	Land Water Conservation Fund
m	meters
MBTA	Migratory Bird Treaty Act
MDEQ	Montana Department of Environmental Quality
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MFWP	Montana Fish and Wildlife Parks
mi	miles
MOA	Memorandum of Agreement

MPDES	Montana Pollutant Discharge Elimination System
mph	miles per hour
MT	Montana
MTNHP	Montana Natural Heritage Program
MW&S	Montana, Wyoming & Southern
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRCS	U.S. Department of Agriculture – Natural Resources Conservation Service
NRHP	National Register of Historic Places
PA	Programmatic Agreement
PM ₁₀	particulate matter less than 10 microns in diameter
RCRA	Resource Conservation and Recovery Act
RP	reference mile post
RR	railroad
RTI	Renewable Technologies, Inc.
S	Secondary (as in Secondary Highway)
SPA	Stream Protection Act
SWPPP	Stormwater Pollution Prevention Plan
TDS	total dissolved solids
TMDL	total maximum daily load
TNM	Traffic Noise Model
USC	US Code
USDA	US Department of Agriculture
USFWS	US Fish and Wildlife Service
UST	underground storage tank
VMT	vehicle miles traveled

SUMMARY

Introduction and Background

Montana Department of Transportation (MDT) proposes to reconstruct an approximately 17.9-kilometer (km) (11.1-mile [mi]) section of Montana Primary Highway 72 (MT 72) between Montana Secondary 308 (S-308) in the town of Belfry and US Highway 310 (US 310) south of the town of Bridger in Carbon County, Montana (see Figure 1.1). The project includes proposed improvements within the town of Belfry as well as throughout the mostly rural corridor. Proposed improvements would include adding sidewalks and other improvements in the town of Belfry and widening shoulders, replacing bridges, improving horizontal and vertical alignments, improving clear zones, and flattening side slopes throughout the corridor.

The corridor is agricultural, and MT 72 is used by local farmers to move farm equipment within this area. It serves the agricultural industry in the area and links tourism and commercial traffic regionally between the State of Wyoming, Yellowstone National Park, Red Lodge and Billings, Montana.

The existing MT 72 roadway was constructed in 1948 and 1949, and is now deficient for a Primary route's geometrics. The majority of its surface widths are +/- 7.3 meters (m), approximately 24 feet (ft). A section between RP's +/- 11.7 and 14.5 is only +/- 6 m, approximately 20 ft wide. Bridge structures have variable deck widths of +/- 6.4 to 7.3 m, approximately 21 to 24 ft.

Purpose of and Need for Action

The primary purpose of this proposed project is to improve safety along the project corridor. MT 72 is an important regional highway in Montana and is classified by MDT as a Primary Highway. It is the primary local transportation route for the towns of Belfry and Bridger, and a link between south-central Montana and Wyoming (Billings, Montana, to Cody, Wyoming).

MT 72's existing route features a narrow width on a deteriorating roadbed with steep shoulders throughout its rural portion and restricted sight-distances in various places. Safety is a concern throughout its present length in both the community and that rural section. Particular needs include improving safety at specific crash locations; reducing roadway deficiencies to improve overall safety for highway users; improving vehicular, pedestrian, and bicycle safety at Belfry School; improving pedestrian and bicycle safety throughout the corridor; and improving safety of roadway intersections.

It serves agriculture in the area and links tourism and commercial traffic regionally between the State of Wyoming, Yellowstone National Park, Red Lodge, and Billings, Montana. In the proposed project area, MT 72 provides a transportation route for agricultural products in the surrounding area.

Roadway deficiencies include narrow bridges, narrow shoulders, insufficient clear zones and recoverable areas, steep side slopes, lack of pedestrian and bicycle facilities in the town of Belfry, poor intersection geometry, and several sharp curves. Shoulders are narrow throughout the corridor, and inadequate clear zones and recoverable areas are present in 60 percent of the corridor. There are 10 sharp horizontal curves, seven deficient vertical curves, and six narrow bridges. The six bridges include the Clarks Fork "south" bridge, the Clarks Fork "north" bridge (functionally obsolete and eligible for replacement), the Silver Tip Creek bridge, the Dry Creek Canal bridge, and two bridges over the Sand Creek Ditch. The structure over Bear Creek on

existing MT 72 is a box culvert augmented by a corrugated metal pipe (CMP). Geometric problems at intersections throughout the corridor, including the intersections with S-308 and US 310, present numerous safety concerns for the community.

In Belfry, the current MT 72 alignment passes by the Belfry School at a sharp curve with a posted speed of 15 mph. Pedestrian and bicycle safety near the school is a serious concern for residents. North of Belfry in the rural corridor, "Lynn's Corner" a sharp curve and high accident location with a reduced speed limit of 72 kph (45 mph), is also a safety concern for the local community.

Another safety concern is the mix of high-speed regional traffic with slower moving local traffic including agricultural equipment. Land use along MT 72 between Belfry and US 310 is primarily agricultural, and farm equipment regularly uses the highway to access adjacent fields. Since the existing shoulders are either narrow or non-existent, farm equipment must drive in the general travel lane rather than on the shoulder, creating conflicts with faster moving through traffic.

No-Build Alternative

The No-Build alternative is the current MT 72 alignment and configuration. In the Belfry Area, MT 72 through the town of Belfry is located on Vaill Avenue and curves northward in front of the Belfry School on Wisconsin Street and north to North Dutch Lane. In the Rural Corridor, MT 72 would continue on its existing alignment from North Dutch Lane to the intersection of US 310. There would be no change in roadway, pedestrian, or parking conditions under the No-Build Alternative. MDT would continue maintaining the highway, but roadway deficiencies and safety concerns would remain.

Build Alternatives

All build alternatives proposed for the Belfry North project provide for the reconstruction of MT 72 through the project area in order to achieve the project purpose and need. The alternatives were grouped according to alignment and typical section alternatives. To simplify discussion of the proposed alignment alternatives that were carried forward for analysis in this EA, the MT 72 corridor was divided into two segments: the **Belfry Area** between S-308 and North Dutch Lane (+/- RP 10.5 to 12.7) and the **Rural Corridor** between North Dutch Lane and US 310 (+/- RP 12.7 to 21.4). **No-Build Alternatives** (i.e., no roadway improvements) for both proposed segments were analyzed along with two proposed build alignment alternatives for the Belfry Area and three proposed build alignment alternatives for the Rural Corridor. For each of these proposed alignment alternatives, two typical sections were evaluated for the rural portions of the alternatives.

Belfry Area: Railroad Alignment Alternative (Preferred Alternative)

Belfry Area: Railroad Alignment Alternative (Preferred Alternative) would create a new alignment for MT 72, relocating the highway from Vaill Avenue and Wisconsin Street to Railroad Avenue on the western edge of the town of Belfry. The alternative begins on MT 72, south of Railroad Avenue's present intersection with S-308 at +/- RP 10.5, follows Railroad Avenue to its current terminus, and continues north on the old railroad grade to tie-in to the existing MT 72 alignment north of Dutch Lane. This alternative terminates at North Dutch Lane at +/- RP 12.7. In addition to the construction of the new roadway and modifications to existing intersections, this alternative includes improvements to one block of Broadway Avenue in Belfry, construction of a new structure over Bear Creek, and construction of a new two-lane bridge over the Clarks Fork Yellowstone River (Clarks Fork). Under this alternative, the existing MT 72 alignment north of its Bear Creek crossing to north of the Clarks Fork "south" bridge would be eliminated, and the existing MT 72 through

Belfry would be used for local rather than highway traffic. This alternative features MDT's urban typical section (two travel lanes, sidewalks, curb and gutter, and parking) from the project start to just after the Bear Creek crossing. At this point, the alternative would begin to transition to a rural typical section (two travel lanes, paved shoulders with rumble strips, and drainage ditches). Curb and gutter drainage would be retained on the west side in this transition area to avoid impacting the historic railroad maintenance shop.

Belfry Area: Broadway Avenue Alternative

Belfry Area: Broadway Avenue Alternative would shift the MT 72 alignment one block north from Vaill Avenue to Broadway Avenue. Broadway is the historic "Main Street" commercial arterial within the town and provides parking and direct access to the majority of the town's businesses. From the S-308 intersection, this alternative would travel along Railroad Avenue to Broadway Avenue where it would connect to Broadway with a new 40 kilometers per hour (kph) (+/- 25 mph) curve. Broadway Avenue would be improved to MDT standards through Belfry to Wisconsin Street, where the highway would continue through another 40 kph (+/- 25 mph) curve and join the existing MT 72 alignment north of Wisconsin Street. This alternative would continue along the existing MT 72 alignment to North Dutch Lane. A new cul de sac would be constructed for the Belfry School south of the proposed MT 72 alignment. In addition to roadway and intersection improvements or construction, this alternative would involve replacement of the box culvert and corrugated metal pipe on Bear Creek at MT 72, and the Clarks Fork "south" bridge. This alternative would feature MDT's urban typical section through town and transition to a rural typical section north of the Wisconsin Street curve.

Rural Corridor: Modified Existing Alignment Alternative (Preferred Alternative)

Rural Corridor: Modified Existing Alignment Alternative (Preferred Alternative) would feature a rural typical section throughout. The alignment would follow the existing roadway from North Dutch Lane (+/- RP 12.7) to just north of the Clarks Fork "north" bridge at Lynn's Corner, approximately 4.8 km (+/- 3 mi) north of Belfry. At Lynn's Corner, the alignment would shift to the east with two reverse curves to replace the existing substandard horizontal curve at this location. From the reconstructed curve, the highway would proceed north along the existing roadway alignment to the US 310 intersection. A number of modifications would occur at the MT 72/US 310 intersection to improve safety and geometry at this high accident location. In addition to roadway, intersection, and access improvements, this alternative would include replacement structures at Silver Tip Creek bridge and Clarks Fork "north" bridge and replacement of structures at Dry Creek Canal and Sand Creek Canal.

Rural Corridor: Ridgeway North Alternative

Rural Corridor: Ridgeway North Alternative also features a rural typical section throughout and is identical in alignment to the proposed Modified Existing Alignment Alternative from North Dutch Lane (+/- RP 12.7) to just south of Sand Creek Canal at approximately RP 20.3. It includes the same improvements to Lynn's Corner and bridge replacements as the Preferred Alternative. At Sand Creek Canal, from the point where the existing highway curves, the Ridgeway North Alternative eliminates this curve and continues straight. It proceeds northeasterly on a new alignment across Ridgeway Lane terminating at US 310 at a private driveway north of the existing Ridgeway Lane intersection with US 310, across from the MDT Maintenance Yard Facility. The existing MT 72/US 310 intersection would revert to local access under this alternative.

Rural Corridor: Ridgeway South Alternative

Rural Corridor: Ridgeway South Alternative is identical to the Ridgeway North Alternative except that it crosses Ridgeway Lane further east and terminates on US 310 south of the Ridgeway North Alternative and north of the existing Ridgeway Lane intersection with US 310. This proposed alignment closely follows a treeline on the eastern side to minimize intrusion into farm fields.

Typical Section: 9.6-m (= +/- 32-ft) Width Alternative

Typical Section: 9.6-m (32-ft) Alternative is MDT's standard for this type of rural highway and volume of traffic. This proposed typical section includes two 3.6-m (12-ft) travel lanes with 1.2-m (4-ft) shoulders. The typical right-of-way is 30 m (100 ft), although this varies based on specific conditions in the corridor.

Typical Section: 12-m (= +/- 40-ft) Width Alternative

Typical Section: 12-m (40-ft) Alternative is similar to the 9.6-m (32-ft) Alternative, except it provides wider shoulders, which are 2.4 m (8 ft). The public at several public meetings suggested this typical section.

Impacts

Impacts are summarized and compared among proposed alternatives in Tables S-1 for the Belfry Area and S-2 for the Rural Corridor.

All of the proposed build alternatives meet the purpose and need of the project by improving safety as well as traffic flow, access, and pedestrian and bicycling activities. The No-Build Alternative does not improve safety along the corridor, and therefore, does not meet the purpose and need of the project.

Comparison of Typical Sections Impacts

Two typical sections, the 9.6-m (32-ft) and the 12-m (40-ft), were evaluated for the rural portion of the corridor (i.e., the area outside the town of Belfry). Rural sections are present in both the Belfry Area (between the town of Belfry and North Dutch Lane) and throughout the Rural Corridor. The two typical sections are identical in all aspects except the 9.6-m (32-ft) section includes 1.2-m (4-ft) shoulders, and the 12-m (40-ft) section includes 2.4-m (8-ft) shoulders. Although the proposed 9.6-m (32-ft) typical section meets MDT standards, the public suggested the wider shoulders as means to improve safety for highway users including the movement of agricultural equipment. The wider shoulders are also consistent with the American Association of State Highway and Transportation Officials (AASHTO) recommendations for the type of highway and volume of traffic on MT 72.

The wider 12-m (40-ft) typical section creates small additional increases in ground disturbance and property impacts as compared with the 9.6-m (32-ft) typical section. There would be slightly greater impacts to farmlands, vegetation, wetlands, right-of-way, and floodplains from the wider shoulders. However, the primary impacts to ground disturbance result from reconstruction of the highway to current MDT standards (improving horizontal and vertical alignments, etc.). To implement the 12-m (40-ft) typical section, combined total proposed project estimated costs for the Preferred Alternatives in both segments would increase 15 percent from \$16.1 million to \$18.5 million.

Although there would be slightly greater property and environmental impacts and a higher cost associated with the proposed 12-m (40-ft) typical section, wider shoulders would also provide a number of transportation benefits. For the 12-m (40-ft) typical section, the 2.4-m (8-ft) shoulders improve travel and safety conditions as they allow a vehicle to pull off of the roadway and out of the driving lanes. Wider shoulders encourage uniform speeds, which generally increase highway capacity; improve roadside safety, as there is more recovery room for vehicles that stray outside of the travel way; and improve sight distances around horizontal curves. In this project area, which is dominated by agricultural uses, wider shoulders provide improved conditions for slow-moving agricultural equipment to travel in the corridor and minimize conflicts with faster-moving through traffic.

Comparison of Alignment Alternatives Impacts

In the Belfry Area, the Railroad Alignment Alternative and the Broadway Avenue Alternative would address roadway deficiencies and meet the primary need to improve safety in the corridor. The Railroad Alignment Alternative provides greater safety benefits by moving the highway to the western edge of town and away from the school. It also would provide the opportunity to access a BLM parcel on the Clarks Fork, which could be developed as a fishing access site. Impacts to cultural resources, wetlands, and water quality would be similar for both alternatives. Both Alternatives result in the relocation or acquisition of one business (Krum's Gift Shop) and two residences (two mobile homes on the Toogood property) along Railroad Avenue. The Railroad Alignment Alternative also may require the relocation or reconstruction of four structures on one farm (the Brown Trust property). Whereas, the Broadway Avenue Alternative would not impact this farm, it would impact the picnic area across from the Belfry school. The Railroad Alignment Alternative would require slightly more acquisition of new right-of-way and could impact the operations of one farm and the proposed redevelopment of one agricultural property (the Wolfe property) as a hunting club. Due to the new crossing of the Clarks Fork, the Railroad Alignment Alternative also would create slightly greater impacts to floodplains, water bodies, and aquatic resources. For either typical section, the Railroad Alignment Alternative would cost about \$700,000 more than the Broadway Avenue Alternative.

In the Rural Corridor, all build alternatives, the Modified Existing Alignment Alternative, the Ridgeway North Alternative, and the Ridgeway South Alternative would reduce roadway deficiencies and improve safety. These three alternatives would improve safety by realigning Lynn's Corner, by improving intersections including the MT 72 and US 310 intersection, and by relocating approximately 10 accesses that are within 150 m (500 ft) of a public road intersection within the rural corridor. In addition, for the Modified Existing Alignment Alternative, four accesses near US 310 would be consolidated by means of a new access road to improve the safety at the reconfigured US 310 intersection. Impacts would be similar among the three proposed build alternatives for most resource areas (in part because the alignment is identical among the alternatives for much of the Rural Corridor segment). All alternatives would result in an impact to the farming operation at Lynn's Corner because a small parcel would be severed. The Modified Existing Alignment Alternative and the Ridgeway South Alternative would each result in one relocation/acquisition. However, the Modified Existing Alignment Alternative would result in less farmland acquisition and fewer impacts to several agricultural operations in the corridor than both the Ridgeway alternatives. The Modified Existing Alignment Alternative would cost approximately 10 percent more than the other alternatives.

Conclusion

After consideration of the purpose and need of the project to improve safety and roadway deficiencies, the Railroad Alignment Alternative in the Belfry Area and the Modified Existing Alignment Alternative in the Rural Corridor were selected to be combined as the Preferred Alternative for the proposed project. In the Belfry Area, the Railroad Alignment Alternative would provide the greatest improvement to safety in town by relocating the highway outside the town center and reducing conflicts with pedestrians, bicycles, and local traffic. It also would provide the most improved safety conditions for the Belfry School, which was identified by the public as one of the major concerns to be addressed by this proposed project.

The Modified Existing Alignment was selected as part of the Preferred Alternative for the Rural Corridor. Although all three build alternatives improved safety and had similar impacts, the Modified Existing Alignment Alternative had less impact on several agricultural operations.

Both the 9.6-m (32-ft) typical section with 1.2-m (4-ft) paved shoulders and the 12-m (40-ft) typical section with 2.4-m (8-ft) paved shoulders would improve safety in the highway corridor. The 12-m (40-ft) typical section would provide wider shoulders to further improve safety; whereas, the 9.6-m (32-ft) typical section would have less environmental impact and a lower cost.

FHWA and MDT identified a design option that combines the best features of these two typical section alternatives. The preferred typical section is a **12-m (40-ft) subgrade with a 9.6-m (32-ft) paved top and flattened in-slopes**. This option would feature an initial paved top of 9.6 m (32 ft). Paved 1.2-m (4-ft) shoulders with flattened in-slopes from this shoulder would offer a wider shoulder and recovery area at the edge of the travelway. The increased width of the shoulder area resulting from the paved and unpaved area would provide more room for movement of agricultural equipment. This option would offer a lower initial paving cost and could easily accommodate a future 12-m (40-ft) overlay when traffic volumes warrant a wider paved roadway width. Until a full 12-m (40-ft) paved top is warranted, FHWA and MDT may consider using a 12-m (40-ft) pavement near intersections, bridge approaches, or where school bus stops are located. During the project's final design, MDT and FHWA will determine appropriate locations, if any, for the 12-m (40-ft) paved top.

Table S.1 Summary of Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

Topic Area	No-Build	Railroad Alignment Alternative (Preferred)	Broadway Avenue Alternative
TRAFFIC			
9.6-m (approximately 32-ft) Typical Section			
Consistency with connecting National Highway System (NHS) and Primary Route widths, and American Association of State and Highway Transportation Officials (AASHTO) recommendations	Not consistent with MT 72 at this proposed project's beginning at the proposed Wyoming Line to Belfry project's northerly end. Also not consistent with US 310's width at this proposed project's northerly end. Not consistent with AASHTO recommendations for 2-lane highways in either rural or developed areas.	Consistent with MT 72 for proposed Wyoming Line – Belfry project's typical section width, but narrower than US 310 beyond this proposed project's northerly end. Narrower than suggested AASHTO widths.	Same impacts as Railroad Alignment Alternative.
Traffic Patterns	Highway traffic continues in front of school	Reduced traffic volumes (in front of Belfry School) on Wisconsin St. and Vaill Ave. Diverts highway traffic from residential area to railroad alignment Closure of one block of Vaill Avenue changes some local traffic patterns	Reduced traffic volumes on Vaill Ave. and on section of Wisconsin St. near school; traffic volumes could increase on State and Wyoming St. approaches to Vaill Ave. Diverts highway traffic from residential to commercial area of town Closure of one block of Vaill Avenue changes some local traffic patterns
Traffic Operations	No impact	Improves traffic operations at MT 72/S-308 intersection	Same impacts as Railroad Alignment Alternative
12-m (approximately 40-ft) Typical Section (Impacts are same as 9.6-m (32-ft) in town, where the urban typical section is used; transition to rural typical section, where shoulder widths differ, occurs north of the town of Belfry. Impacts are the same as the 9.6-m (32-ft) rural section except for the additional impacts listed below.)			
Consistency with connecting NHS and Primary Route widths, and AASHTO recommendations.	Not consistent with MT 72 at this proposed project's beginning at the proposed Wyoming Line to Belfry project's northerly end. Also not consistent with US 310's width at this proposed project's northerly end. Not consistent with AASHTO recommendations for 2-lane highways in either rural or developed areas.	Wider than MT 72 for proposed Wyoming Line – Belfry project's typical section width, but same as US 310 beyond this proposed project's northerly end. Consistent with AASHTO 2-lane width recommendations.	Same impacts as Railroad Alignment Alternative.
Highway Capacity	No impact	Increased highway capacity from uniform speeds encouraged by wider shoulders	Same impacts as Railroad Alignment Alternative.
Traffic Operations	No impact	Improves flow and passing because slow-moving traffic can pull off roadway onto wider shoulder	Same impacts as Railroad Alignment Alternative.
ACCESS			
9.6-m (approximately 32-ft) Typical Section			
Business Access	Some entrances poorly defined without curbs	Intersection improvement (MT 72/Broadway Ave.) improves access to commercial area on Broadway Ave.	Improves business and parking access along commercial area on Broadway Ave.
Belfry School	No impact	No impact (highway traffic relocated)	Access from local street (Vaill Ave.) through new cul de sac

Table S.1 Summary of Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane) (continued)

Topic Area	No-Build	Railroad Alignment Alternative (Preferred)	Broadway Avenue Alternative
ACCESS (continued)			
9.6-m (approximately 32-ft) Typical Section (continued)			
Driveway Access	Many residential driveways directly access highway	Fewer driveways accessing highway (fewer driveways on Railroad Ave.). Opportunity to implement access management within 150 m (500 ft) of public roads to improve safety.	Fewer and different type of driveways accessing highway; driveways are commercial not residential. Opportunity to implement access management within 150 m (500 ft) of public roads to improve safety.
BLM Fishing Access	No impact	New alignment provides access to BLM land for potential development of new fishing access on Clarks Fork	No impact
MT 72 Access	No impact	New access/relocated access for properties on eliminated section of old MT 72.	No impact
12-m (approximately 40-ft) Typical Section (Impacts are same as 9.6-m (32-ft) in town, where the urban typical section is used; transition to rural typical section, where shoulder widths differ, occurs north of the town of Belfry. Impacts are the same as the 9.6-m (32-ft) rural section except for the additional impacts noted below.)			
Wider Shoulders	No impact	Improved access to school bus stops, mail boxes, highway maintenance, fishing, and other uses adjacent to highway	Same impacts from wider shoulders as Railroad Alignment Alternative
SAFETY			
9.6-m (approximately 32-ft) Typical Section			
Tight Curve at Vaill Ave. and Wisconsin St.	Curve remains at school and highway traffic remains on it	Curve remains at school but there would be no highway traffic on it.	Existing curve replaced with improved curve one block north at Broadway Ave. and Wisconsin St at north end of school.
Belfry School Safety	Safety issues at school would not change	Reduced traffic volumes and speeds on Wisconsin St. and Vaill Ave. improve pedestrian safety at school.	Reduced traffic volumes on Wisconsin St. and Vaill Ave. improve pedestrian safety for southern portion of Belfry School (traffic volumes at Wisconsin St. and Broadway Ave. for northern portion of school are unchanged from no-build) Cul de sac on Wisconsin Street provides an opportunity for a school drop-off/pick-up area
Neighborhood Safety	Highway traffic continues in residential area	Diverting traffic from Vaill Ave. (residential area) to Railroad Ave. (less developed residential/commercial area) is more compatible with pedestrian movements	Diverting traffic from Vaill Ave. (residential area) to Broadway Ave. (commercial area) more compatible with pedestrian movements
Side Slopes, Clear Zones, and Shoulders	Substandard conditions remain	Improved to meet MDT standards to improve safety	Same impacts as Railroad Alignment Alternative.
Intersections	Skewed accesses remain	Improved driveway and public road geometry improves safety	Same impacts as Railroad Alignment Alternative.
12-m (approximately 40-ft) Typical Section (Impacts are same as 9.6-m (32-ft) in town, where the urban typical section is used; transition to rural typical section, where shoulder widths differ, occurs north of the town of Belfry. Impacts are the same as the 9.6-m (32-ft) rural section except for the additional impacts noted below.)			
Wider Shoulders	No impact	Wider shoulders provide more recovery room for errant vehicles, improve sight distance, and allow disabled vehicles to pull completely out of travel lane	Same impacts from wider shoulders as Railroad Alignment Alternative
PEDESTRIAN AND BICYCLES			
9.6-m (approximately 32-ft) Typical Section			
In Belfry	No defined sidewalks	Sidewalks provided on MT 72 from S-308 along Railroad Ave. and at Broadway Ave. intersection improves connections and enhances safety	Sidewalks provided on MT 72 from S-308 along Broadway Ave. to Wisconsin St. improve connections and enhance safety
North of Belfry	No impact	Wider shoulder area improves safety conditions for pedestrian and bicycle movements, school bus stops	Same impacts from wider shoulder as Railroad Alignment Alternative.

Table S.1 Summary of Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane) (continued)

Topic Area	No-Build	Railroad Alignment Alternative (Preferred)	Broadway Avenue Alternative
PEDESTRIAN AND BICYCLES (continued)			
12-m (approximately 40-ft) Typical Section (Impacts are same as 9.6-m (32-ft) in town, where the urban typical section is used; transition to rural typical section, where shoulder widths differ, occurs north of the town of Belfry.)			
North of Belfry	No impact	Increased distance between high-speed vehicular traffic and pedestrians and bicycles improves safety conditions more than 9.6-m (32-ft). Meets AASHTO recommendations for 1.2-m (4-ft) clear area for bicycle use in shoulder.	Same impacts from wider shoulder as Railroad Alignment Alternative
LAND USE (Both Typical Sections)			
Population Growth	No impact	Not likely to induce growth.	Not likely to induce growth.
PARKS AND RECREATION (Both Typical Sections)			
Fishing Access	No impact	Informal fishing access at existing Clarks Fork "south" bridge could be impacted because this area would no longer be in MDT right-of-way. Opportunity for BLM to develop official fishing access to its property adjacent to new alignment	Informal fishing access at Clarks Fork "south" bridge would not change.
Picnic Area near Belfry School	No impact	No impact	Cul de sac impacts 60% (approximately 0.1 ha (0.4 ac)) of picnic area property used by traveling public; would potentially eliminate its use as a picnic area.
PRIME AND IMPORTANT FARMLANDS			
9.6-m (approximately 32-ft) Typical Section			
Direct and Indirect Impacts	No impact	10.0 ha (24.6 ac)	6.4 ha (15.9 ac)
12-m (approximately 40-ft) Typical Section (Impacts are same as 9.6-m (32-ft) in town, where the urban typical section is used; transition to rural typical section, where shoulder widths differ, occurs north of the town of Belfry.)			
Direct and Indirect Impacts	No impact	10.4 ha (25.7 ac)	6.4 ha (15.9 ac)
FARM OPERATIONS			
9.6-m (approximately 32-ft) Typical Section			
Movement of Farm Equipment on MT 72	Continued conflicts with vehicles and farm equipment	Would improve safety and movement of farm equipment through corridor due to improved through-traffic passing with wider 1.2-m (4-ft) shoulders.	Same impacts as Railroad Alignment Alternative.
Brown Trust Property	No impact	Alignment bisects property. Adversely affects efficiency of operations (e.g., production at feedlots; access to corrals, outbuildings, fuel storage and mechanic's shop). Could require relocation of 4 structures elsewhere on the property.	No impact
Spaulding Property	No impact	Current MT 72 alignment bisects property; relocating MT 72 would provide opportunity to reconnect property and improve productivity	No impact
Wolfe Property	No impact	Alignment bisects property. Would adversely affect owner's proposed plan to change use of parcel from farming to hunting club.	No impact
12-m (approximately 40-ft) Typical Section (Impacts are same as 9.6-m (32-ft) in town, where the urban typical section is used; transition to rural typical section, where shoulder widths differ, occurs north of the town of Belfry. Impacts are the same as the 9.6-m (32-ft) rural section except for the additional impacts listed below.)			
Movement of Farm Equipment	No impact	Safety and movement of farm equipment would be improved more with wider shoulder area, which is increased to 2.4 m (8 ft).	Same impacts as Railroad Alignment Alternative

Table S.1 Summary of Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane) (continued)

Topic Area	No-Build	Railroad Alignment Alternative (Preferred)	Broadway Avenue Alternative
IRRIGATION (Both Typical Sections)			
Bear Creek/Youst Ditch	No impact	Would affect some irrigation waste ditches in Belfry area but would not adversely impact irrigation operations. New conveyances on Youst Ditch system would improve irrigation operations of Brown Trust property	Replacement of culverts at Youst Ditch and Bear Creek would improve conveyance structures.
Irrigation Ditches		Some relocations would be required; relocations would either improve or have a neutral effect on irrigation operations	Same impacts as Railroad Alignment Alternative
SOCIAL CONDITIONS			
9.6-m (approximately 32-ft) Typical Section			
Emergency Vehicle and Fire Department Access from Bridger	No impact	Access reduced to one intersection on west side (at Railroad Ave. (MT 72) and Broadway Ave.). MT 72 along Wisconsin St. north of town is removed; one block of Vaill Ave. between Railroad Ave. (MT 72) and Montana St. is removed. Access would become more circuitous for some areas but shorter for others. Redistribution of access would not substantially affect response times because geographic area of Belfry is small.	Access on east side is via existing intersections with MT 72 and Wisconsin St. (Wisconsin St. at Carbon St., Wisconsin St. at Broadway Ave., and Wisconsin St. at Vaill Ave.). Wisconsin St./Vaill Ave. intersection would be eliminated. Access would become more circuitous for some areas but shorter for others. Redistribution of access would not substantially affect response times because geographic area of Belfry is small.
Fire Department Access in Belfry	No impact	No impact	No impact
Hospital Access	No impact	Similar to existing conditions (from Belfry to Red Lodge via S-308)	Same impacts as Railroad Alignment Alternative
Police and Emergency Operations	No impact	Wider shoulders provide areas for vehicles to partially pull off highway for law enforcement or emergency services	Same impacts as Railroad Alignment Alternative
12-m (approximately 40-ft) Typical Section (Impacts are same as 9.6-m (32-ft) in town, where the urban typical section is used; transition to rural typical section, where shoulder widths differ, occurs north of the town of Belfry. Impacts are the same as the 9.6-m (32-ft) rural section except for the additional impacts noted below.)			
Police and Emergency Operations	No impact.	Increased shoulder width allows vehicles to move out of the travel lane to shoulder for law enforcement and emergency services	Same impacts as Railroad Alignment Alternative
ECONOMIC			
9.6-m (approximately 32-ft) Typical Section			
Commercial Property Impacts	No impact	Relocation/acquisition of Krum gift shop, and potential impacts to proposed hunting club on Wolfe property.	Relocation/acquisition of Krum gift shop; Webb Coal Scale access modified (main building not operating); and Kose Grocery overhang may need reconstruction
Belfry Businesses	Little opportunity for through-traffic business	Would result in better access/visibility to commercial center with relocation of highway to Railroad Ave. and improved Broadway Ave. intersection.	Relocating travel corridor could enhance economic opportunity because traffic would travel through commercial center of town.
Project Cost	N/A	\$4.7 million	\$4.0 million
12-m (approximately 40-ft) Typical Section (Impacts are same as 9.6-m (32-ft) in town, where the urban typical section is used; transition to rural typical section, where shoulder widths differ, occurs north of the town of Belfry.)			
Project Cost	N/A	Increases by 9% to \$5.1 million	Increases by 9% to \$4.4 million

Table S.1 Summary of Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane) (continued)

Topic Area	No-Build	Railroad Alignment Alternative (Preferred)	Broadway Avenue Alternative
RIGHT-OF-WAY (ROW) AND RELOCATIONS/ACQUISITIONS			
9.6-m (approximately 32-ft) Typical Section			
Approximate New ROW	N/A	15.0 ha (37.2 ac)	9.3 ha (23.0 ac)
Relocations/ Acquisitions	No impact	7 relocations/acquisitions: Krum business (former Junction Exxon), 2 mobile homes on Toogood property; 4 farm structures on Brown Trust property Utility relocations (not likely to affect service)	3 relocations/acquisitions: Krum business (former Junction Exxon) and 2 mobile homes on Toogood property Utility relocations (not likely to affect service)
Public Property	No impact	BLM property impact 0.3 ha (0.8 ac); Belfry property near sewage lagoon 0.2 ha (0.5 ac)	Belfry School properties: school bus facility parking area 0.1 ha (0.1 ac); and staff parking lot and picnic area are 0.3 ha (0.8 ac)
12-m (approximately 40-ft) Typical Section			
Approximate New ROW	N/A	15.8 ha (39.0 ac)	9.9 ha (24.5 ac)
Relocations	No impact	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.
Public Property	No impact	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.
CULTURAL RESOURCES (Both Typical Sections)			
Clarks Fork "south" bridge (24CB707/1144)	No effect	Adverse effect. New alignment bypasses bridge; bridge would be removed but could be left in place if new owner assumes maintenance of bridge.	Adverse effect. Bridge is narrow and would require replacement; bridge could be left in place if new owner assumes maintenance of bridge.
MW&S Railroad Maintenance Shop (24CB1146)	No effect	No adverse effect. Design modification implemented to avoid impacts to building. Setting remains largely intact, and the characteristics that make the site eligible for the NRHP would be perpetuated.	No effect
Kose Grocery (24CB1813)	No effect	No effect	No adverse effect. Sidewalk reconstructed adjacent to building, overhang would be retained or reconstructed; structure not impacted.
Holland Lumber (24CB1803)	No effect	No effect	No adverse effect. Access modified; no structures impacted.
Middlesworth Farmhouse (25CB1145)	No effect	No effect	No effect
MW&S Railroad Depot (24CB1148)	No effect	No effect	No effect
First Presbyterian (United Methodist Church) (24CB678)	No effect	No effect	No effect
Riddle House (24CB676)	No effect	No effect	No effect
Youst Ditch (24CB1817)	No effect	No effect	No effect
NOISE (Both Typical Sections)			
Impacted Receptors	None	2 residences	4 residences

Table S.1 Summary of Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane) (continued)

Topic Area	No-Build	Railroad Alignment Alternative (Preferred)	Broadway Avenue Alternative
WATER RESOURCES/WATER QUALITY			
9.6-m (approximately 32-ft) Typical Section			
Impervious Surfaces	No impact	Impervious surfaces would increase 1.7 ha (4.2 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Impervious surfaces would increase 2.2 ha (5.4 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.
Construction and Removal of Structures	No impact	Construction and removal of structures at Bear Creek, Clarks Fork, and seven drainage or irrigation ditches could increase erosion and interrupt flow.	Construction and removal of structures at Bear Creek, Clarks Fork, and six drainage or irrigation ditches could increase erosion and interrupt flow.
12-m (approximately 40-ft) Typical Section			
Impervious Surfaces	No impact	Impervious surfaces would increase 4.0 ha (9.9 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Impervious surfaces would increase 4.4 ha (10.9 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.
Construction and Removal of Structures	No impact	Construction and removal of structures at Bear Creek, Clarks Fork, and seven drainage or irrigation ditches could increase erosion and interrupt flow.	Construction and removal of structures at Bear Creek, Clarks Fork, and six drainage or irrigation ditches could increase erosion and interrupt flow.
WETLANDS			
9.6-m (approximately 32-ft) Typical Section			
Jurisdictional	No impact	0.17 ha (0.43 ac)	0.15 ha (0.38 ac)
Non-jurisdictional	No impact	0.05 (0.12 ac)	0.16 ha (0.40 ac)
Indirect Impacts	No impact	Small impacts from reduction in flood storage, habitat reduction, and degradation in water quality	Small impacts from reduction in flood storage, habitat reduction, and degradation in water quality
12-m (approximately 40-ft) Typical Section			
Jurisdictional	No impact	0.18 ha (0.44 ac)	0.16 ha (0.40)
Non-jurisdictional	No impact	0.05 ha (0.128 ac)	0.22 ha (0.53 ac)
Indirect impacts	No impact	Small impacts from reduction in flood storage, habitat reduction, and degradation in water quality	Small impacts from reduction in flood storage, habitat reduction, and degradation in water quality
VEGETATION			
9.6-m (approximately 32-ft) Typical Section			
Noxious Weeds	No impact	Potential increase in noxious weeds because of increased disturbance from new alignment and disturbance of area	Minimal potential increase in noxious weeds from disturbance within current alignment
Vegetation	No impact	Small loss of riparian vegetation from replacement of / construction of new bridges and culverts. Loss of mature trees along Railroad Avenue.	Small loss of riparian vegetation from replacement of bridges and culverts. Loss of mature trees along Railroad Avenue.
12-m (approximately 40-ft) Typical Section			
Noxious Weeds	No impact	Slightly greater potential increase in noxious weeds than 9.6-m (32-ft) typical section due to slightly larger disturbance area from wider shoulders	Minimal potential increase in noxious weeds is slightly greater than for 9.6-m (32-ft) typical section because of slightly larger disturbance area from wider shoulders
Vegetation	No impact	Slightly greater disturbance of riparian vegetation than 9.6-m (32-ft) typical section due to larger disturbance area from wider shoulders. Loss of mature trees along Railroad Avenue.	Slightly greater disturbance of riparian vegetation than 9.6-m (32-ft) typical section due to larger disturbance area from wider shoulders. Loss of mature trees along Railroad Avenue.

Table S.1 Summary of Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane) (continued)

Topic Area	No-Build	Railroad Alignment Alternative (Preferred)	Broadway Avenue Alternative
WILDLIFE AND MIGRATORY BIRDS (Both Typical Sections)			
Montana Species of Special Concern	No impact	No effect to white-tailed prairie dog, spotted bat, pallid bat, or sagebrush lizard because of lack of suitable habitat. No effect to the northern leopard frog because suitable habitat would not be disturbed. May affect milk snake and mountain plover (should they be present), but it is not likely to contribute to a trend toward Federal listing or loss of viability of these species.	Similar but slightly less overall impact to habitat areas as Railroad Alignment Alternative due to the expansion along an existing roadway.
Other Wildlife	No impact	Small potential impacts to species and habitat, but unlikely to contribute to trends toward Federal listing of loss of viability of any wildlife species	Similar impacts as Railroad Alignment Alternative, except slightly smaller impact due to expansion along an existing roadway
Birds	No impact	Potential disturbance to cliff swallows, if nesting under bridges.	Same impacts as Railroad Alignment Alternative
Wildlife/Vehicle Collisions	No impact	Would potentially decrease collisions due to improved clear zone, flatter side slopes, and wider shoulders that would improve sight distance and provide opportunity for driver avoidance maneuvers.	Same impacts as Railroad Alignment Alternative
AQUATIC SPECIES (Both Typical Sections)			
Montana Species of Special Concern	No impact	May affect Yellowstone cutthroat trout or burbot individual (should they be present), but it is not likely to contribute to a trend toward Federal listing or loss of viability of these species as there are no spawning areas in the project area.	Same impacts as Railroad Alignment Alternative.
THREATENED AND ENDANGERED SPECIES (Both Typical Sections)			
Bald Eagle	No effect	Not likely to adversely affect	Not likely to adversely affect
Black-Footed Ferret	No effect	No effect	No effect
Gray Wolf	No effect	No effect	No effect
Black-tailed Prairie Dog	No effect	No effect	No effect
FLOODPLAINS (Both Typical Sections)			
Encroachments to 100-year Floodplain	Continued transverse encroachment at Bear Creek/Youst Ditch and Clarks Fork and longitudinal encroachment of Clarks Fork	The realignment of MT 72 results in a new transverse encroachment at Bear Creek and a new transverse encroachment at Clarks Fork that merges into an existing longitudinal encroachment of the Clarks Fork floodplain. At the existing longitudinal encroachment of Clarks Fork, additional encroachments are limited to increased width and side slopes.	Conditions similar to No-Build. Additional encroachments are limited to increased width and side slopes at existing encroachment areas
WATER BODY MODIFICATIONS (Both Typical Sections)			
Crossings	No impact	Additional new crossings of Bear Creek and Clarks Fork could disturb stream hydrology. Existing Clarks Fork "south" bridge would likely be removed, which would improve stream flow in the long-term. Other structures replaced at existing locations could disturb stream hydrology.	Structures replaced at existing crossing locations could disturb stream hydrology Less resource impact to Clarks Fork from bridge construction, which would occur near currently disturbed area as opposed to a new, previously undisturbed location under the Railroad Alignment Alternative.

Table S.1 Summary of Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane) (continued)

Topic Area	No-Build	Railroad Alignment Alternative (Preferred)	Broadway Avenue Alternative
HAZARDOUS MATERIALS (Both Typical Sections)			
Tanker Truck Fuel Spills	No impact	Potential impacts at unknown locations throughout rural portion of corridor	Same impacts as Railroad Alignment Alternative
Historic Railroad Operations	No impact	Disturbance of soils near railroad could potentially disturb contaminated soils and impact nearby soils and groundwater.	No impact
MW&S Railroad Maintenance Shop	No impact	Potential impact from disturbance of lead contaminated and potentially arsenic contaminated soils surrounding shop	No impact
Black's Service Station LUST	No impact	No impact	Potential impact from disturbance of potentially contaminated soils
School Bus Barn/ Garage	No impact	No impact	Potential impacts from disturbance of petroleum-contaminated soils
Bridges	No impact	Potential impacts from removal of bridges that may be painted with lead-containing paints or constructed with treated timbers	Same impacts as Railroad Alignment Alternative
SECTION 4(f) (Both Typical Sections)			
NRHP-eligible Clarks Fork "south" Bridge	No impact	Section 4(f) use if bridge is removed, which would be required if new owner cannot be identified.	Section 4(f) use if bridge is removed, which would be required if new owner cannot be identified.
NRHP-eligible MW&S Railroad Maintenance Shop	No impact	No Section 4(f) use.	No Section 4(f) use.
NRHP-eligible Kose Grocery	No impact	No Section 4(f) use.	No Section 4(f) use.
NRHP-eligible Holland Lumber	No impact	No Section 4(f) use.	No Section 4(f) use.
NRHP-eligible Middlesworth Farmhouse	No impact	No Section 4(f) use.	No Section 4(f) use.
NRHP-eligible MW&S Railroad Depot	No impact	No Section 4(f) use.	No Section 4(f) use.
NRHP-eligible First Presbyterian Church	No impact	No Section 4(f) use.	No Section 4(f) use.
NRHP-eligible Riddle House	No impact	No Section 4(f) use.	No Section 4(f) use.
CONSTRUCTION IMPACTS (Both Typical Sections)			
Temporary Impacts during Construction	No impact	<p>Increased noise, mobile source air emissions, fugitive dust (dust in air), soil erosion, sedimentation; use of construction easements and staging areas; traffic delays; traffic congestion; potential for hazardous materials spills; visual intrusions; and displacement of wildlife, migratory birds, and aquatic species.</p> <p>Disruption of residential and business accesses, parking, emergency response, irrigation systems, and utility connections.</p> <p>Short-term creation of direct and indirect jobs associated with construction</p>	Same impacts as Railroad Alignment Alternative except disruptions to traffic, access, and parking in Belfry would be greater because of construction within the town on Broadway Ave. versus in the less developed railroad alignment area.

Table S.2 Summary of Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

Topic Area	No-Build	Modified Existing Alignment (Preferred)	Ridgeway North	Ridgeway South
TRAFFIC				
9.6-m (approximately 32-ft) Typical Section				
Consistency with connecting NHS and Primary Route widths, and AASHTO recommendations.	Not consistent with MT 72 at this proposed project's beginning at the proposed Wyoming Line to Belfry project's northerly end. Also not consistent with US 310's width at this proposed project's northerly end. Not consistent with AASHTO recommendations for 2-lane highways in rural areas.	Consistent with MT 72 for proposed Wyoming Line – Belfry project's typical section width, but narrower than US 310 beyond this proposed project's northerly end. Narrower than suggested AASHTO widths.	Same impacts as Modified Existing Alignment	Same impacts as Modified Existing Alignment
Traffic Operations	No impact	Slow-moving traffic can use shoulder but cannot pull completely out of travelway and may still delay other traffic	Same impacts as Modified Existing Alignment	Same impacts as Modified Existing Alignment
MT 72/US 310 Intersection	Confusing layout would remain	MT 72 intersection with US 310 would be realigned to improve safety and traffic movements	New design and location for MT 72/US 310 intersection would improve safety and traffic movements	Same improvement as Ridgeway North
12-m (approximately 40-ft) Typical Section				
Consistency with connecting NHS and Primary Route widths, and AASHTO recommendations.	Not consistent with MT 72 at this proposed project's beginning at the proposed Wyoming Line to Belfry project's northerly end. Also not consistent with US 310's width at this proposed project's northerly end. Not consistent with AASHTO recommendations for 2-lane highways in rural areas.	Wider than MT 72 for proposed Wyoming Line – Belfry project's typical section width, but same as US 310 beyond this proposed project's northerly end. Consistent with AASHTO 2-lane width recommendations for rural highways.	Same impacts as Modified Existing Alignment	Same impacts as Modified Existing Alignment
Traffic Operations	No impact	Slow-moving traffic can pull off roadway onto wider shoulder Increased highway capacity from uniform speeds encouraged by wider shoulders	Same impacts as Modified Existing Alignment	Same impacts as Modified Existing Alignment
MT 72/US 310 Intersection	Confusing layout would remain	Same improvements as 9.6-m (32-ft) typical section	Same improvements as 9.6-m (32-ft) typical section	Same improvements as 9.6-m (32-ft) typical section

Table S.2 Summary of Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection) (continued)

Topic Area	No-Build	Modified Existing Alignment (Preferred)	Ridgeway North	Ridgeway South
ACCESS				
9.6-m (approximately 32-ft) Typical Section				
Intersection Geometry	Skewed intersections would remain	Skewed intersections would be rebuilt perpendicular to MT 72	Same impacts as Modified Existing Alignment	Same impacts as Modified Existing Alignment
MT 72 Access	No impact	Four accesses near the US 310 intersection would be consolidated by means of a new access road to improve safety at the reconfigured US 310 intersection.	Minor inconvenience for relocated accesses for removed portion of MT 72, residential access at US 310, and Ridgeway Lane Because of cul de sac, access to east side of Ridgeway Lane would require out-of-direction travel via US 310	Same impacts as Ridgeway North Alternative
Access Management	Safety conflicts with multiple direct residential and business accesses onto MT 72 would continue	Implementing access management within 150 m (500 ft) of public road intersections would relocate approximately 10 accesses to improve safety.	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
12-m (approximately 40-ft) Typical Section (Impacts same as 9.6-m (32-ft) typical section except for impacts noted below.)				
Access Adjacent to Highway	No impact	Wider shoulders would improve access to school bus stops, mail boxes, and highway maintenance	Same impacts as 9.6-m (32-ft) typical section	Same impacts as 9.6-m (32-ft) typical section
SAFETY				
9.6-m (approximately 32-ft) Typical Section				
Curve at Lynn's Corner	Substandard curve would remain	Curve would be realigned to meet MDT standards to improve safety	Same impacts as Modified Existing Alignment	Same impacts as Modified Existing Alignment
MT 72/US 310 Intersection	Problematic curves, ramps, sight distances, speeds, and signage would not be addressed	Would provide reconfigured MT 72 and US 310 intersection, improving safety. Eliminating southbound "off ramp" would reduce speed through intersection, reduce driver confusion, and improve safety	Provides a new MT 72 and US 310 intersection which would eliminate problems with existing intersection and improve safety	Same impacts as Ridgeway North Alternative
Intersections	Limited sight distance and undesirable approach angles for county road intersections would remain	Skewed county road intersections would be adjusted or consolidated to improve sight distance and approaches	Same impacts as Modified Existing Alignment	Same impacts as Modified Existing Alignment
Icing	Icy conditions would continue at bluff and bridges	Slight realignment to east may lessen bluff shadows and icy conditions. Replacement of bridges over Sand Creek Canal may reduce a source of ice and would improve highway safety	Avoids icy bluff area; however, drifting snow across Ridgeway Lane area may result in safety concerns Replacement of bridges over Sand Creek Canal may reduce a source of ice and would improve highway safety	Same impacts as Ridgeway North Alternative
Side Slopes, Clear Zones, and Shoulders	Substandard conditions remain Narrow or nonexistent shoulders would remain	Would be improved to meet MDT standards. Addition of shoulders would reduce conflicts between agricultural equipment and other vehicles	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative

Table S.2 Summary of Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection) (continued)

Topic Area	No-Build	Modified Existing Alignment (Preferred)	Ridgeway North	Ridgeway South
SAFETY (continued)				
12-m (approximately 40-ft) Typical Section (Impacts same as 9.6-m (32-ft) typical section except for impacts noted below.)				
Shoulders	Narrow or nonexistent shoulders remain	Wider shoulders would provide more recovery room for errant and agricultural vehicles, improve sight distance around horizontal curves, and allow disabled vehicles able to pull completely out of travel lane	Same benefits as Modified Existing Alignment Alternative	Same benefits as Modified Existing Alignment Alternative
PEDESTRIANS AND BICYCLES				
9.6-m (approximately 32-ft) Typical Section				
Rural Corridor	No impact	Wider shoulders would improve conditions for pedestrian and bicycle movements, school bus pickup and drop-off	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
12-m (approximately 40-ft) Typical Section				
Rural Corridor	No impact	Wider shoulders would increase distance between high speed vehicular traffic and pedestrians and bicycles Would meet AASHTO recommendations for 1.2-m (4-ft) clear area for bicycle use in shoulder	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
LAND USE (Both Typical Sections)				
Population Growth	No impact	Not likely to induce growth.	Not likely to induce growth.	Not likely to induce growth.
PRIME AND IMPORTANT FARMLANDS				
9.6-m (approximately 32-ft) Typical Section				
Direct and Indirect Impacts	No impact	38.4 ha (94.8 ac)	41.0 ha (101.3 ac)	42.1 ha (103.9 ac)
12-m (approximately 40-ft) Typical Section				
Direct and Indirect Impacts	No impact	40.5 ha (99.9 ac)	42.9 ha (106.0 ac)	43.9 ha (108.4 ac)
FARM OPERATIONS				
9.6-m (approximately 32-ft) Typical Section				
Movement of Farm Equipment on MT 72	Continued conflicts with vehicles and farm equipment	Wider shoulders of 1.2-m (4-ft) would provide farm equipment with improved movement and safety	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
Hergenrider Property	No impact	Eastward alignment shift near the Hergenrider property would impact the corrals, stock shelter and feed lot	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
Aisenbrey Property	No impact	Eastward alignment shift near Aisenbrey property would impact grain silos and silage pit	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
K-E-W Trust Property (Lynn's Corner)	No impact	Eastward alignment shift at Lynn's Corner would partition property; partitioned parcel may not be large enough for agricultural use unless combined with adjoining parcels west of alignment	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
Peterson Property	No impact	No impact	Divides field; efficiency of operations would be reduced	Same impacts as Ridgeway North Alternative

Table S.2 Summary of Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection) (continued)

Topic Area	No-Build	Modified Existing Alignment (Preferred)	Ridgeway North	Ridgeway South
FARM OPERATIONS (continued)				
9.6-m (approximately 32-ft) Typical Section (continued)				
Meinhardt Property	No impact	No impact	Divides field; one remainder parcel may be too small to farm; efficiency of operations would be reduced	Same impacts as Ridgeway North Alternative
Richards Property	No impact	No impact	No impact	Divides field; efficiency of operations would be reduced
12-m (approximately 40-ft) Typical Section (Impacts same as 9.6-m (32-ft) typical section except for impacts noted below.)				
Movement of Farm Equipment on MT 72	Continued conflicts with vehicles and farm equipment	Safety and movement of farm equipment would be improved more with wider shoulder area, which is increased to 2.4 m (8 ft)	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
IRRIGATION (Both Typical Sections)				
Sand Creek Canal	No impact	Improvements to Sand Creek Canal conveyances would have beneficial effect to Nash and Mienhardt properties	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
Irrigation Ditches	No impact	Some relocations would be required; relocations would either improve or have a neutral effect on irrigation operations. Could impact irrigation to western (remainder) parcel of K-E-W Trust property at Lynn's Corner.	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
SOCIAL CONDITIONS				
9.6-m (approximately 32-ft) Typical Section				
Emergency Access	No impact	No impact	Emergency access from Bridger to hospital in Red Lodge for Ridgeway Lane residents would be more circuitous due to cul de sac	Same impacts as Ridgeway North Alternative
Police and Emergency Operations	No impact	Wider shoulders would provide areas for vehicles to partially pull out of the travelway for law enforcement or emergency services	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
12-m (approximately 40-ft) Typical Section (Impacts same as 9.6-m (32-ft) typical section except for impacts noted below.)				
Police and Emergency Operations	No impact.	Increased shoulder width would allow vehicles to move out of the travel lane onto shoulder for law enforcement and emergency services	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
ECONOMIC				
9.6-m (approximately 32-ft) Typical Section				
Commercial Property Impacts		Thunder Mountain Log Works would be relocated or acquired. Kapor Lumber property would be impacted; Kapor accesses on US 310 and MT 72 would be modified and or consolidated to improve intersection geometry. The changes in access may impact operations but are not likely to impact viability of business.	Would change MT 72 access to Kapor Lumber and Thunder Mountain Log Works; would improve accesses for both businesses off US 310; not likely to impact business operations or viability of business.	Same impacts as Ridgeway North Alternative.
Project Cost	N/A	\$11.3 million	\$10.3 million	\$10.6 million

Table S.2 Summary of Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection) (continued)

Topic Area	No-Build	Modified Existing Alignment (Preferred)	Ridgeway North	Ridgeway South
ECONOMIC (continued)				
12-m (approximately 40-ft) Typical Section (Impacts same as 9.6-m (32-ft) typical section except for impacts noted below.)				
Project Cost	N/A	Increases 18% to \$13.3 million	Increases 17% to \$12.1 million	Increases 18% to \$12.5 million
RIGHT-OF-WAY (ROW) AND RELOCATIONS/ACQUISITIONS				
9.6-m (approximately 32-ft) Typical Section				
Approximate New ROW	N/A	47.2 ha (116.6 ac)	44.1 ha (108.9 ac)	44.0 ha (108.8 ac)
Relocations/ Acquisitions	No impact	1 relocation/acquisition: Thunder Mountain Log Works Utility relocations	No relocations/acquisitions except utility relocations	1 relocation/acquisition: Peterson property Utility relocations
Potential Relocations/ Acquisitions	No impact	Potential relocation of Aisenbrey grain silo and silage pit.	1 potential relocation/acquisition: Feller property; and potential relocation of Aisenbrey grain silos and silage pit.	2 potential relocations/ acquisitions: 1 farm structure on Richards property; 1 structure on Peterson property; and potential relocation of Aisenbrey grain silos and silage pit.
12-m (approximately 40-ft) Typical Section (Impacts same as 9.6-m (32-ft) typical section except for impacts noted below.)				
Approximate New ROW	N/A	50.3 ha (124.3 ac)	46.9 ha (115.8 ac)	46.9 ha (115.9 ac)
CULTURAL RESOURCES (Both Typical Sections)				
Sand Creek Canal (24CB1050)	No effect	No effect	Adverse Effect. Small portion of Sand Creek Canal may need to be rechanneled.	Same impacts as Ridgeway North Alternative
Dry Creek Canal (24CB1154)	No effect	No effect	No effect	No effect
Golden Ditch (24CB1152)	No effect	No effect	No effect	No effect
Jennings Homestead (24CB1848)	No effect	No effect	No effect	No effect
NOISE (Both Typical Sections)				
Impacted Receptors	No impact	1 residence	4 residences	4 residences
WATER RESOURCES/WATER QUALITY				
9.6-m (approximately 32-ft) Typical Section				
Impervious Surfaces	No impact	Impervious surfaces would increase 7.1 ha (17.5 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Impervious surfaces would increase 6.0 ha (14.8 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Impervious surfaces would increase 5.7 ha (14.1 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.
Construction and Removal of Structures	No impact	Construction and removal of structures at Clarks Fork, Silver Tip Creek, and Sand Creek Canal could increase erosion and interrupt flow	Construction and removal of structures at Clarks Fork, Silver Tip Creek, and Sand Creek Canal could increase erosion and interrupt flow. Proposed alignment would be much closer to Clarks Fork, which would increase potential for contaminants and sediments to enter the waterway.	Same impacts as Ridgeway North, except alignment would be even closer (adjacent) to Clarks Fork.

Table S.2 Summary of Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection) (continued)

Topic Area	No-Build	Modified Existing Alignment (Preferred)	Ridgeway North	Ridgeway South
WATER RESOURCES/WATER QUALITY (continued)				
12-m (approximately 40-ft) Typical Section (Impacts same as 9.6-m (32-ft) typical section except for impacts noted below.)				
Impervious Surfaces	No impact	Impervious surfaces would increase to 18.3 ha (45.2 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Impervious surfaces would increase to 16.6 ha (41.0 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Impervious surfaces would increase to 16.2 ha (40.0 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.
Construction and Removal of Structures	No impact	Same structure impacts as 9.6-m (32-ft) typical section.	Same structure impacts as 9.6-m (32-ft) typical section.	Same structure impacts as 9.6-m (32-ft) typical section.
WETLANDS				
9.6-m (approximately 32-ft) Typical Section				
Jurisdictional	No impact	0.57 ha (1.41 ac)	0.57 ha (1.41 ac)	0.57 ha (1.41 ac)
Non-jurisdictional	No impact	0.871 ha (2.152 ac)	0.937 ha (2.315 ac)	0.877 ha (2.167 ac)
Non-jurisdictional isolated areas	No impact	0.003 ha (0.007 ac)	0.003 ha (0.008 ac)	No impacts
Indirect Impacts	No impact	Small impacts from reduction in flood storage, habitat reduction, and degradation in water quality	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
12-m (approximately 40-ft) Typical Section				
Jurisdictional	No impact	0.64 ha (1.57 ac)	0.64 ha (1.57 ac)	0.64 ha (1.57 ac)
Non-jurisdictional	No impact	0.912 ha (2.254 ac)	0.998 ha (2.466 ac)	0.940 ha (2.323 ac)
Non-jurisdictional Isolated Areas	No impact	0.004 ha (0.010 ac)	0.004 ha (0.008 ac)	No impacts
Indirect Impacts	No impact	Small impacts from reduction in flood storage, habitat reduction, and degradation in water quality	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
VEGETATION				
9.6-m (approximately 32-ft) Typical Section				
Noxious Weeds	No impact	Minimal potential increase in noxious weeds	Slightly greater potential increase in noxious weeds than Modified Existing Alignment Alternative because of new alignment near Ridgeway Lane	Same impacts as Ridgeway North Alternative
Vegetation	No impact	Small loss of riparian vegetation from replacement of bridges and culverts. Some mature trees along the corridor may be impacted.	Small loss of riparian vegetation from replacement of bridges and culverts. Some mature trees along the corridor may be impacted.	Same impacts as Ridgeway North Alternative
12-m (approximately 40-ft) Typical Section				
Noxious Weeds	No impact	Slightly greater potential increase in noxious weeds compared to 9.6-m (32-ft) typical section alternative due to larger disturbance area	Slightly greater potential increase in noxious weeds than Modified Existing Alignment Alternative due to disturbance on new alignment	Same impacts as Ridgeway North Alternative
Vegetation	No impact	Slightly greater disturbance of riparian vegetation than 9.6-m (32-ft) typical section due to larger disturbance area from replacement of bridges and culverts. Some mature trees along the corridor may be impacted.	Slightly greater disturbance of riparian vegetation than 9.6-m (32-ft) typical section due to larger disturbance area from replacement of bridges and culverts. Some mature trees along the corridor may be impacted.	Same impacts as Ridgeway North Alternative

Table S.2 Summary of Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection) (continued)

Topic Area	No-Build	Modified Existing Alignment (Preferred)	Ridgeway North	Ridgeway South
WILDLIFE AND MIGRATORY BIRDS (Both Typical Sections)				
Montana Species of Special Concern	No impact	No effect to white-tailed prairie dog, spotted bat, pallid bat, or sagebrush lizard because of lack of suitable habitat. No effect to the northern leopard frog because suitable habitat would not be disturbed. May affect milk snake and mountain plover (should they be present), but it is not likely to contribute to a trend toward Federal listing or loss of viability of these species.	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
Other Wildlife	No impact	Small potential impacts to species and habitat, but same impacts as Ridgeway North Alternative. Unlikely to contribute to trends toward Federal listing or loss of viability of any wildlife species.	Similar to Modified Existing Alignment Alternative except slightly greater impacts from ground disturbance from new alignment	Same impacts as Ridgeway North Alternative
Birds	No impact	Potential disturbance to cliff swallows, if nesting under bridges.	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
Wildlife/Vehicle Collisions	No impact	Potential decrease because improved clear zone, flatter side slopes, and wider shoulders provide opportunity for driver avoidance maneuvers.	Same benefits as Modified Existing Alignment Alternative; however, proximity of new alignment to riparian corridor could increase incidents.	Same impacts as Ridgeway North Alternative
AQUATIC SPECIES (Both Typical Sections)				
Montana Species of Special Concern	No effect	May affect Yellowstone cutthroat trout or burbot individual (should they be present), but it is not likely to contribute to a trend toward Federal listing or loss of viability of these species as there are no spawning areas in the project area.	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
THREATENED AND ENDANGERED SPECIES (Both Typical Sections)				
Bald Eagle	No effect	Not likely to adversely affect	Not likely to adversely affect	Not likely to adversely affect
Black-Footed Ferret	No effect	No effect	No effect	No effect
Gray Wolf	No effect	No effect	No effect	No effect
Black-tailed Prairie Dog	No effect	No effect	No effect	No effect
FLOODPLAINS (Both Typical Sections)				
Encroachments to 100-year Floodplain	Continued longitudinal encroachment of Clarks Fork. Transverse encroachment of Silver Tip Creek and the Clarks Fork/Dry Creek floodplain.	Conditions similar to No-Build. Additional encroachments are limited to increased width and side slopes at existing encroachment areas.	Same impacts as Modified Existing Alignment Alternative.	Same impacts as Modified Existing Alignment Alternative.
WATER BODY MODIFICATIONS (Both Typical Sections)				
Crossings	No impact	Structures replaced at existing crossing locations could disturb stream hydrology	Same impacts as Modified Existing Alignment Alternative.	Same impacts as Modified Existing Alignment Alternative.

Table S.2 Summary of Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection) (continued)

Topic Area	No-Build	Modified Existing Alignment (Preferred)	Ridgeway North	Ridgeway South
HAZARDOUS MATERIALS (Both Typical Sections)				
Tanker Truck Fuel Spills	No impact	Potential impacts from disturbance of contaminated soils at unknown locations throughout rural corridor	Same impacts as Modified Existing Alignment Alternative.	Same impacts as Modified Existing Alignment Alternative.
Bridges	No impact	Potential impacts from removal of bridges that may be painted with lead-containing paints or constructed with treated timbers	Same impacts as Modified Existing Alignment Alternative.	Same impacts as Modified Existing Alignment Alternative.
SECTION 4(f) RESOURCES (Both Typical Sections)				
NRHP-eligible Sand Creek Canal	No impact	Section 4(f) use, because more of canal would be incorporated into roadway	Section 4(f) use because more of canal would be incorporated into roadway and the canal may be relocated to provide property access.	Section 4(f) use because more of canal would be incorporated into roadway and the canal may be relocated to provide property access.
NRHP-eligible Dry Creek Canal	No impact	Section 4(f) use, because more of canal would be incorporated into roadway	Section 4(f) use, because more of canal would be incorporated into roadway	Section 4(f) use, because more of canal would be incorporated into roadway
NRHP-eligible Golden Ditch	No impact	No Section 4(f) use	No Section 4(f) use	No Section 4(f) use
NRHP-eligible Jennings Homestead	No impact	No Section 4(f) use	No Section 4(f) use	No Section 4(f) use
CONSTRUCTION IMPACTS (Both Typical Sections)				
Temporary Impacts During Construction	No impact	<p>Increased noise, mobile source emissions, fugitive dust (dust in air), soil erosion, sedimentation; use of construction easements and staging; traffic delays; traffic congestion; potential for hazardous materials spills; visual intrusions; and displacement of wildlife, migratory birds, and aquatic species.</p> <p>Disruption of residential and business accesses, parking, emergency response, irrigation systems, livestock underpasses, utility connections, and operation of US 310 intersection.</p> <p>Short-term creation of direct and indirect jobs associated with construction</p>	Same impacts as Modified Existing Alignment except no disruptions to existing US 310 intersection would occur while new intersection is constructed, and there would be impacts to traffic operations on and near Ridgeway Lane.	Same impacts as Ridgeway North

Mitigation

Mitigation measures to minimize or reduce adverse social, economic, and environmental impacts were prepared for the preferred alternative and are summarized in Table S-3.

Table S.3 Mitigation Measures Identified for the Preferred Alternative

Resource area	Type of Impact	Mitigation
TRAFFIC		
Construction	Disruption of traffic during roadway and bridge construction.	<ul style="list-style-type: none"> Prepare construction traffic control plan and coordinate with emergency services. Existing bridges will be kept in place during construction to maintain traffic flow while new bridges are being constructed.
ACCESS		
MT 72 Access	Relocation of property access to new MT 72 alignment and within 150 m (500 ft) of public roadways.	<ul style="list-style-type: none"> Access relocations will be coordinated with affected property owners to minimize impacts to farming and business operations.
Construction	Temporary access impacts	<ul style="list-style-type: none"> Early notification and coordination with adjacent property owners
PEDESTRIANS AND BICYCLES		
Construction	Construction impacts on town	<ul style="list-style-type: none"> Maintain walkways and pavement to the extent practicable and provide additional pedestrian signage during construction.
PARKS AND RECREATION AREAS		
Fishing Access	Informal fishing access at existing Clarks Fork "south" bridge would be impacted if bridge is removed. Opportunity to provide access to BLM property for potential future official fishing access.	<ul style="list-style-type: none"> Continue to coordinate with BLM and MFWP on their agency plans for development of the BLM parcel on the Clarks Fork.
FARMLANDS, FARMLAND OPERATIONS, AND IRRIGATION		
Farmland Acquisition	Acquisition of farmlands for road construction and/or right-of-way	<ul style="list-style-type: none"> Right-of-way acquisition from farmlands will comply with Uniform Relocation Assistance and Real Property Policies Act of 1970, as amended (1987).
Farmland Severance	Bisection of farmland and farming, thereby impacting efficiency of operations	<ul style="list-style-type: none"> Coordinate with property owners to integrate severed parcels with adjacent parcels, if possible.
Farm Infrastructure	Farm infrastructure within the new right-of-way would be impacted.	<ul style="list-style-type: none"> Replace in-kind irrigation ditches, stockpasses, fences, and gates that may be relocated or altered.
Irrigation	Relocation of some irrigation systems and replacement of conveyances	<ul style="list-style-type: none"> Impacted irrigation canals and ditches would be relocated in consultation with ditch owners to minimize impacts to farming operations
Construction	Construction activities could impact farm operations and irrigation.	<ul style="list-style-type: none"> Coordinate with affected farm owners during the design phase to minimize impacts to operations and irrigation.
ECONOMIC CONDITIONS, RELOCATIONS/ACQUISITIONS, RIGHT-OF-WAY		
Property Acquisition	Right-of-way acquisition and relocations/acquisitions of residences and commercial businesses	<ul style="list-style-type: none"> The acquisition of land or improvements for highway construction is governed by state and federal laws and regulation designed to protect both the landowners and the public. Affected landowners are entitled to receive fair market value for any land or buildings acquired and any damages as defined by law to remaining land due to the effects of highway construction. Right-of-way acquisition for this project will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646 as amended), (42 U.S.C. 4601, et. Seq.), the Uniform Relocations Act Amendments of 1987 (P.L. 100-17), and 23 U.S.C. 317 for appropriation of public lands for highway right-of-way use.

Table S.3 Mitigation Measures Identified for the Preferred Alternative (continued)

Resource area	Type of Impact	Mitigation
ECONOMIC CONDITIONS, RELOCATIONS/ACQUISITIONS, RIGHT-OF-WAY (continued)		
Utilities	Utility relocations	<ul style="list-style-type: none"> • Coordinate with utility owners prior to construction. • The proposed roadway alignment design will ensure that the Williston/Exxon pipeline facilities are outside the clear zone and that drainage will be integrated or diverted around the pipeline facilities.
Construction	Temporary access and construction areas are needed.	<ul style="list-style-type: none"> • Temporary construction easements will be used whenever possible so that land is retained by property owner. • Early notification of property owners on construction activities
CULTURAL RESOURCES		
Clarks Fork "south" Bridge	Removal of bridge.	<ul style="list-style-type: none"> • Implement terms of Programmatic Agreement for Historic Roads and Bridges and use Adopt a Bridge Program to find new owner.
MW&S Railroad Maintenance Shop	Potential impacts to structure.	<ul style="list-style-type: none"> • Use a modified typical section to avoid structure. • MDT will install an historical marker along the proposed highway alignment between the MW&S Railroad Maintenance Shop (24CB1146) and the MW&S Depot (24CB1148)
Construction	Ground disturbing activities may unexpectedly uncover cultural materials.	<ul style="list-style-type: none"> • If cultural materials are uncovered, construction in the area will cease, a qualified archaeologist will examine material, and the SHPO will be consulted.
AIR QUALITY		
Construction	Fugitive dust (dust in air) emissions and vehicle emissions would occur from construction equipment and traffic delays.	<ul style="list-style-type: none"> • Institute best management practices (BMPs) to control fugitive dust emissions, which may include minimizing exposed erodible earth area; stabilizing exposed earth with grass, mulch, pavement or other cover; and applying water or stabilizing agents to working and haulage areas. • To minimize the amount of additional vehicle emissions, a construction traffic control plan will be developed to limit disruption to corridor traffic.
NOISE		
Construction	Construction activities would result in temporary increases in noise levels.	<ul style="list-style-type: none"> • Advance notice of construction will be provided to businesses and residences. Contractors will adhere to local noise ordinances. Construction hours will be limited to daylight hours near residences.

Table S.3 Mitigation Measures Identified for the Preferred Alternative (continued)

Resource area	Type of Impact	Mitigation
WATER QUALITY AND WETLANDS		
Wetlands and Water Quality	Filling of wetlands and potential indirect impacts from reduction in flood storage, sedimentation, increased water temperature, increase in non-native plant species, and hydrologic modifications and degradation of water quality.	<ul style="list-style-type: none"> • Adherence to MDT BMPs. • An erosion control and sediment plan prepared in compliance with the Montana Pollutant Discharge Elimination System (MPDES) regulations. • Prevent unnecessary operation of equipment within the channels of any creeks or rivers within the construction area of this project. • Adherence to the Montana Stream Protection Act Permit (SPA 124 Permit). • Adherence to the COE 404 Permit process. • A Corps of Engineers (COE) 404 permit will be required and may identify mitigation measures, which will be incorporated into the project. Limited possibilities for on-site mitigation exist within the project right-of-way. However, one small area might be found at +/- RP 11.9 beneath the southernmost Clarks Fork bridge on both sides of the river where the bridge span is wide enough to allow wetlands between the river and the abutments. The bridge would likely be removed providing more area for potential mitigation. Off-site mitigation would be required for the remainder of the impact. This would be explored during the permitting process with the Corps of Engineers. • An "in-lieu fee" program for wetland mitigation is currently under development with MDT and COE. If this program is implemented, it could be a potential mitigation option. • Holding the grade as low as possible and reducing the fill slopes in areas, where practical and where safety would not be compromised, may be used to reduce the wetland impact areas • A noxious weed management program will be implemented
Wells	Potential impact to wells	<ul style="list-style-type: none"> • Relocate impacted wells in accordance with FHWA's and MDT's standard procedures
Stormwater	Direct release of untreated drainage into waterways	<ul style="list-style-type: none"> • Eliminate, where feasible, direct release of stormwater into rivers by implementing system that would drain through roadside ditches or detention swales. • Incorporate a Stormwater Pollution Prevention Plan (SWPPP) and BMPs into construction projects • Comply with MPDES permit.
Construction	Temporary physical disturbance during construction from bridge replacements and roadway construction activities; disturbance could include sedimentation, erosion, and introduction of pollutants into water bodies and wetlands.	<ul style="list-style-type: none"> • Obtain SPA 124 permit and implement any mitigation measures in permit. • Temporary impacts to wetlands will be restored in accordance with MDT standard specifications or permit conditions. • Implement measures to prevent sediment loading into the waterways and hold in-water work to a minimum in the Clarks Fork and any of its tributaries. • MDT will incorporate a SWPPP and BMPs into construction projects.

Table S.3 Mitigation Measures Identified for the Preferred Alternative (continued)

Resource area	Type of Impact	Mitigation
VEGETATION		
Noxious Weeds and Vegetation	Potential increase in noxious weeds because of new alignment and disturbance of area Small loss of riparian vegetation from replacement of bridges and culverts	<ul style="list-style-type: none"> MDT will follow its general BMPs to reduce impacts to vegetation. A noxious weed management program will be developed and implemented by MDT. To reduce the spread of noxious weeds during construction, the construction contractor will comply with relevant permit conditions that may require cleaning equipment prior to leaving or entering the project area to preclude the transfer of seeds into other sites. Clearing and grubbing will be limited to the area necessary for construction of the project. A permanent desirable vegetation community will be re-established over all landform surface areas disturbed by construction.
WILDLIFE AND THREATENED AND ENDANGERED SPECIES		
Raptors	Possible electrocution of raptors with power lines.	<ul style="list-style-type: none"> Overhead power lines relocated during construction will be raptor-proofed in accordance with MDT policies.
Cliff Swallows	Potential impact to cliff swallows from removal of bridges used for nesting	<ul style="list-style-type: none"> To preclude migratory birds (such as cliff swallows) from constructing nests on structures that are to be demolished, MDT will remove all nests from structures on or between the dates of August 16 and April 30. MDT will then cover or enclose all surfaces on the underside of the structures with mesh netting, chicken wire fencing, or other suitable material to prevent birds from establishing new nests. MDT will maintain this covering material until the structures have been removed. The netting, fencing, or other material will have no opening or mesh size greater than 19 mm. If any active nests are reestablished or exist on the structures on or between May 1 and August 15, MDT will not remove the structures or nests until the project manager, in coordination with MDT Environmental Services, provides approval.
Bald Eagles	Potential disruption of nesting eagles	<ul style="list-style-type: none"> A biologist will verify that there are no nests prior to construction. If nests are found, MDT will consult with USFWS and MFWP before starting construction
AQUATIC SPECIES		
Construction	Habitat disruption during replacement of bridges and culverts; potential impacts to fish passage with culvert and bridge replacement; and disturbance of fish during spawning periods. In-stream disturbance and temporary loss of riparian vegetation, and increased sedimentation in water bodies.	<ul style="list-style-type: none"> All structures at stream and river crossings that are identified as having fisheries will be designed for fish passage. The proposed project will be designed to minimize impacts to fisheries wherever practicable. The proper replacement structures will be determined by means of engineering analysis to address the required hydraulic functions at crossings. A Montana Stream Protection Act Permit 124 (SPA 124) will be required and may identify mitigation measures which will be incorporated into the project. MDT will incorporate a SWPPP and BMPs into construction projects. Sediment control during and following construction will be implemented. In-water work will be held to a minimum in the Clarks Fork and any of its tributaries.
FLOODPLAINS AND WATER BODY MODIFICATION		
Floodplain encroachment	Additional transverse or longitudinal encroachments into floodplains.	<ul style="list-style-type: none"> Adhere to conditions in the Floodplain Development Permit from Carbon County. Project design will be in accordance with Federal-Aid Highway Program Manual "Location and Hydraulic Design of Encroachments on Floodplains" (23 CFR 650 A) and EO 11988, Floodplain Management.
Water body modifications	Bridge or culvert replacements may impact stream hydrology.	<ul style="list-style-type: none"> Structures will be designed to minimize disruption to stream hydrology or permanent alterations of streambanks. Adhere to conditions in COE 404 permit, Montana SPA 124 Permit, MPDES permit, and Carbon County Floodplain Development Permit.

Table S.3 Mitigation Measures Identified for the Preferred Alternative (continued)

Resource area	Type of Impact	Mitigation
FLOODPLAINS AND WATER BODY MODIFICATION (continued)		
Construction	Increased erosion and stormwater runoff from construction activities could temporarily alter floodplain functions	<ul style="list-style-type: none"> MDT will prepare a SWPPP including identification of BMPs. SPA 124 and COE 404 permits will be followed during construction. Construction areas will be returned to preconstruction conditions after construction.
HAZARDOUS MATERIALS		
Soil contamination	Soil contamination may be encountered in Belfry along the railroad corridor including the MW&S Railroad Maintenance Shop, and at spill locations in the rural corridor.	<ul style="list-style-type: none"> MDT will develop a plan for soil testing and if needed, excavation and disposal of contaminated soils would be handled in compliance with applicable federal, state, and local regulations.
Bridges	Bridges being removed may have treated timbers or lead-containing paint.	<ul style="list-style-type: none"> If treated timber or lead-containing painted bridges are encountered, removal and disposal will be in accordance with applicable regulations and procedures.
SECTION 4(F) RESOURCES		
Refer to Appendix F		

1.0 Purpose of and Need for Action

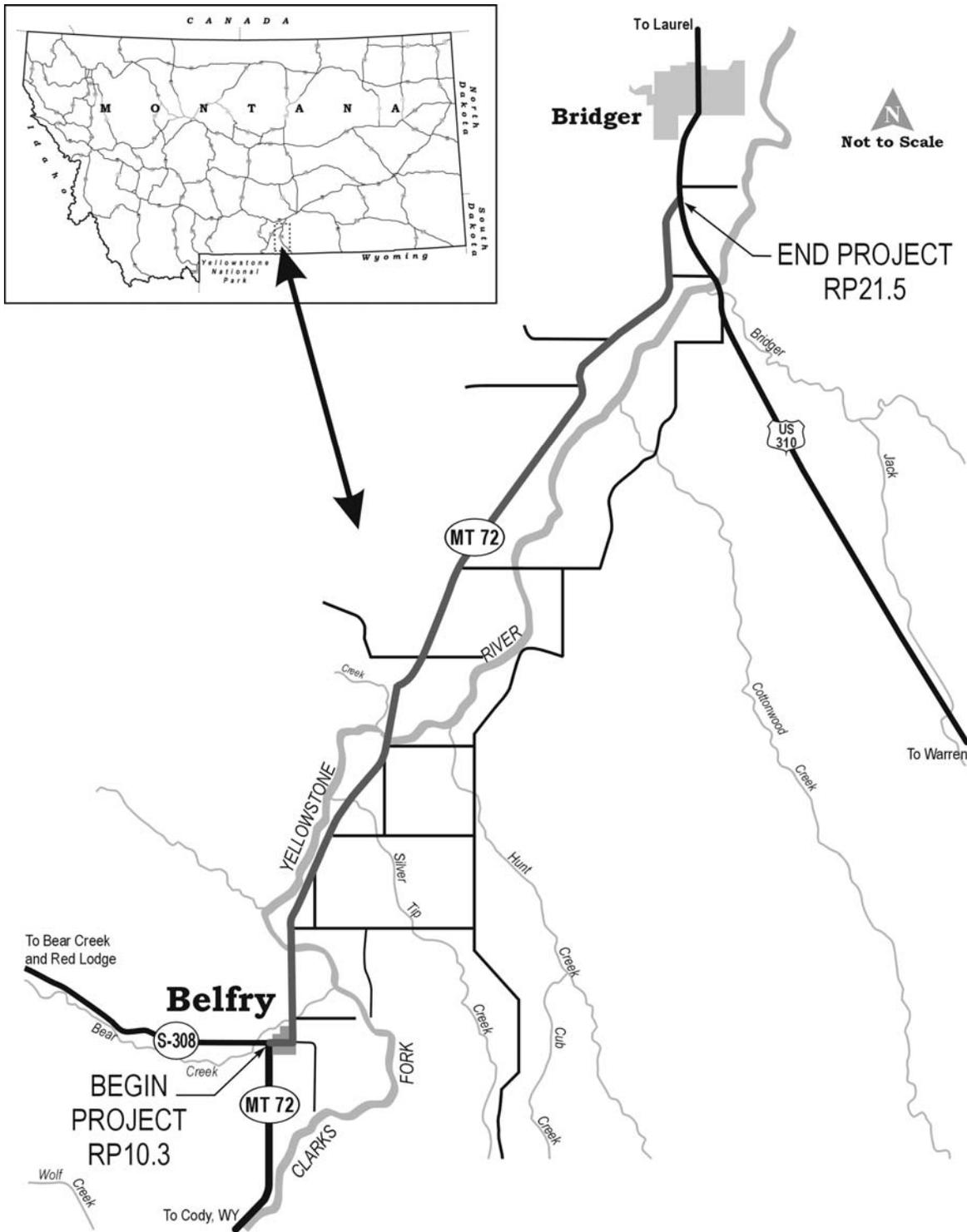
Montana Department of Transportation (MDT) proposes to reconstruct an approximately 17.9-km (11.1-mile) section of Montana Primary Highway 72 (MT 72) between Montana Secondary 308 (S-308) in the town of Belfry and US Highway 310 (US 310) 2.0+km, approximately +/- 1.25 mi, south of the town of Bridger in Carbon County, Montana (see Figure 1.1). MT 72 was originally constructed in the late 1940s and does not meet current MDT standards for width and roadway geometry. The project includes proposed improvements within the town of Belfry as well as throughout the mostly rural corridor. Proposed improvements would include adding sidewalks and other improvements in the town of Belfry and widening shoulders, replacing bridges, improving horizontal and vertical alignments, improving clear zones, and flattening side slopes throughout the corridor. Improvements would address the primary needs to improve safety and reduce roadway deficiencies (see Section 1.4).

1.1 Project Area

The project is located in Carbon County, Montana, approximately 71 km (+/- 44 mi) southwest of Billings along the banks of the Clarks Fork Yellowstone River (Clarks Fork). Topography in the project area is relatively flat with the elevation gradually ranging from approximately 1,177 m (3,860 ft) in the town of Belfry to 1,112 m (3,650 ft) in the town of Bridger. The agricultural industry surrounds the project vicinity and includes commercial livestock and dryland and irrigated farms. The southern portion of the project area is located in the town of Belfry (population 219 persons). The remaining project route is rural, consisting of farmland dispersed with farmhouses, barns, and silos. At the north end of the corridor near the intersection with US 310 are a residential area and several commercial businesses.

In this report, the *project corridor* refers primarily to the area extending 90 m (300 ft) on either side of the existing or proposed centerline for the length of the project. The project corridor is comprised of two main segments: the "urban" section through the town of Belfry (from the S-308 intersection) and the "rural" section from Belfry-North to the US 310 intersection. The *project area* refers to the area adjacent to the existing roadway that would be directly affected by construction-related (i.e., ground disturbing) activities. The project area is expected to be approximately 37 m (120 ft) on either side of the existing or proposed centerline. The *project vicinity* refers to a larger area that encompasses an approximate 1.6-km (+/- 1-mi) radius from the existing MT 72 that could be indirectly affected by the proposed action.

Figure 1.1 Belfry-North Project Area Map



1.2 Project Background

Improvements for MT 72 (the Belfry-North project) have been studied and planned since the mid-1980s. MDT first proposed improvements in a February 19, 1986 letter, which was distributed to local, state, and federal government and private entities. At that time, MDT estimated the project would be completed in 6 to 7 years.

MDT held a public information meeting in late 1988 to introduce the Belfry-North project. At that time, the project was described as a 12-m (40-ft) roadway with a paved surface of 8.5 m (28 ft). However, subsequent to that meeting, MDT received updated traffic counts, and the 12-m (40-ft) roadway was not warranted on the basis of capacity issues, and MDT determined that an 11-m (36-ft) roadway (also with an 8.5-m (28-ft) paved surface) was applicable. Another public meeting (Location and Design hearing) was held in early 1991, which introduced the revised typical section as well as several alternative alignments.

After the 1991 meeting, MDT received five letters and a petition with 46 signatures requesting that the alignment through Belfry be changed to follow the old Montana, Wyoming, and Southern (MW&S) railroad grade. This alignment would eliminate the proposed crossing of an irrigated field and would reduce the number of curves in this immediate area from three to one. MDT found this alternative to be reasonable and included it in its analyses.

In 1993, MDT standards were revised. For primary highways, the recommended paved surface increased from 8.5 m (28 ft) to 9.6 m (32 ft), and the Belfry-North proposal was changed accordingly.

MDT proceeded with environmental analyses and preliminary engineering for this project until other projects took priority, and progress stalled. Between 1993 and 2001, MDT sporadically continued to study the Belfry-North project. In 2002, MDT began preparation of an environmental assessment (EA) report and held additional public scoping meetings. The objectives of these meetings were to:

- Announce the initiation of this EA in accordance with the National Environmental Policy Act (NEPA),
- Update community members on the status of the project,
- Solicit public input regarding the environmental, economic, and social issues that needed to be evaluated in the EA, and
- Define any additional project alternatives that should be investigated since the project was originally initiated.

1.3 Project Schedule

Upon completion of this EA, if no significant impacts are identified, then a Finding of No Significant Impact (FONSI) would be issued. If it is determined that there are significant impacts, an environmental impact statement (EIS) would be completed. If a FONSI is appropriate, MDT estimates that construction of the Belfry-North project could start as early as the end of 2006. MDT expects the project would take approximately two construction seasons to construct.

1.4 Purpose of and Need for the Proposed Project

The primary purpose of this project is to improve safety along the project corridor. MT 72 is an important regional highway in Montana and is designated by the Montana Transportation Commission as a primary highway. The corridor is agricultural, and MT 72 is used by local farmers to move farm equipment within this area. It serves the agricultural industry in the area and links tourism and commercial traffic regionally between the State of Wyoming, Yellowstone National Park, Red Lodge and Billings, Montana. In the project area, MT 72 provides:

- transportation for agricultural products produced in the surrounding area,
- the primary local transportation route for the towns of Belfry and Bridger, and
- an interstate link between south-central Montana and Wyoming (Billings, Montana to Cody, Wyoming).

The existing MT 72 roadway was constructed in 1948 and 1949. The majority of surface and roadway widths measure 7.3 m (approximately 24 ft), except for a section between +/- reference post (RP) 11.7 and +/- RP 14.5 that is only 6 m (approximately 20 ft) wide. Bridge structures vary in width from 6.4 to 7.3 m (approximately 21 to 24 ft).

The present MT 72's route has both a narrow width and steep shoulders as well as limited sight distances for approaches. Safety is a concern throughout the corridor, in both the town and rural portions of the highway.

Specific safety needs include:

- Improving safety at specific crash locations
- Reducing roadway deficiencies to improve overall safety for highway users
- Improving vehicular, pedestrian, and bicycle safety at Belfry School
- Improving pedestrian and bicycle safety throughout the corridor
- Improving safety of roadway intersections

Detailed information on these safety issues is presented in the sections that follow.

1.4.1 Crash Locations

Crash rates in this corridor exceed the statewide averages for rural primary highways in almost all measured categories. These rates are summarized in Table 1.1.

Table 1.1 Accident and Severity Rates (per million vehicle miles) (1992 through 2001)

	MT 72 Corridor	Statewide Average for Rural State Primary
All Vehicles Accident Rate	2.01	1.53
All Vehicles Severity Index	2.38	2.44
All Vehicles Severity Rate	4.78	3.75
Truck Accident Rate	2.97	1.36
Truck Severity Index	3.06	2.29
Truck Severity Rate	9.08	3.11

Notes:

1. Accident rates are defined as the number of accidents per million vehicle-miles.
2. Severity index is defined as the ratio of the sum of fatal and incapacitating injury accidents times 8, plus the number of other injury accidents times 3, plus the number of property damage accidents compared to the total number of accidents.
3. Severity rate is defined as the accident rate multiplied by the severity index.

Source: Montana Department of Transportation.

Table 1.2 shows a summary of the crashes by segment throughout the study corridor.

Table 1.2 Crash Summary by Segment (1-1-1992 through 12-31-2001)

Reference Post (Segment)	Number of Crashes: Total/with Injuries/with Fatalities	Crash Characteristics
+/- RP 10.3 – 11.0 (Belfry Area)	13 total 4 w/ injuries 0 w/ fatalities	4 crashes were intersection-related 4 were right-angle collisions
+/- RP 11.0 – 21.5 (Rural Corridor)	88 total 33 w/ injuries 3 w/ fatalities	33 were single car crashes with fixed objects 15 resulted in an overturned vehicle 15 crashes involved wildlife or domestic animals 4 crashes occurred while overtaking another vehicle 4 crashes were intersection-related

Source: Crash report provided by Montana Department of Transportation. Data compiled by DEA.

Several crash analyses have been performed for this corridor in the last decade for five specific accident cluster locations. Many have been identified previously as problem areas but no recent improvements have been made, as they will be addressed by this project.

1. A 1996 analysis by MDT identified a cluster between +/- RPs 10.4 and 11.2, which includes the intersection of MT 72 and S-308. Signs and luminaires were installed at this location in August 2001 in an attempt to reduce crashes. At this time, there are no data available to analyze the effectiveness of this treatment.
2. In 1997 and 1998 an accident cluster was identified between +/- RPs 14.7 and 15.5. The section of roadway includes the substandard "Lynn's Corner", a sharp curve, which has a reduced speed limit of 72 kph (45 mph). MDT safety projects in the late 1970s and early 1980s installed guardrails and signing at +/- RP 15, which have reduced the incidence of crashes on the curve, but this remains a high accident location. Additional recommendations for improvements included reconstruction of the curve to a standard radius with wider shoulders.
3. A 2002 analysis by MDT identified accident clusters between +/- RPs 11.9 and 12.6 and between +/- RPs 12.9 and 13.7. No feasible countermeasures were recommended by MDT to address a specific trend.

4. The intersection of MT 72 with US 310 has been a high accident location. The intersection-related crashes are generally those between +/- RPs 21.4 and 21.5. Three out of the four accidents listed for this location occurred at night. Intersection geometry (see Section 1.4.3) may contribute to a high number of accidents in this location.
5. A memorandum from MDT stated that another potential concern is the visual alignment of the power line north of +/- RP 19, which could be mistaken by drivers for the roadway alignment. However, the accident history does not indicate a problem in this area.
6. Although not related to a specific location (i.e., scattered throughout the rural corridor), a 2002 accident analysis prepared by MDT identified some additional safety concerns. In 35 percent of the recorded crashes, the first and/or most harmful event was reported as "overturn" or "collision with ditch." Mitigation for this type of crash may include reconstruction of the roadway with a wider shoulder, possibly including rumble strips, flatter side slopes, wider clear zone, and improved ditch configuration.

1.4.2 Need to Reduce Roadway Deficiencies

MT 72 is designated a primary highway and classified as a principal arterial. MDT publishes design standards for both rural and urban highways in every functional class of the state's highway system. MDT's current standard for a rural principal arterial for the level of traffic on MT 72 is two 3.6-m (12-ft) travel lanes with 1.2-m (4-ft) shoulders for a total paved width of 9.6 m (32 ft).

Roadway deficiencies include narrow bridges, narrow shoulders, inadequate clear zones and recoverable areas, steep side slopes, lack of pedestrian and bicycle facilities in the town of Belfry, poor intersection geometry, and several sharp curves. These problems are summarized as follows in Table 1.3.

Table 1.3 Belfry-North Existing Conditions

Criteria	Existing Conditions
Narrow Shoulders	100% of the corridor
Inadequate Clear Zones/Recoverable Areas	60% of corridor
Sharp Horizontal Curves	10
Deficient Vertical Curves	7
Narrow Bridges	6

1.4.2.1 Shoulders and Clear Zone/Recoverable Areas

MDT standards for a primary highway recommend a paving surface width of 9.6 m (32 ft). Most of the current roadway measures between 7.3 and 8.5 m (24 and 28 ft) wide. A small section between +/- RP 11.7 and +/- RP 14.5 measures only 6.1 m (20 ft) wide. Throughout the rural corridor, shoulder widths range from 0 to 1.4 m (0 to 5 ft) with the majority of the rural corridor having unpaved shoulders of 0.3 to 0.6 m (1 to 2 ft). The existing urban typical section of the highway, located within the town of Belfry, does have shoulders. However, the shoulders are unpaved and used for parking and pedestrian movements because there are no sidewalks in most of the urban section.

The majority of the rural highway has a narrow unpaved shoulder with relatively steep side slopes, which do not meet current clear zone guidelines intended to improve the recoverable areas along

highways should errant vehicles leave the highway (Figure 1.2). The clear zone is inadequate on 60 percent of the corridor.

As noted earlier, MT 72 between Belfry and US 310 is a rural agricultural corridor, and farm equipment uses MT 72. Since the existing shoulders are either narrow or non-existent, farm equipment must drive in the general travel lane rather than on the shoulder. This results in conflicts between the slow moving agricultural equipment and higher speed regional traffic, including unsafe passing.

Figure 1.2 Skewed Access, Narrow Shoulders, and Steep Side Slopes



1.4.2.2 Vertical and Horizontal Curves

There are 10 sharp horizontal curves and seven deficient vertical curves within the project corridor. Two curve areas are of particular concern: (1) the horizontal curve in front of the Belfry School between Vaill Avenue and Wisconsin Street (+/- RP 10.7) (see Figure 1.8) and (2) the horizontal back-to-back curves at Lynn's Corner (+/- RP 14.9). Lynn's Corner (Figure 1.3) is a high accident cluster location (see Section 1.4.1), and Belfry School safety is a specific concern for MDT and residents (see Section 1.4.1).

Figure 1.3 Lynn's Corner

1.4.2.3 Bridges

There are six bridges on MT 72 within the project area. The six bridges include the Clarks Fork "south" bridge, the Clarks Fork "north" bridge, the Silver Tip Creek bridge, the Dry Creek Canal bridge, and two bridges over the Sand Creek Ditch. The structure over Bear Creek on existing MT 72 is a box culvert with a corrugated metal pipe (CMP). In addition to those six bridges, a number of smaller structures carry irrigation ditches beneath MT 72. All bridges with bridge railings have narrow clear roadway widths, measured between the inside face of the existing bridge railings. The bridge widths range from 6.4 m (21.1 ft) to 8.1 m (26.6 ft). Applicable MDT standards provide for replacement of any bridge with a width less than 8.4 m (28 ft). MDT classifies one of these narrow bridges as "functionally obsolete". MDT has found that the Clarks Fork "north" bridge (Figure 1.4), is functionally obsolete and eligible for replacement.

Figure 1.4 Clarks Fork "North" Bridge

1.4.3 Roadway Intersections

There are three main areas of concern for intersection safety along the corridor:

1. The intersections in the town of Belfry, including the MT 72 and S-308 intersection
2. The intersection of MT 72 and US 310 at the northern terminus of the project (a high accident location)
3. County road intersections throughout the rural portion of the corridor

Safety concerns for the S-308 and US 310 intersections are generally related to intersection geometry and are discussed in detail below. The concern with county road intersections relates to limited sight distances and undesirable approach angles. Field approaches are scattered throughout the rural corridor, and agricultural trucks and equipment are frequently entering, exiting, and moving along the highway during harvest time.

1.4.3.1 Belfry Intersections

Within the town of Belfry, MT 72 intersects with virtually every in-town street as it follows an alignment along Vaill Avenue with a sharp turn at Wisconsin Street. The MT 72/Vaill Avenue intersection with S-308 is offset and contributes to problems with turning movements. There are no access restrictions onto MT 72 from residential or business driveways as the highway travels through town. Reduced speed and stop signs are the primary control at intersections.

The S-308 intersection is a high accident location (see Section 1.4.1). The intersection is offset, and eastbound drivers on S-308 coming down the hill sometimes slide through the intersection with MT 72 in the winter.

1.4.3.2 US 310 Intersection

The intersection at US 310 presents several problems with intersection geometry, curve radii, and sight distance (Figures 1.5 and 1.6). Area residents have consistently voiced their concerns about this intersection at public meetings. Cited problems include:

- The US 310 southbound to MT 72 southbound leg of this intersection is one-way. Vehicles traveling northbound on MT 72 mistake this leg for the main roadway and consequently northbound vehicles will be traveling the wrong way on the one-way southbound lane, leading to potential head-on collisions.
- On MT 72, there is a single westbound lane, and the eastbound lane is a shared left-right turn lane. Due to the configuration of this intersection, the westbound lane is commonly mistaken by motorists as an eastbound left-turn lane, resulting in eastbound traffic sitting in the westbound travel lane waiting to turn north on US 310.
- Immediately south of this intersection is a local road to the west accessing a residential area. The higher speed at which southbound vehicles on US 310 move through the dedicated MT 72 southbound leg of the intersection is a concern for local residents turning onto the local road.

Engineers for this project witnessed some of these events while conducting background research and data collection in the corridor. The existing intersection is illustrated in Figures 1.5 and 1.6.

Figure 1.5 Existing Intersection Geometry at MT 72/US 310 Intersection

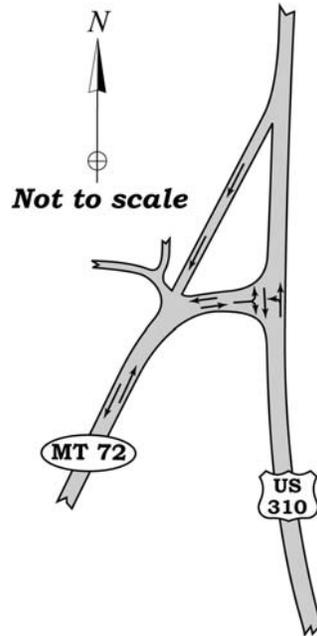


Figure 1.6 View of Existing MT 72/US 310 Intersection



1.4.3.3 Skewed Intersections in Rural Corridor

Throughout the rural corridor, there are numerous driveways and public roads accessing directly onto MT 72. These access points are mostly unimproved, and many are skewed (see Figure 1.2).

1.4.4 Safety at Belfry School

There are two primary safety concerns for Belfry School: (1) pedestrian safety in crosswalks and (2) the sharp curve at the corner of Vaill Avenue and Wisconsin Street.

There are three marked student crosswalks on Wisconsin Street (Figure 1.7). These crosswalks are defined through signing and striping and are aligned with openings in the school's fence. Crossing guards are not posted for the crosswalks, but students generally cross at the designated locations. There is some illumination in the vicinity of the crosswalks. Students are generally not walking in the dark unless they are going to and from after-school activities. Residents report that vehicles often travel above the speed limit in this location, and sight distance for eastbound traffic on Vaill Avenue is limited. Belfry residents and the Belfry School District have expressed interest in improving driver awareness of the school crossings on Wisconsin Street. The school district recently submitted a request to MDT for a study of the crosswalks and installation of a warning device. Preliminary discussions on the matter revolved around the installation of a flashing yellow beacon mounted on a school speed limit sign.

Figure 1.7 School Crosswalks on Wisconsin Street (looking south)



Another safety concern for the school area is the sharp curve at the corner of Vaill Avenue (the existing MT 72 alignment) and Wisconsin Street (Figure 1.8). Residents report both that the posted speed at the curve is too high and that traffic moves through the area above the posted speed limit. Although not a specific accident location, the curve is sharp and presents a potential safety concern for vehicles and students walking and bicycling to school. In late 2002, a truck went off the road at this curve, through the school's fence, and hit a tree in front of the school.

Figure 1.8 Curve in Front of Belfry School (looking south)

(Note: school is to left in picture)

**1.4.5 Pedestrian and Bicycle Safety**

There is no formal bicycle or pedestrian infrastructure anywhere along the project corridor. The urban section of MT 72 has gravel shoulders, no sidewalks, and poorly defined access points. Within the town of Belfry pedestrians must walk along the highway shoulder. The shoulder width appears to be sufficient for pedestrian traffic along most of the route in town. However, the shoulder is not a defined "pedestrian only" area as a sidewalk would be. The unpaved shoulder makes for an undesirable riding surface forcing bicyclists to share a travel lane with faster-moving vehicular traffic.

There are minimal or no shoulders in the rural corridor and no place for pedestrians or bicycles outside the travel lane.

2.0 Alternatives

All build alternatives proposed for the Belfry-North project provide for the reconstruction of MT 72 through the highway corridor and achieve the project purpose and needs, as discussed in Chapter 1. Alternatives initially considered but eliminated from further analyses are discussed in Section 2.5, Alternatives Considered but Eliminated, and all alternatives considered are illustrated in Figure 2.11.

2.1 Background to Alternatives Development

As discussed in Section 1.2, Project Background, MDT began to look at alternatives for the Belfry-North project in the 1980s to address the needs to improve safety and correct roadway deficiencies. When the project was reinitiated in 2001, MDT revisited project alternatives proposed in the 1980s and considered additional alternatives. During the course of three public meetings held in June, September, and December 2002, more than a dozen alignment alternatives were proposed by the public and screened along with the No-Build Alternative.

The second and third public meetings included a prescreening evaluation process for the proposed alternatives that reduced the number of alignment alternatives carried forward for detailed analysis. This screening was based solely on a "fatal flaw" analysis, which considered several factors: (1) whether the proposed alternative met the project "purpose and need" to improve safety in the MT 72 corridor (2) whether there was a similar alternative with fewer environmental impacts, and (3) order of magnitude cost (reasonable or feasible). Alternatives that were deemed to be "unreasonable" in cost were one-third or more expensive than the other alternatives that met safety criterion. Costs were estimated according to average industry construction costs for the year 2003.

To simplify discussion of alternatives that were carried forward for analysis in this EA, the MT 72 corridor was divided into two segments: the **Belfry Area** between S-308 and North Dutch Lane (+/- RP 10.5 to +/- RP 12.7) and the **Rural Corridor** between North Dutch Lane and US 310 (+/- RP 12.7 to +/- RP 21.4). These segment limits are illustrated in Figure 2.1.

Within the Belfry Area, two build alternative alignments were carried forward for analysis:

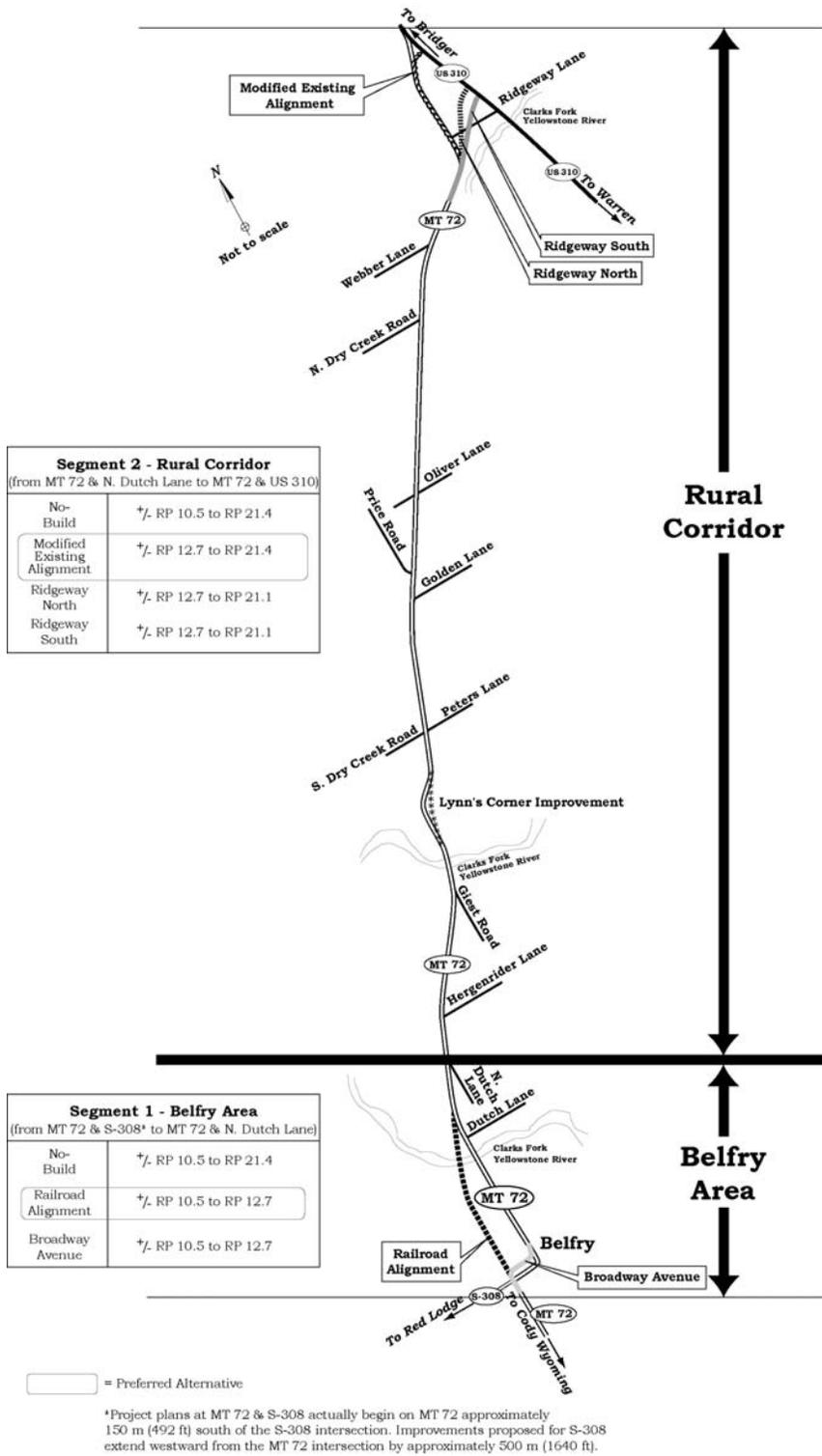
- Railroad Alignment Alternative
- Broadway Avenue Alternative

Within the Rural Corridor, three build alternative alignments were carried forward for analysis:

- Modified Existing Alignment Alternative
- Ridgeway North Alternative
- Ridgeway South Alternative

In addition to these build alternatives, a no-build alternative was analyzed for each segment. These alternatives are illustrated on Figure 2.1 and described in detail on the following pages.

Figure 2.1 Map of MT 72 Segments with Alternatives



2.2 Typical Sections

MT 72 is designated a primary highway. MDT publishes design standards for both rural and urban highways in every functional class of the state's highway system. MT 72 is classified as a principal arterial. For this type of facility with the amount of traffic predicted for MT 72, MDT's standard is a 9.6-m (approximately 32-ft) roadway. Four typical sections are included in the various alternatives for this project. The typical sections include two urban typical sections and two rural typical sections. The English measurements in this document are approximate and are always shown within parentheses. The urban typical sections are illustrated in Figures 2.2 and 2.3, and the rural typical sections are illustrated in Figure 2.4.

2.2.1 Urban Typical Sections

MDT's urban typical section is used within the town of Belfry and has the following characteristics:

- Two 3.6-m (12-ft) travel lanes
- Sidewalks of 1.6 m (5 ft) on each side
- Parking lanes and shoulders
- Curb and gutter

Variations between the urban typical sections for in the town of Belfry are summarized in Table 2.1 and illustrated in Figures 2.2 and 2.3.

Table 2.1 Variations in Urban Typical Sections

Components	Railroad Alignment Alternative	Broadway Avenue Alternative
Shoulders	Shoulder on west side is 2.4 m (8 ft); shoulder on east side is same as Broadway Avenue Alternative typical section	0.6-m (2-ft) shoulder with 0.6-m (2-ft) buffer on both sides
Parking Lanes	No parking lane on west side; parking lane on east side in town between S-308 intersection and Broadway Avenue is same as Broadway Avenue Alternative typical section	3.0-m (10-ft) parking lanes next to travel lanes on both sides of Broadway Avenue. Parking will be provided where possible along MT 72 in town

Figure 2.2 Railroad Alignment Alternative Urban Typical Section

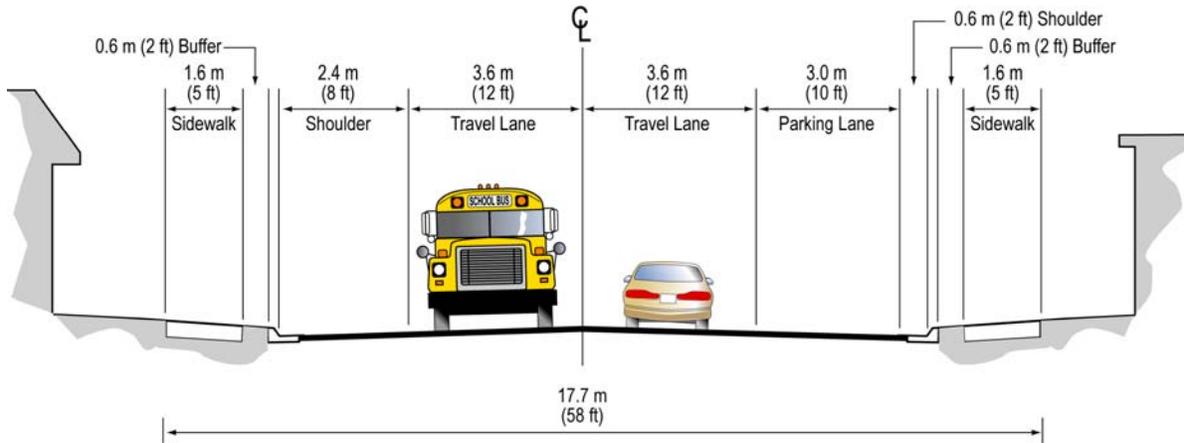
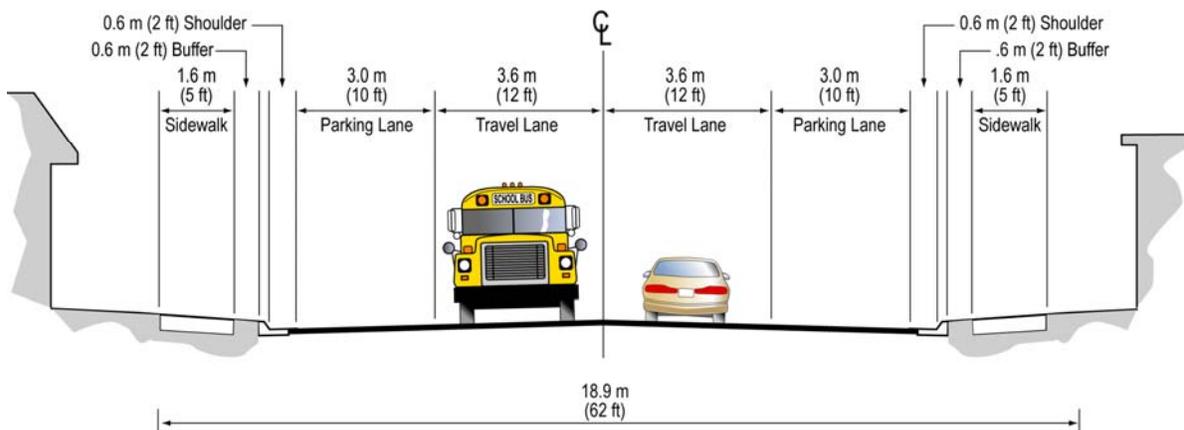


Figure 2.3 Broadway Avenue Alternative Urban Typical Section



2.2.2 Rural Typical Section

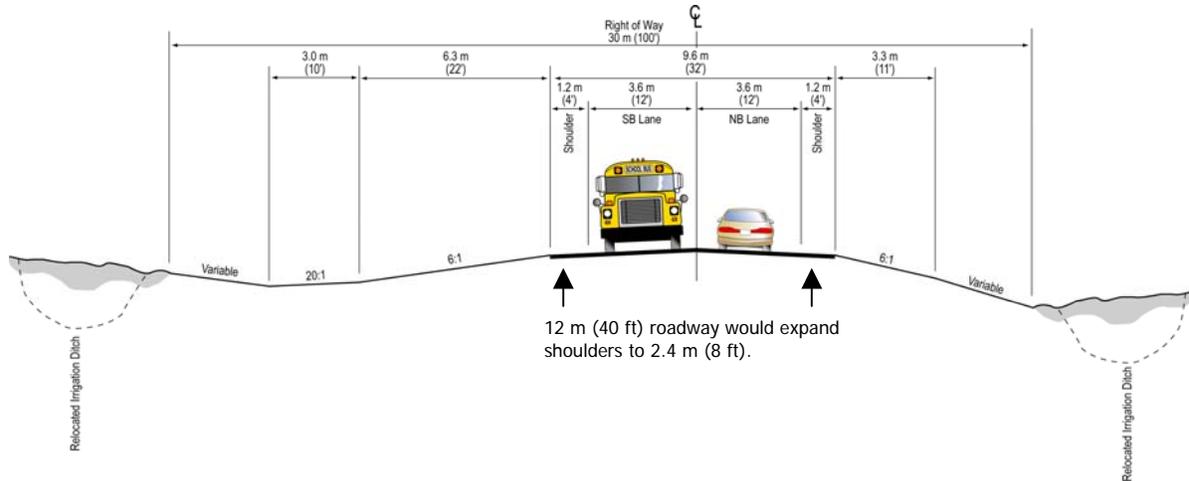
MT 72 is a principal arterial. MDT’s rural typical section for principal arterial features:

- Design speed of 100 kph (60 mph)
- Total paved width of 9.6 m (32 ft)
- Two 3.6-m (12-ft) travel lanes
- Two 1.2-m (4-ft) shoulders with rumble strips
- Drainage ditch to convey storm runoff

In addition to MDT’s standard for a rural principal arterial, an alternative 12-m (approximately 40-ft) typical section is being evaluated because it was requested by the public at all the public meetings. The two rural typical sections vary only in shoulder width. For the 9.6-m (32-ft) roadway, the shoulders are 1.2 m (4 ft) on each side. For the 12-m (40-ft) roadway, the shoulders are 2.4 m (8 ft). Figure 2.4 shows the rural typical section for the 9.6-m (32-ft) roadway. The

typical right-of way is 30 m (100 ft), although this varies based on specific conditions in the corridor.

Figure 2.4 MDT's Rural Typical Section (9.6-m (32-ft) roadway)



2.3 Belfry Area Alternatives (S-308 to North Dutch Lane)

2.3.1 No-Build

The No-Build alternative is the current MT 72 alignment and configuration (see Figure 1.1). In the Belfry Area, MT 72 through the town of Belfry is located on Vaill Avenue and curves northward in front of the Belfry School on Wisconsin Street and north to North Dutch Lane. There would be no change in roadway, pedestrian, or parking conditions under the No-Build Alternative. MDT would continue maintaining the highway.

As discussed in Chapter 1, the current MT 72 has both a narrow width and steep shoulders as well as limited sight distances for approaches. The present route's width and alignment are inadequate for the volume and type of traffic it currently accommodates, and the road is nearly six decades old. Because it does not meet the purpose and need, it is not carried forward as the preferred alternative but rather used to provide a baseline comparison for the build alternatives and in accordance with NEPA regulations (40 CFR 1502.14(d)).

2.3.2 Railroad Alignment Alternative (Preferred)

2.3.2.1 9.6-m (32-ft) Typical Section

The Railroad Alignment Alternative is within the Belfry Area segment. This alternative would create a new alignment for MT 72, relocating the highway from Vaill Avenue and Wisconsin Street to Railroad Avenue on the western edge of town. The alternative begins on MT 72, south of Railroad Avenue's present intersection with S-308 at +/- RP 10.5. It follows Railroad Avenue to its current terminus and continues north on the old MW&S railroad grade to North Dutch Lane at +/- RP 12.7 (Figure 2.6).

Under this alternative, the S-308 intersection would be reconfigured to include the addition of a left turn lane on S-308, west of the intersection. At this reconfigured intersection, Vaill Avenue would be closed one block to the east. From the S-308 intersection, the Railroad Alignment Alternative would proceed northward past Vaill Avenue (the existing MT 72 alignment) and along the alignment of Railroad Avenue, which is currently a one-lane gravel road between S-308 and Broadway Avenue. This typical section would be the urban typical section with parking on only the east side (see Figure 2.2). To improve the connection between the business district and the new MT 72, this alternative would include improvement and reconstruction of the first block of Broadway Avenue.

The Railroad Alignment Alternative would continue northward past the historic MW&S Railroad Depot (located on Broadway Avenue) and cross over Bear Creek on a new structure, staying on a route headed north toward the historic MW&S Railroad Maintenance Shop. North of Bear Creek the roadway would transition from an urban typical section to a rural typical section. To avoid impacting the historic MW&S Railroad Maintenance Shop, curb and gutter would be retained on the west side in this transition area. The proposed alignment would continue north of the railroad maintenance shop and parallel to the west side of the sewage lagoon that serves the town of Belfry. As the alignment proceeds northward, it would cross private agricultural land and curve northeasterly through a portion of Bureau of Land Management (BLM) property, cross Clarks Fork, and curve northeasterly to eventually tie-in to the existing MT 72 alignment at north of Dutch Lane. The Railroad Alignment would cross the Clarks Fork at a new location approximately 237 m (778 ft) downstream of the existing Clarks Fork "south" bridge and would require a new two-lane bridge. The Dutch Lane and North Dutch Lane tie-ins to the proposed alignment would be reconfigured into a "tee" intersection.

Access would be changed under this alternative to accommodate the new highway alignment. The number of driveways accessing directly onto MT 72 would be reduced because some would be redirected to connect with county roads and others would be consolidated. The existing MT 72 highway would be returned to a local street through town, and the existing highway segment between the Bear Creek bridge and Clarks Fork "south" bridge would be eliminated. The existing historic Clarks Fork "south" bridge would likely be removed after completion of the new bridge on the new alignment (unless a new owner is identified to assume ownership and maintenance of the bridge). The existing segment between Clarks Fork "south" bridge and Dutch Lane would be retained as a local access road. The portion of MT 72 that would be eliminated from highway use bisects a single property owner, and this owner would be provided primary access from a single point along the relocated MT 72. This location would provide access to the entire combined eastern parcels, which would no longer be partitioned by the existing highway. Additional field approaches would be constructed to access parcels both east and west of the new alignment to reasonably address the operations of the property.

Since traffic is rerouted to the west side of town, traffic would be greatly reduced on Wisconsin Street and Vaill Avenue in front of the Belfry School, and therefore, no additional improvements are included in the school area for this alternative.

The estimated project cost for acquisition of right-of-way, design, and construction of the 9.6-m (32-ft) typical section Railroad Alignment Alternative would be \$4.7 million.

2.3.2.2 12-m (40-ft) Typical Section

The urban portion of this alternative (from S-308 to Broadway Avenue) would be the same as described for the 9.6-m (32-ft) typical section. The 2.4-m (8-ft) shoulders would apply to the rural typical section of this alternative. The transition from an urban typical section to a 12-m (40-ft)

rural typical section would start north of Bear Creek. To avoid the historic MW&S Railroad Maintenance Shop, curb and gutter would be retained on the west side in this area. North of the MW&S Railroad Maintenance Shop for the remaining section of the Belfry Area segment (until north of Dutch Lane where the Rural Corridor segment begins), the highway would be a 12-m (40-ft) rural typical section with 2.4-m (8-ft) shoulders. Except for the increased shoulder width from 1.2 m (4 ft) to 2.4 m (8 ft), other aspects of the alignment and typical sections are identical to the 9.6-m (32-ft) typical section.

The estimated project cost for acquisition of right-of-way, design, and construction of the 12-m (40-ft) typical section Railroad Alignment Alternative would be \$5.1 million.

2.3.3 Broadway Avenue Alternative

2.3.3.1 9.6-m (32-ft) Typical Section

The Broadway Avenue Alternative is within the Belfry Area segment of the study area. It contains both urban and rural typical section characteristics, as described earlier. Broadway Avenue is parallel to Vaill Avenue, which is the local residential street on which the existing MT 72 alignment currently travels through town. Under the Broadway Avenue Alternative, the MT 72 alignment would be shifted one block north from Vaill Avenue to Broadway Avenue (Figure 2.6). Broadway Avenue is the historic "Main Street" commercial arterial within the town and provides parking and direct access to the majority of the town's businesses.

This alternative, like the Railroad Alignment Alternative, would begin near the MT 72/S-308 intersection. West of the intersection with S-308, a left turn lane would be added. The MT 72/S-308 intersection would be redesigned into a 3-legged intersection, eliminating the connection to Vaill Avenue (the existing MT 72 alignment). The one-block section connecting MT 72 to Vaill Avenue from the S-308 intersection to Montana Street would be permanently closed to improve the intersection.

From the S-308 intersection, the MT 72 alignment would continue north along Railroad Avenue to Broadway Avenue and follow a new 40 kph (25 mph) curve to join MT 72 to Broadway Avenue west of Montana Street. From Montana Street, MT 72 would continue easterly to tie-in to Wisconsin Street. In this section between Railroad Avenue and Wisconsin Street, the roadway would be improved to the urban typical section with parking and sidewalks on each side. From S-308 to Broadway Avenue, new sidewalks would be provided on both sides, and on-street parking would be provided where feasible. From Broadway Avenue to Bear Creek Lane, new sidewalks but no parking lanes would be built on both sides of MT 72. Pedestrians would be encouraged to cross at the intersections of MT 27/Carbon Avenue and MT 72/Wyoming Street through the use of appropriate new signage and striping.

At the Wisconsin Street tie-in, the current 3-legged intersection at Broadway Avenue and Wisconsin Street would be modified to a curve, and Wisconsin Street south of Broadway Avenue would be disconnected from Broadway Avenue. In front of the Belfry School near this curve, the disconnected segment of Wisconsin Street would be reconstructed into a cul de sac, which would be accessible only from the south. The cul de sac would accommodate drop-off and turn-around access to Belfry School for school buses, students and parents.

From the Wisconsin Street curve, the Broadway Avenue alignment would proceed northerly on the existing MT 72 alignment. The existing MT 72 alignment would be reconstructed to the rural typical section. The existing box culvert at Bear Creek would be reconstructed. Continuing north on the alignment, the Clarks Fork "south" bridge would be replaced, and the alignment would be shifted east of the existing centerline to improve geometry. The new bridge would be constructed east of the existing bridge so that traffic could be maintained on the current bridge during construction.

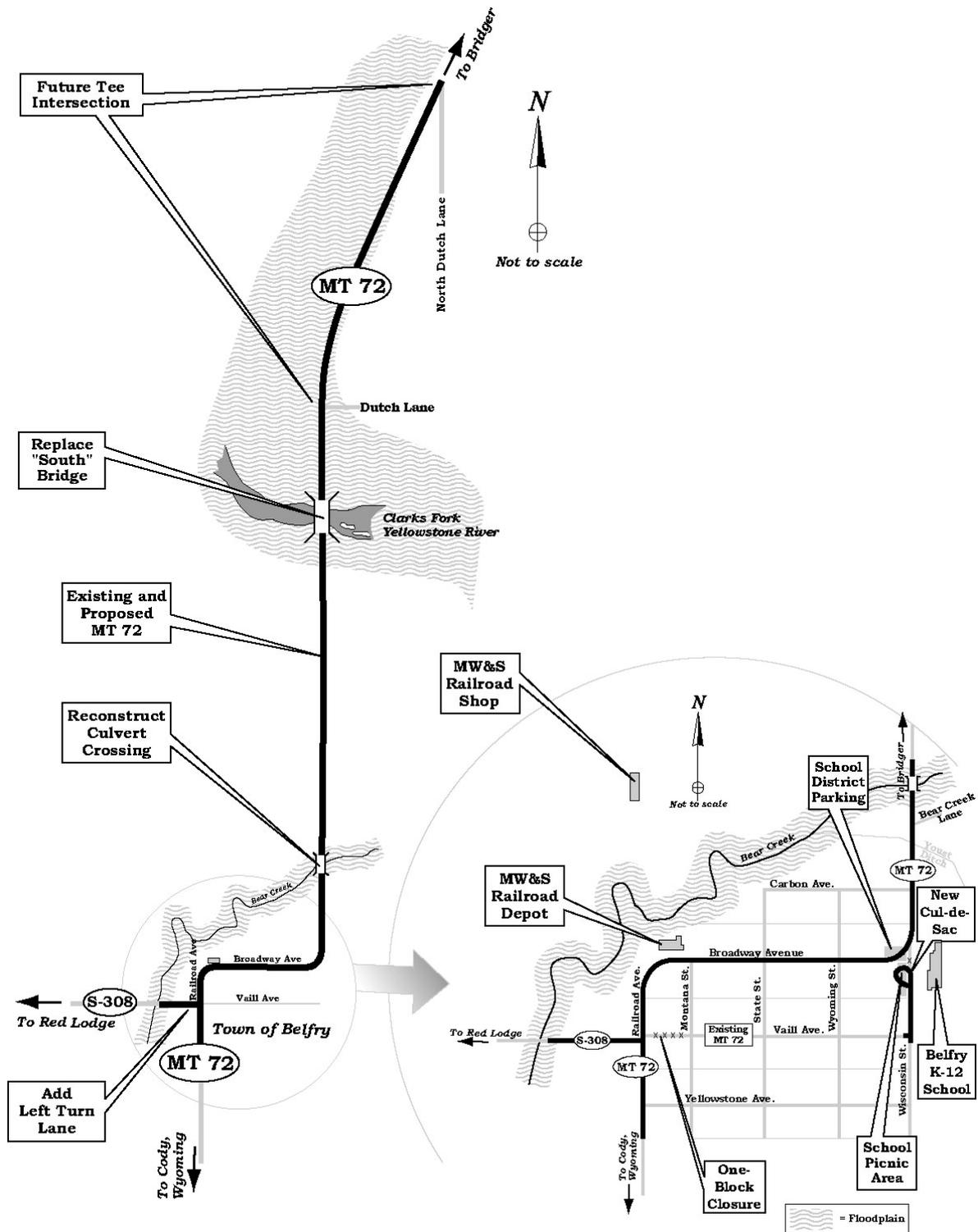
The estimated project cost for acquisition of right-of-way, design, and construction of the 9.6-m (32-ft) typical section Broadway Avenue Alternative would be \$4.0 million.

2.3.3.2 12-m (40-ft) Typical Section

The urban portion of this alternative (from S-308 to Broadway Avenue) would be the same as described for the 9.6-m (32-ft) typical section. The 2.4-m (8-ft) shoulders would apply to the rural typical section of this alternative, which begins north of Wisconsin Street. For this remaining section of the Belfry Area segment (until North of Dutch Lane where the Rural Corridor segment begins), the highway would be a 12-m (40-ft) rural typical section with 2.4-m (8-ft) shoulders. Except for the increased shoulder width from 1.2 m (4 ft) to 2.4 m (8 ft), other aspects of the alignment and typical sections are identical to the 9.6-m (32-ft) typical section.

The estimated project cost for acquisition of right-of-way, design, and construction of the 12-m (40-ft) typical section Broadway Avenue Alternative would be \$4.4 million.

Figure 2.6 Broadway Avenue Alternative



2.4 Rural Corridor Alternatives (North Dutch Lane to US 310)

2.4.1 No-Build

Under the No-Build Alternative in the Rural Corridor, MT 72 would continue on its existing alignment from North Dutch Lane to the intersection of US 310. There would be no change in roadway conditions under the No-Build Alternative. MDT would continue maintaining the highway, but roadway deficiencies and safety concerns would remain.

The current MT 72 has both a narrow width and steep shoulders as well as limited sight distances for approaches as discussed in Chapter 1. The present route's width and alignment are inadequate for the volume and type of traffic it currently accommodates, and the road is nearly six decades old. Although it does not meet the purpose and need, it is carried forward to be used as a baseline comparison for the build alternatives and in accordance with NEPA regulations (40 CFR 1502.14(d)).

2.4.2 Modified Existing Alignment Alternative (Preferred)

2.4.2.1 9.6-m (32-ft) Typical Section

The Modified Existing Alignment Alternative is within the Rural Corridor segment of this project (see Figure 2.1) and would feature the improvements associated with the rural typical section, including side slopes adhering to clear zone guidelines and roadside ditches to accommodate storm runoff. The proposed alignment generally follows the existing MT 72 alignment from the terminus of the Belfry Area segment at North Dutch Lane to the intersection with US 310 where the project terminates. To correct roadway deficiencies, the alignment is modified in some areas as discussed below. Details of the Modified Existing Alignment Alternative are illustrated in Figure 2.7.

Moving north through the project area, the improved alignment would follow the existing roadway centerline from North Dutch Lane to just north of the Clarks Fork "north" bridge at Lynn's Corner, approximately 4.8 km (+/- 3 mi) north of Belfry. At Lynn's Corner (from +/- RP 14.5 to +/- RP 15.2), the alignment would shift to the east with two reverse curves that would be designed to meet MDT standards. The alignment would reduce the sharp tight curve adjacent to the existing residence on the west. Access to this property would be reconstructed. The existing MT 72 roadway in this area would be removed. The existing Silver Tip Creek and Clarks Fork "north" bridges would be replaced to accommodate the widened roadway. To maintain traffic on the existing bridge during construction, new structures would be built east of the existing bridges.

From the reconstructed curve at Lynn's Corner, the highway would proceed north as the rural typical section along the existing roadway centerline. North of Webber Lane (+/- RP 20) is a bluff on the west side of MT 72. Between Webber Lane (+/- RP 19.5) and Ridgeway Lane (+/- RP 20.6), the existing alignment crosses Sand Creek Canal two times. The existing bridges over Sand Creek Canal (+/- RP 19.9 and +/- RP 20.4) in these locations would be replaced with new structures.

Near the second Sand Creek Canal crossing (+/- RP 20.4), the existing MT 72 alignment would be realigned slightly westward toward the bluff to flatten a horizontal curve. Just north of this curve, the access road to residences on the bluff top would be modified.

Under the Modified Existing Alignment Alternative, a number of modifications would occur at the MT 72/US 310 intersection (see Figure 2.8). The intersection would be moved south of its existing

location for both north- and southbound traffic and replaced with a new “tee” intersection. A deceleration lane from US 310 onto MT 72 would be incorporated into the final design in accordance with MDT standards. Business and residential accesses would be modified along both MT 72 and US 310 to accommodate the reconstructed intersection.

The number of access points would be reduced throughout the Rural Corridor. The majority of the public road intersections would require some realignment to create a perpendicular intersection with the highway, since many roads presently intersect at an angle. Many of the residential and field driveways would be realigned to connect with nearby public roads, and some may be combined together or shifted along the property frontage. An Access Management Plan would be developed to manage access points on MT 72 within 150 m (500 ft) of the public road intersections.

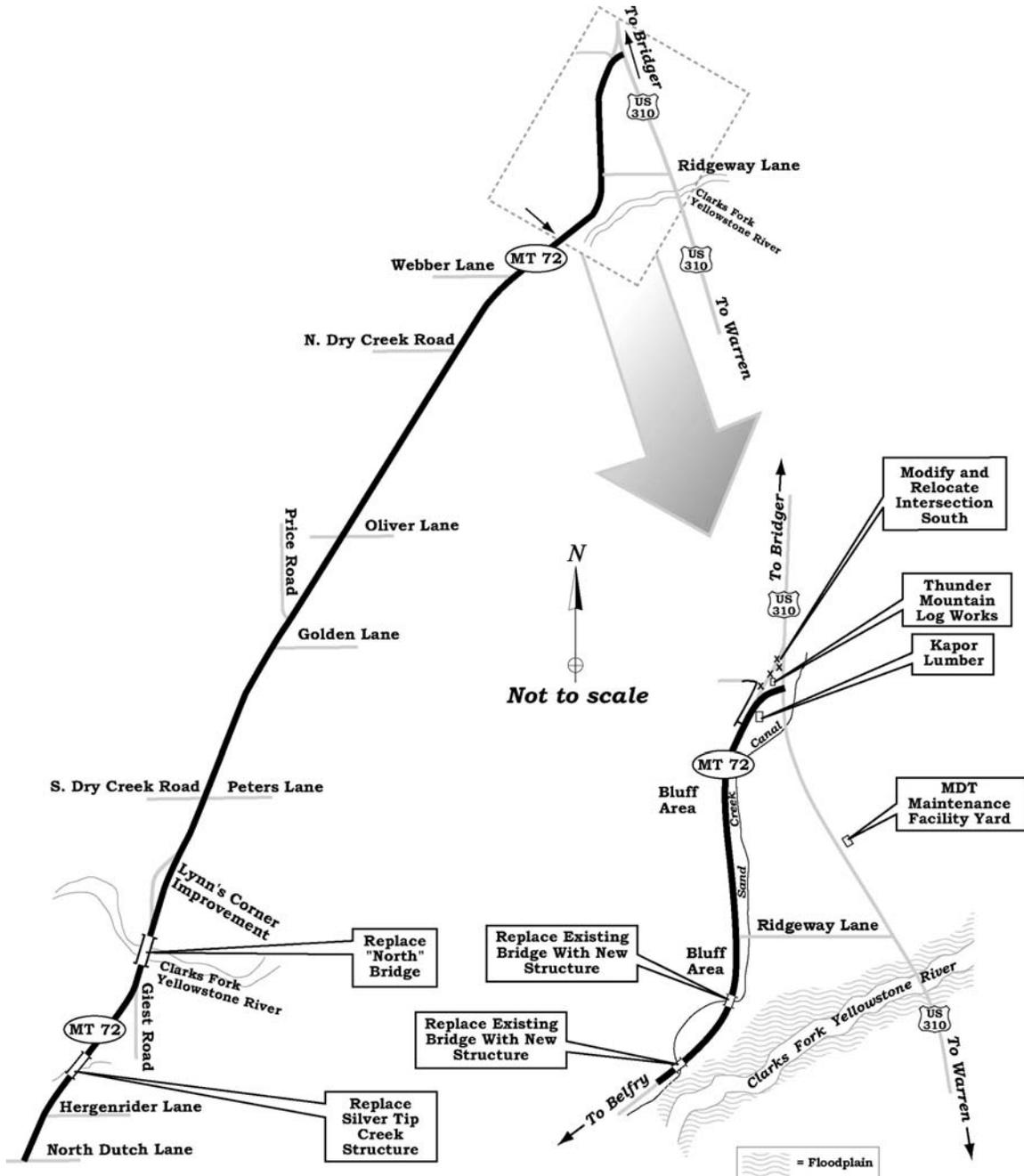
The estimated project cost for acquisition of right-of-way, design, and construction of the 9.6-m (32-ft) typical section Modified Existing Alignment Alternative would be \$11.3 million.

2.4.2.2 12-m (40-ft) Typical Section

Rural typical sections for the Rural Corridor segment shown in Figure 2.4 would be modified under the 12-m (40-ft) typical section to include 2.4 m (8 ft) instead of 1.2-m (4-ft) shoulders. The alignment and all other design elements would be as described in Section 2.4.2.1.

The estimated project cost for acquisition of right-of-way, design, and construction of the 12-m (40-ft) typical section Modified Existing Alignment Alternative would be \$13.3 million.

Figure 2.7 Modified Existing Alignment Alternative (Preferred)



2.4.3 Ridgeway North Alternative

2.4.3.1 9.6-m (32-ft) Typical Section

The Ridgeway North Alternative is in the Rural Corridor segment. Like the other alternatives in the Rural Corridor, this alternative follows the rural typical section throughout. The Ridgeway North Alternative is identical in alignment and typical section to the Modified Existing Alignment Alternative from North Dutch Lane (+/- RP 12.7) to just south of Sand Creek Canal at +/- RP 20.3. From the point where the existing highway curves, the Ridgeway North Alternative eliminates this curve and continues straight. It proceeds northeasterly on a new alignment across Ridgeway Lane terminating at US 310 at a private driveway north of the existing Ridgeway Lane intersection, across from the MDT Maintenance Yard Facility (see Figure 2.8). This alignment was proposed to straighten the MT 72 alignment and to avoid impacting farm houses near Ridgeway Lane.

From south of Sand Creek Canal (+/- RP 20.3), the Ridgeway North alignment would proceed north and begin to shift east of the existing MT 72 and would cross Sand Creek twice at new locations. The Sand Creek Canal would be realigned westward toward the bluff and away from the proposed alignment. Construction of a new structure for the realigned canal at existing MT 72 could be required to maintain access to properties on the west side. However, farm driveways near the bluff area could also be redesigned to connect to the proposed alignment. If driveways would be reconnected to the proposed alignment, the use of the existing alignment in this area could be eliminated, thereby reducing or eliminating the need for a new canal structure near the bluff area.

The alignment would continue away from the bluff area east to its intersection with US 310 at +/- RP 21.1. Access to Ridgeway Lane would be provided from US 310 only. A cul de sac would be constructed at the western end of Ridgeway Lane east of the proposed MT 72 alignment. This cul de sac would eliminate direct access onto MT 72 from Ridgeway Lane.

After completion of the new US 310 intersection, the existing MT 72 roadway north of the existing Ridgeway Lane would be eliminated. The existing MT 72/US 310 intersection farther north would be reconfigured to continue serving as access to businesses and residences in the immediate area. The US 310 to MT 72 southbound leg of the existing MT 72/US 310 intersection would be eliminated under this alternative, and the roadway would be removed.

The number of access points would be reduced throughout the corridor. The majority of the public road intersections would require some realignment to create a perpendicular intersection with the highway, since many roads presently intersect at an angle. Many of the residential and field driveways would be realigned to connect with nearby public roads and some may be combined together or shifted along the property frontage. An Access Management Plan would be developed to manage access points on MT 72 within 150 m (500 ft) of the public road intersections.

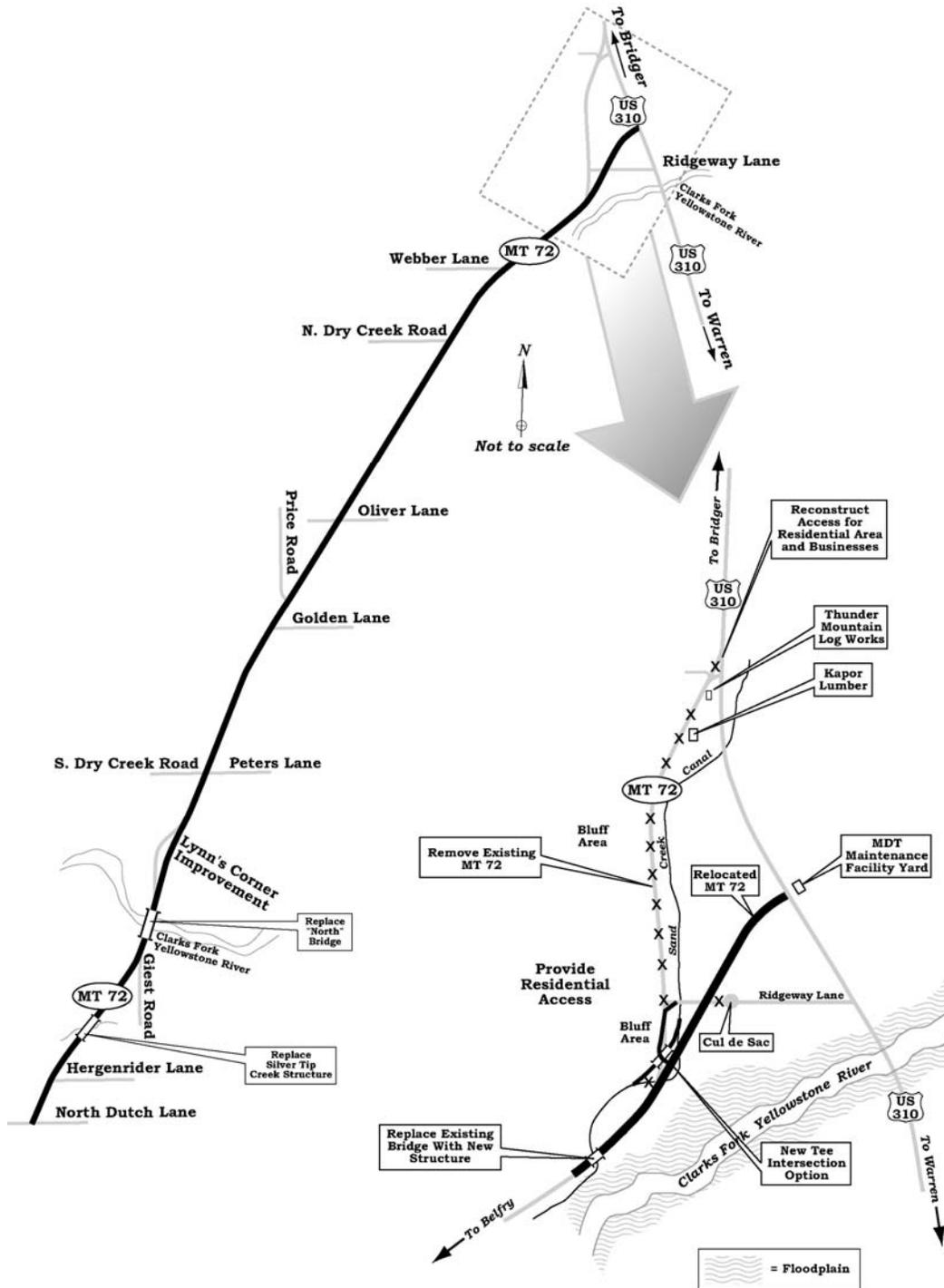
The estimated project cost for acquisition of right-of-way, design, and construction of the 9.6-m (32-ft) typical section Ridgeway North Alternative would be \$10.3 million.

2.4.3.2 12-m (40-ft) Typical Section

Typical rural typical sections for the Rural Corridor segment shown in Figure 2.4 would be modified under the 12-m (40-ft) typical sections to include 2.4-m (8-ft) instead of 1.2-m (4-ft) shoulders. The alignment and all other design elements would be as described in Section 2.4.3.1.

The estimated project cost for acquisition of right-of-way, design, and construction of the 12-m (40-ft) typical section Ridgeway North Alternative would be \$12.1 million.

Figure 2.8 Ridgeway North Alternative



2.4.4 Ridgeway South Alternative

2.4.4.1 9.6-m (32-ft) Typical Section

The Ridgeway South Alternative is in the Rural Corridor segment. Like the other alternatives in the Rural Corridor, this alternative uses the rural typical section throughout. The Ridgeway South Alternative is identical in alignment and typical section to the other Rural Corridor alternatives from North Dutch Lane (+/- RP 12.7) to just south of Sand Creek Canal (+/- RP 20.3). Like the Ridgeway North Alternative, where the existing highway curves, the Ridgeway South Alternative eliminates this curve and continues straight. The highway proceeds northeasterly on a new alignment across Ridgeway Lane. The Ridgeway South Alternative would cross near the midpoint of Ridgeway Lane (east of the Ridgeway North Alternative alignment) and terminate on US 310 south of the Ridgeway North Alternative and north of the existing Ridgeway Lane intersection with US 310 at +/- RP 21.1 (see Figure 2.9). This proposed alignment closely follows a treeline on the eastern side. This alignment was proposed to straighten the MT 72 alignment and to minimize bisecting farmlands near Ridgeway Lane.

Near the bluff and in the vicinity of the existing Ridgeway Lane intersection with MT 72, the proposed Ridgeway South Alternative alignment would cross a section of the existing Sand Creek Canal in one place at the tip of curve where the canal changes direction. Like the Ridgeway North Alternative, the Ridgeway South Alternative would realign Sand Creek westward toward the bluff and away from the proposed roadway realignment, or alternative access points could be provided along the proposed new alignment.

As with the Ridgeway North Alternative, access to Ridgeway Lane would be provided from US 310 only. A cul de sac would be constructed at the western end of Ridgeway Lane east of the proposed MT 72 alignment. This cul de sac would eliminate direct access onto MT 72 from Ridgeway Lane.

After completion of the new US 310 intersection, the existing MT 72 roadway north of the existing Ridgeway Lane would be eliminated. The existing MT 72/US 310 intersection farther north would be reconfigured to continue serving as access to businesses and residences in the immediate area. The US 310 to MT 72 southbound leg of the existing MT 72/US 310 intersection would be eliminated under this alternative.

The number of access points would be reduced throughout the corridor. The majority of the public road intersections would require some realignment to create a perpendicular intersection with the highway, since many roads presently intersect at an angle. Many of the residential and field driveways would be realigned to connect with nearby public roads, and some may be combined together or shifted along the property frontage. An Access Management Plan would be developed to manage access points on MT 72 within 150 m (500 ft) of the public road intersections.

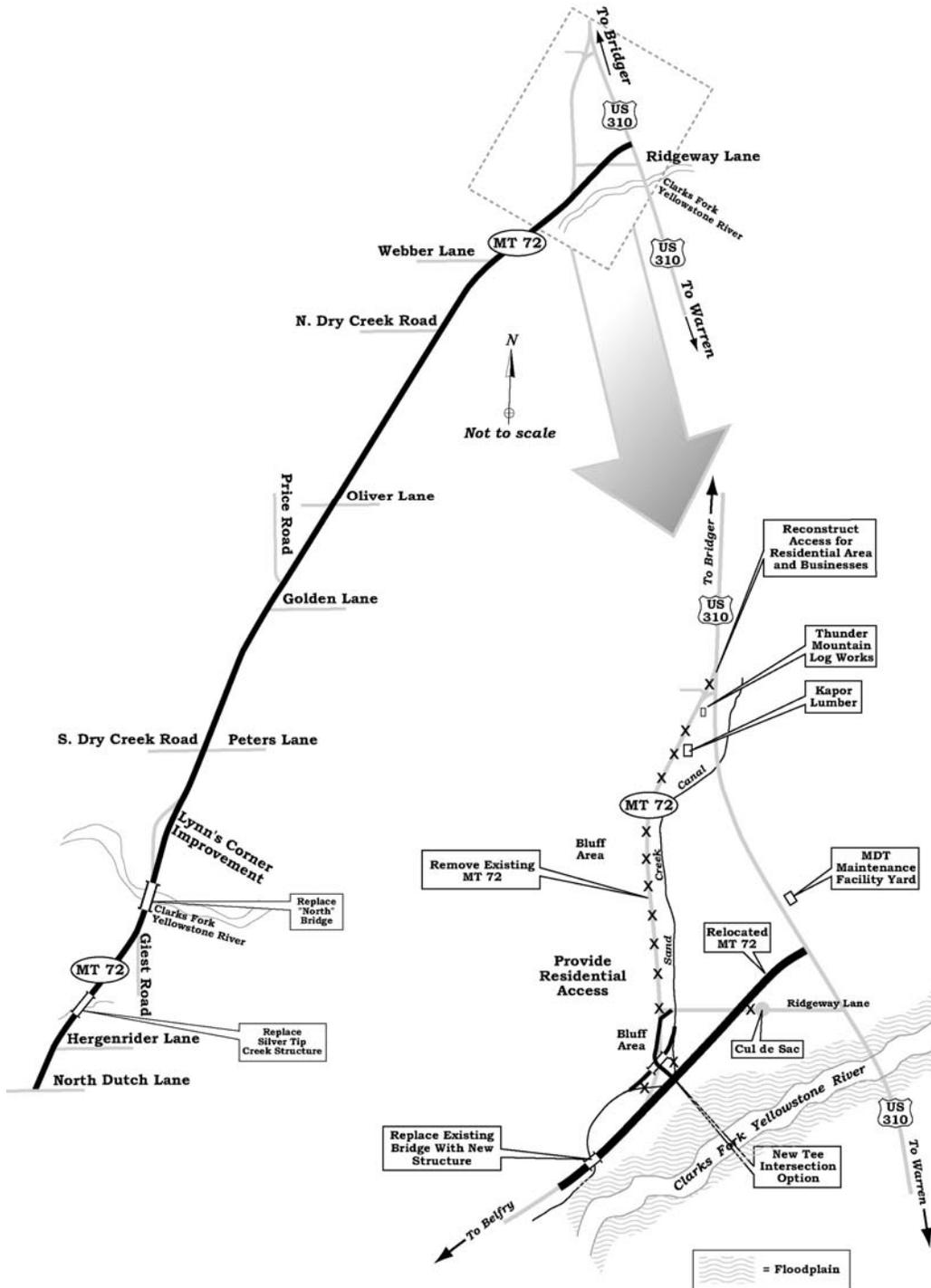
The estimated project cost for acquisition of right-of-way, design, and construction of the 9.6-m (32-ft) typical section Ridgeway South Alternative would be \$10.6 million.

2.4.4.2 12-m (40-ft) Typical Section

Typical sections for the Rural Corridor segment shown in Figure 2.4 would be modified under the 12-m (40-ft) typical sections to include 2.4-m (8-ft) instead of 1.2-m (4-ft) shoulders. The alignment and all other design elements would be as described in Section 2.4.4.1.

The estimated project cost for acquisition of right-of-way, design, and construction of the 12-m (40-ft) typical section Ridgeway South Alternative would be \$12.5 million.

Figure 2.9 Ridgeway South Alternative



2.5 Selection of Preferred Alternative

2.5.1 Alternatives Summary of Impacts

All of the proposed build alternatives meet the purpose and need of the project by improving safety as well as traffic flow, access, and pedestrian and bicycling activities. The No-Build Alternative does not improve safety along the corridor, and therefore, does not meet the purpose and need of the project.

Typical Sections. Two typical sections, the 9.6-m (32-ft) and the 12-m (40-ft), were evaluated for the rural portion of the corridor (i.e., the area outside the town of Belfry). Rural sections are present in both the Belfry Area (between the town of Belfry and North Dutch Lane) and throughout the Rural Corridor. The two typical sections are identical in all aspects except the 9.6-m (32-ft) section includes 1.2-m (4-ft) shoulders, and the 12-m (40-ft) section includes 2.4-m (8-ft) shoulders. Although the proposed 9.6-m (32-ft) typical section meets MDT standards, the public suggested the wider shoulders as means to improve safety for highway users including the movement of agricultural equipment. The wider shoulders are also consistent with AASHTO recommendations for the type of highway and volume of traffic on MT 72.

The wider 12-m (40-ft) typical section creates small additional increases in ground disturbance and property impacts as compared with the 9.6-m (32-ft) typical section. There would be slightly greater impacts to farmlands, vegetation, wetlands, right-of-way, and floodplains from the wider shoulders. The primary impacts from ground disturbance result from reconstruction of the highway to current MDT standards (improving horizontal and vertical alignments, etc.). To implement the 12-m (40-ft) typical section, combined total proposed project estimated costs for the Preferred Alternatives in both segments would increase 15 percent from \$16.1 million to \$18.5 million.

Although there would be slightly greater property impacts and a higher cost associated with the proposed 12-m (40-ft) typical section, wider shoulders would also provide a number of transportation benefits. For the 12-m (40-ft) typical section, the 2.4-m (8-ft) shoulders improve travel and safety conditions as they allow vehicles to pull off of the roadway and out of the driving lanes. Wider shoulders encourage uniform speeds, which generally result in increased highway capacity; improved roadside safety, as there is more recovery room for vehicles that stray outside of the travel way; and improved sight distances around horizontal curves. In this proposed project area, which is dominated by agricultural uses, wider shoulders provide improved conditions for slow-moving agricultural equipment to travel in the corridor and minimize conflicts with faster-moving through traffic.

Alignment Alternatives. In the Belfry Area, the Railroad Alignment Alternative and the Broadway Avenue Alternative would both improve safety and address the roadway deficiencies. The Railroad Alignment Alternative provides greater safety benefits by moving the highway to the edge of town and away from the school. It also would provide the opportunity to access a BLM parcel on the Clarks Fork, which could be developed as a fishing access site. Impacts to cultural resources, wetlands, and water quality would be similar for both alternatives. Both Alternatives result in the relocation of one business and two residences along Railroad Avenue. The Railroad Alignment Alternative also may require the relocation or reconstruction of four buildings on one farm. Whereas, the Broadway Avenue Alternative would not impact this farm, it would impact the picnic site across from the Belfry school. The Railroad Alignment Alternative would require slightly more acquisition of new right-of-way and could impact the operations of one farm and the potential redevelopment of one property as a hunting club. Due to the new crossing of the Clarks Fork, the Railroad Alignment Alternative also would create slightly greater impacts to floodplains,

water bodies, and aquatic resources. For either typical section, the Railroad Alignment Alternative would cost about \$700,000 more than the Broadway Avenue Alternative.

In the Rural Corridor, all build alternatives (the Modified Existing Alignment Alternative, the Ridgeway North Alternative, and the Ridgeway South Alternative) would reduce roadway deficiencies and improve safety. These three alternatives would improve safety by realigning Lynn's Corner, improving intersections including the MT 72 and US 310 intersection, and relocating approximately 10 accesses that are within 150 m (500 ft) of a public road intersection. In addition, for the Modified Existing Alignment Alternative, four accesses near the US 310 intersection would be consolidated by means of a new access road. Impacts would be similar among the three proposed build alternatives for most resource areas (in part because the alignment is identical among the alternatives for much of the Rural Corridor segment). All alternatives would result in an impact to the farming operation at Lynn's Corner because a small parcel would be severed. The Modified Existing Alignment Alternative and the Ridgeway South Alternative would each result in one relocation/acquisition. However, the Modified Existing Alignment Alternative would result in less farmland acquisition and fewer impacts to agricultural operations in the corridor than both the Ridgeway alternatives. The Modified Existing Alignment Alternative would cost approximately 10 percent more than the other alternatives.

2.5.2 Preferred Alternative Summary

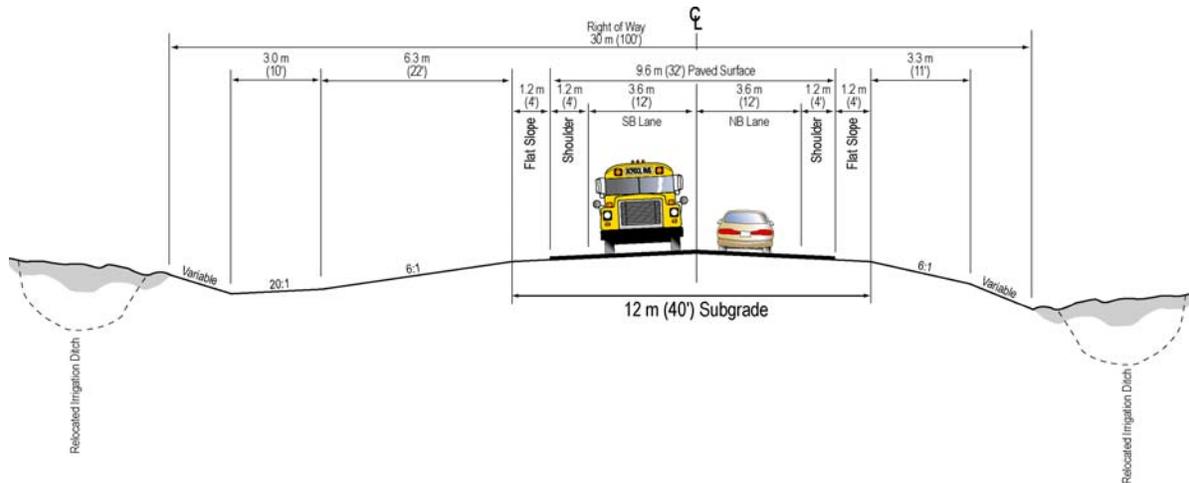
After consideration of the purpose and need of the project to improve safety and roadway deficiencies, the Railroad Alignment Alternative in the Belfry Area and the Modified Existing Alignment Alternative in the Rural Corridor were selected to be combined as the Preferred Alternative for the proposed project. In the Belfry Area, the Railroad Alignment Alternative would provide the greatest improvement to safety in town by relocating the highway outside the town center and reducing conflicts with pedestrians, bicycles, and local traffic. It also would provide the most improved safety conditions for the Belfry School, which was identified by the public as one of the major concerns to be addressed by this proposed project.

The Modified Existing Alignment was selected as part of the Preferred Alternative for the Rural Corridor. Although all three build alternatives improved safety and had similar impacts, the Modified Existing Alignment Alternative had less impact on agricultural operations.

Both the 9.6-m (32-ft) typical section with 1.2-m (4-ft) paved shoulders and the 12-m (40-ft) typical section with 2.4-m (8-ft) paved shoulders would improve safety in the highway corridor. The 12-m (40-ft) typical section would provide wider shoulders to further improve safety; whereas, the 9.6-m (32-ft) typical section would have less environmental impact and a lower cost.

MDT identified its Preferred Alternative as an option that combines the best features of these two typical section alternatives. The preferred typical section is a **12-m (40-ft) subgrade with a 9.6-m (32-ft) paved top and flattened in-slopes** (Figure 2.10). This option would feature an initial paved top of 9.6 m (32 ft). Paved 1.2-m (4-ft) shoulders with flattened in-slopes from this shoulder would offer a wider shoulder and recovery area at the edge of the travelway. The increased width of the shoulder area resulting from the paved and unpaved area would provide more room for movement of agricultural equipment. This option would offer a lower initial paving cost and could easily accommodate a future 12-m (40-ft) overlay when traffic volumes warrant a wider paved roadway width. It is also consistent with standard bridge widths. An option to consider until a full 12-m (40-ft) paved top is warranted is to apply 12-m (40-ft) pavement near intersections or where school bus stops are located. MDT will determine during the project's final design appropriate locations, if any, for the 12-m (40-ft) top.

Figure 2.10 Preferred Typical Section (12-m (40-ft) Subgrade with a 9.6-m (32-ft) Paved Top and Flattened In-slope)



2.6 Alternatives Considered but Eliminated from Further Review

The following alternatives were not carried forward for detailed analysis in this EA because they (1) did not meet the primary project purpose and need to improve safety, (2) caused more environmental impacts than a similar alternative, or (3) were determined to be unreasonable in cost. Unreasonable cost for an alternative was determined to be one-third or more than other alternatives that met the safety criterion. Figure 2.11 at the end of this section shows all alternatives including those that were eliminated from detailed analysis.

2.6.1 Belfry Area

Within the Belfry Area, six additional alternatives were considered but eliminated because four did not address some of the safety issues and in some cases introduced new safety issues and two were unreasonable in cost.

2.6.1.1 Vaill Avenue Alternative

The Vaill Avenue Alternative is the existing alignment of MT 72 in Belfry. This alternative provides minor improvements along the existing MT 72 alignment through Belfry and at the Vaill Avenue and Wisconsin Street curve near Belfry School. This alternative was eliminated because it did not substantially improve safety near the school.

2.6.1.2 South Alignment Alternative

The South Alignment Alternative begins about 800 m (2624 ft) south of the S-308 junction with Vaill Avenue. From this southern beginning point outside of town, the South Alignment Alternative curves northeasterly across agricultural land to tie-in to Wisconsin Street south of the Belfry School. It continues on the existing MT 72 alignment in front of the school. It was not carried

forward because it did not improve safety near the school, would have introduced more curves in the roadway, and could have resulted in faster speeds within town near the school.

2.6.1.3 Bear Creek Alignment Alternative

The Bear Creek Alignment Alternative begins at the S-308 junction with Vaill Avenue. It immediately cuts a diagonal northeast route across Broadway Avenue and Carbon Avenue before curving toward a connection with existing MT 72, north of the Bear Creek bridge. It eliminates existing MT 72 from in front of the Belfry School but introduces more curves in the roadway and faster speeds in town. An option to the diagonal roadway included consideration of a parallel alignment to the Vaill Avenue alignment, to follow Carbon Avenue and tie-in to the existing MT 72 just south of Bear Creek Lane. It was not carried forward because it did not improve safety.

2.6.1.4 North Diagonal Alignment Alternative

The North Diagonal Alignment Alternative was the alignment proposed by MDT in the 1980s. At that time, the public opposed the alignment because of agricultural impacts so suggested a different alignment referred to as the Railroad Alignment Alternative, which is the Preferred Alternative. The North Diagonal Alignment Alternative extends existing MT 72 on the west side of town along Railroad Avenue, about 400 m (1312 ft) north of the S-308 junction with Vaill Avenue. From this northerly point, the North Diagonal Alignment curves northeasterly across agricultural land to tie-in to the existing MT 72 alignment north of town. It eliminates existing MT 72 from in front of the Belfry School. It was not carried forward because it introduced more curves in the roadway, could have resulted in higher speeds through town, and there was a similar alternative (the Railroad Alignment Alternative) that had fewer impacts.

2.6.1.5 Bluff Bypass With River Crossing Alternative

The Bluff Bypass With River Crossing Alternative takes MT 72 completely out of the town of Belfry. Beginning at a point on existing MT 72 south of town (about 700 m (2,296 ft) south of the S-308 intersection), the alternative curves northwesterly and crosses S-308 about 300 m (984 ft) west of the existing S-308/MT 72 intersection. The alternative continues a northwesterly curve up to the bluff top, traverses the bluff top approximately 1,200 m (3,936 ft), begins a northeast descent down the bluff toward Dutch Lane, crosses the Clarks Fork, and ties into the existing MT 72 alignment at a point north of Dutch Lane. The bluff top is not in agricultural use. Crossing the Clarks Fork at a new point requires a new bridge west of the existing Clarks Fork south bridge. It was not carried forward because it was not of a reasonable cost.

2.6.1.6 Bluff Bypass Without River Crossing Alternative

The Bluff Bypass Without River Crossing Alternative takes MT 72 completely out of the town of Belfry. Beginning at a point on existing MT 72 south of town (about 700 m (2296 ft) south of the S-308 intersection), the alternative curves northwesterly and crosses S-308 about 300 m (984 ft) west of the existing S-308/MT 72 intersection. The alternative continues a northwesterly curve up to the bluff top, traverses the bluff top approximately 1,900 m (6,232 ft), and begins a northeast descent down the bluff. It continues along the toe of the bluff outside agricultural land and west of the Clarks Fork for approximately 4,400 m (14,432 ft) and ties into the existing MT 72 alignment at Lynn's Corner. The bluff top is not in agricultural use. This alignment does not cross the Clarks Fork at any point and does not require new bridges. It was not carried forward because it was not of a reasonable cost.

2.6.2 Rural Corridor

Within the Rural Corridor, three additional alternatives were considered but eliminated from further analyses. (Note: The Bluff Bypass Alternatives extend through both project segments and are discussed in Section 2.5.1.)

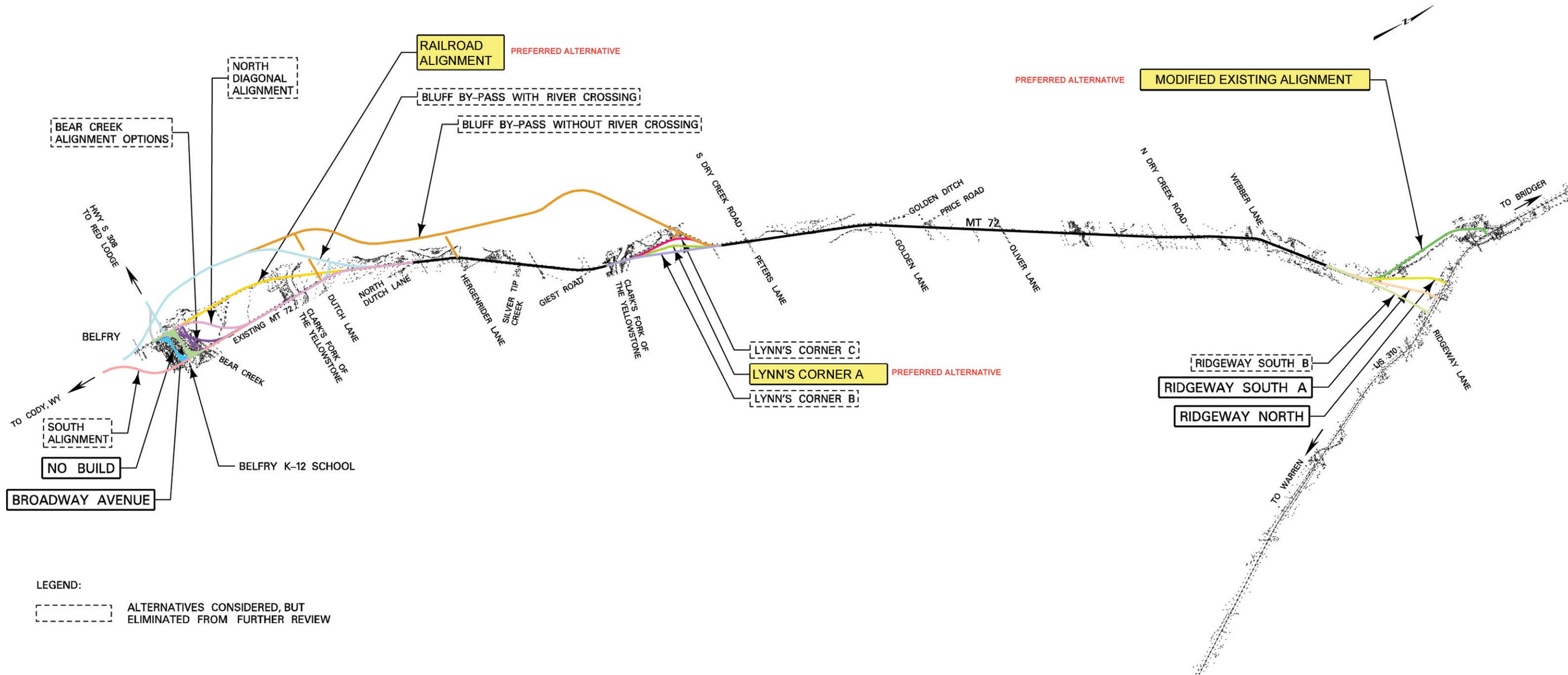
2.6.2.1 Lynn's Corner B and C Alternatives

Two other options for Lynn's Corner were investigated and are referred to as B and C for that locale. Lynn's Corner B Alternative eliminates the "reverse curve" in the Lynn's Corner area by providing the straightest alignment on the eastern side of the existing alignment. Of all the Lynn's Corner alternatives, Lynn's Corner B partitions the farmland on the east by the greatest amount. Since there is an alternative with fewer farmland and right-of-way impacts that still improved safety, alternative B was eliminated. Lynn's Corner C Alternative improves the "reverse curve" in the Lynn's Corner area by shifting and somewhat straightening the alignment to the eastern side of the existing alignment. This design provides some safety improvements with minimal right-of-way and farmland impacts. It was not carried forward because another alternative provided greater safety improvement.

2.6.2.2 Ridgeway South B Alternative

Ridgeway South B Alternative creates a new roadway alignment crossing Ridgeway Lane closest to its eastern end. Although it is the shortest route of the Ridgeway Lane Alternatives, it was not carried forward because the terminus is too near a bridge on US 310 and does not provide adequate sight distance for the intersection. Therefore, it was eliminated for safety reasons.

Figure 2.11 All Alternatives Considered



3.0 Impacts

3.1 Transportation

The transportation section describes the functions of the transportation environment, including traffic, access, accident occurrence, and pedestrian and bicycling activities, that may be affected by the proposed alternatives.

3.1.1 Traffic

3.1.1.1 Affected Environment

MT 72 is an important rural primary highway in Montana. It serves the agricultural industry in the area and links tourism and commercial traffic regionally between the states of Wyoming and Montana. In the rural sections the posted speed is 112 kph (70 mph). The posted speed limit within the town of Belfry is 40 kph (25 mph). South of Belfry, MT 72 is also being improved to MDT standards. This project, referred to as Wyoming Line to Belfry (STPP 72-1(8)0 and STPP 72-1(7)0), will have a 9.6-m (32-ft) roadway top, which is two 3.6-m (12-ft) travel lanes with 1.2-m (4-ft) shoulders. The northern terminus of the Belfry-North project is US 310. US 310 to the north (i.e. Bridger to Fromberg) is generally a 12-m (40-ft) roadway top, which is two 3.6-m (12-ft) travel lanes with 2.4-m (8-ft) shoulders.

MDT measured average daily traffic (ADT) for 2002 at 1,600 vehicles and projects ADT of 2,890 for the design year (2026). Traffic volume records for this corridor have been taken almost continuously since 1986 and have shown a steady growth trend in traffic volume with only minor year-to-year fluctuations. Between the years 1986 and 2001, traffic volume data for the MT 72 corridor displayed an average annual growth rate of more than three percent. The highest traffic volume increases have been observed closer to the US 310 junction.

Traffic in the corridor is primarily cars and medium trucks, which account for 94 percent of vehicles on the road, with the remaining six percent being heavy truck traffic. Increases in traffic are anticipated to be the same mix of vehicles.

The rural highway segment typically operates at Level of Service (LOS) A or B. The intersections of MT 72 with US 310 and S-308 both operate at LOS A. For two-lane highways, LOS A is described as allowing motorists to drive at their desired speed, having platoons no longer than three vehicles, and having an operating speed near 112 kph (70 mph). LOS B is described as a condition where passing demand equals passing capacity, drivers are delayed up to 45 percent of the time, and vehicles have an average speed of 105 kph (65 mph). For primary highways in level or rolling terrain, MDT's minimum recommended design LOS is B.

There are no major capacity constraints in the corridor. The highway has adequate capacity to function well beyond the design year of 2026 without any additional lanes. Some minor improvements may be needed at the intersections of MT 72 with US 310 and S-308, but these are driven more by safety concerns than capacity issues.

3.1.1.2 Impacts

Tables 3.1 and 3.2 provide traffic impacts for each project alternative for the Belfry Area and Rural Corridor, respectively. Generally, traffic conditions and level of service (LOS A or B) are acceptable under the No-Build Alternative but would be improved under all of the build alternatives. In the Belfry Area, both build alternatives would improve traffic operations at the MT 72/S-308 intersection with an added left turn lane on S-308 and the closure of the Vaill Avenue leg of the intersection. Traffic patterns would be affected by the closure of one block of Vaill Avenue. In the Belfry Area, the Railroad Alignment Alternative would divert traffic from a residential area to follow the railroad alignment on the west side of town and would reduce traffic volumes in front of the Belfry School more than the Broadway Avenue Alternative. In the Belfry Area segment north of Belfry, two typical sections are being evaluated: a 9.6-m (32-ft) roadway and a 12-m (40-ft) roadway.

While a two-lane facility is recommended through the design year, traffic volumes do change recommendations for shoulder widths. Although MDT standards recommend a 1.2-m (4-ft) shoulder, AASHTO recommendations are for wider shoulders. AASHTO shoulder width recommendations vary by volume. For ADT between 400 and 2,000, AASHTO recommends a shoulder width of 1.8 m (6 ft). The current ADT on MT 72 justifies a 1.8-m (6-ft) shoulder. Once the volume increases to 2,000 vehicles per day, a shoulder width of 2.4 m (8 ft) is recommended. Within less than 10 years (by 2012), ADT will exceed 2,000 vehicles and will warrant a 2.4-m (8-ft) shoulder based on AASHTO recommendations. By the design year of 2026, ADT is projected to be 2,890. Wider shoulders are preferable for travel and safety conditions as they allow a vehicle to pull off of the roadway occupying a small part or none of the travel way.

The 9.6-m (32-ft) typical section would be consistent with the Wyoming Line to Belfry project on MT 72; whereas, the 12-m (40-ft) typical section would be consistent with US 310 to the north of the project corridor.

In the Rural Corridor, all of the alignments provide similar traffic benefits, but the 12-m (40-ft) typical section would meet MDT standards and be consistent with AASHTO recommendations and provide additional safety and travel benefits by providing areas where slower-moving traffic (e.g., farm equipment) or disabled vehicles could completely pull off the highway onto the shoulder.

Table 3.1 Traffic Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	<p>No change. Highway traffic would continue in front of Belfry school.</p> <p>Not consistent with MT 72 at this proposed project's beginning at the proposed Wyoming Line to Belfry project's northerly end. Also not consistent with US 310's width at this proposed project's northerly end.</p> <p>Not consistent with AASHTO recommendations for 2-lane highways in either rural or developed areas.</p>	<p>Traffic volumes would be reduced (in front of Belfry School) on Wisconsin Street and Vaill Avenue.</p> <p>Highway traffic would be diverted from residential area to railroad alignment on western edge of town.</p> <p>Highway traffic operations would improve at the MT 72/S-308 intersection by closing one block of Vaill Avenue east of this location to create a tee intersection, but this would change some local traffic patterns.</p> <p>In rural area, shoulder widths are narrower than suggested AASHTO widths.</p> <p>In rural area, typical section would be consistent with MT 72 for proposed Wyoming Line to Belfry project's typical section width, but narrower than US 310 beyond this proposed project's northerly end.</p>	<p>Traffic volumes would be reduced on Vaill Avenue and on the section of Wisconsin Street between Broadway Avenue and Vaill Avenue, near school.</p> <p>Traffic volumes could increase on the State and Wyoming Streets approaches to Vaill Avenue to access school.</p> <p>Highway traffic would be diverted from residential area to original commercial area of town.</p> <p>Highway traffic operations would improve at the MT 72/S-308 intersection by closing one block of Vaill Avenue east of this location to create a tee intersection, but this would change some local traffic patterns.</p> <p>In rural area, shoulder widths are narrower than suggested AASHTO widths.</p> <p>In rural area, typical section would be consistent with MT 72 for proposed Wyoming Line to Belfry project's typical section width, but narrower than US 310 beyond this proposed project's northerly end.</p>
12-m (40-ft) Typical Section	<p>Same impacts as 9.6-m (32-ft) typical section No-Build.</p>	<p>Same impacts as 9.6-m (32-ft) typical section through town.</p> <p>In rural area, slow-moving traffic can pull completely off the roadway onto the wider shoulder.</p> <p>Wider shoulders encourage uniform speeds, which generally result in an increase in highway capacity.</p> <p>Wider than MT 72 for proposed Wyoming Line – Belfry project's typical section width, but same as US 310 beyond this proposed project's northerly end.</p> <p>Consistent with AASHTO 2-lane width recommendations.</p>	<p>Same impacts as 9.6-m (32-ft) typical section through town.</p> <p>Same impacts as 12-m (40-ft) Railroad Alignment Alternative in Rural Corridor.</p>

**Table 3.2 Traffic Impacts by Alternative, Rural Corridor
(North Dutch Lane to US 310 Intersection)**

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	<p>Not consistent with MT 72 at this proposed project's beginning at the proposed Wyoming Line to Belfry project's northerly end. Also not consistent with US 310's width at this proposed project's northerly end.</p> <p>Not consistent with AASHTO recommendations for 2-lane highways in rural areas.</p> <p>Through traffic must look for opportunities to pass slow-moving traffic.</p> <p>MT 72 intersection with US 310 would not be improved.</p>	<p>Consistent with MT 72 for proposed Wyoming Line – Belfry project's typical section width, but narrower than US 310 beyond this proposed project's northerly end.</p> <p>Narrower than suggested AASHTO widths.</p> <p>Slow-moving traffic (e.g. postal trucks and farm machinery) can utilize the shoulder but may still cause delay to other traffic.</p> <p>MT 72 intersection with US 310 would be improved.</p>	Same impacts as Modified Existing Alignment.	Same impacts as Modified Existing Alignment.
12-m (40-ft) Typical Section	Same impacts as 9.6-m (32-ft) typical section No-Build.	<p>Wider than MT 72 for proposed Wyoming Line – Belfry project's typical section width, but same as US 310 beyond this proposed project's northerly end.</p> <p>Consistent with AASHTO 2-lane width recommendations for rural highways.</p> <p>Wider shoulders encourage uniform speeds, which generally result in an increase in highway capacity.</p> <p>Slow-moving traffic could pull completely off the roadway onto the wider shoulder.</p> <p>MT 72 intersection with US 310 would be improved.</p>	Same impacts as Modified Existing Alignment.	Same impacts as Modified Existing Alignment.

3.1.1.3 Mitigation

There are no adverse traffic impacts that would result from any of the build alternatives. Therefore, mitigation would not be required.

3.1.2 Access

3.1.2.1 Affected Environment

The MT 72 highway has 22 intersections in the project area, and where the highway passes through agricultural land, the density of access points is low. There are several county and private road intersections, private driveway connections, and field access points. Access points are well-spaced as there are few houses along the route. The majority of the accesses in the rural section are for agricultural field access.

The density of accesses through the rural section of highway ranges from approximately 6 to 8 access points per kilometer (10 to 13 per mile). Many of the roadways intersecting MT 72 are skewed rather than perpendicular, causing sight distance problems, which require turning vehicles to slow down more than they would for a perpendicular intersection.

In the town of Belfry, MT 72 currently operates as an arterial street with no access restrictions. Vaill Avenue has many residences with driveways. Access points are somewhat reduced along Wisconsin Street since the school frontage occupies much of the block. Overall, the urban section of MT 72 has a high density of access points per kilometer of highway.

3.1.2.2 Impacts

Tables 3.3 and 3.4 provide access impacts for each project alternative for the Belfry Area and Rural Corridor, respectively. Under the No-Build Alternative, access to MT 72 in Belfry as well as rural areas would not change. Many of the skewed access points (those not connecting to the highway in a perpendicular manner) would not be improved resulting in the continuation of site distance problems as well as delay to through traffic caught behind turning vehicles exiting the highway.

Under all build alternatives, the proposed reconstruction of MT 72 offers the opportunity to address certain access concerns in both the Belfry Area and the Rural Corridor through the consolidation of existing access points and control of future access areas. MT 72 would remain as a Regulated Access facility throughout the project limits, using the least restrictive form of access control measures described in the Montana Road Design Manual. In the Belfry Area, the Railroad Alignment Alternative would eliminate access conflicts within town because the highway would be relocated to the western edge of town, and highway traffic would not travel through the Vaill Avenue neighborhood. Traffic patterns would be affected by the closure of one block of Vaill Avenue. Due to the realignment of MT 72 and removal of old MT 72 between north of Bear Creek and Clarks Fork "south" bridge, existing accesses would be extended to the new MT 72. The Railroad Alignment Alternative would also create an opportunity to provide access to the BLM parcel on the Clarks Fork, where BLM and MFWP would like to develop fishing access. Under the Broadway Avenue Alternative, the number and type of accesses would change and improve conditions compared to the existing conditions in the No-Build Alternative. Along Broadway Avenue, there are fewer driveways, and the driveways are for commercial businesses. Therefore, the conflicts between residential driveways and MT 72 would be eliminated.

In the Rural Corridor, improvements of the existing conditions would include access-related changes including the potential implementation of Limited Access Control to prohibit access points on MT 72 within 150 m (500 ft) of public road intersections, which would improve safety. Executing this concept would require relocation of approximately 10 accesses in the rural corridor. In addition, for the Modified Existing Alignment Alternative, four accesses near the US 310 intersection on MT 72 would be consolidated by means of a new access road to improve the safety of the reconfigured US 310 intersection. Because these relocated accesses may be less direct for the property owners than the current driveways, this would cause a minor inconvenience to these owners. These improvements would be guided by principles of good access management to accommodate a variety of concerns, including providing relocated accesses that maintain access to properties and farming operations. Managing access in this manner improves travel and safety for all corridor drivers and, therefore, also benefits the traveling public.

Table 3.3 Access Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	<p>Some business entrances remain poorly defined without curbs.</p> <p>Vaill Avenue continues to have many driveways directly accessing the highway.</p>	<p>Would improve access to commercial district on Broadway Avenue.</p> <p>Access conflicts in town would be eliminated. There are fewer driveways accessing Railroad Avenue, and accesses on Vaill Avenue would be to a local street. Opportunity to implement access management within 150m (500 ft) of public road intersections to improve safety.</p> <p>Access on Vaill Avenue between Montana Street and Railroad Avenue would be eliminated.</p> <p>Belfry School access would remain the same.</p> <p>Access on old MT 72 between north of Bear Creek and Clarks Fork "south" bridge would be eliminated and accommodated on new alignment.</p> <p>Would enhance access to BLM land on Clarks Fork.</p>	<p>Would provide better business and parking access for the commercial district on Broadway Avenue.</p> <p>Access conflicts in town would be reduced because accesses along Broadway Avenue are fewer and of a different type (commercial versus residential) than existing conditions on Vaill Avenue. Opportunity to implement access management within 150 m (500 ft) of public road intersections to improve safety.</p> <p>Access on Vaill Avenue between Montana Street and Railroad Avenue would be eliminated.</p> <p>Belfry School access would be accommodated with new cul de sac on Wisconsin Street, off Vaill Avenue. Vaill would be accessed by local streets (State and/or Wyoming Streets).</p>
12-m (40-ft) Typical Section	<p>Same impacts as 9.6-m (32-ft) typical section.</p>	<p>Same impacts as 9.6-m (32-ft) typical section but wider shoulders also provide additional benefits of improved access to uses adjacent to the highway such as school bus stops, mail boxes, highway maintenance, and fishing accesses.</p>	<p>Same impacts as 9.6-m (32-ft) typical section but with additional benefits provided by wider shoulders.</p>

**Table 3.4 Access Impacts by Alternative, Rural Corridor
(North Dutch Lane to US 310 Intersection)**

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	<p>Skewed intersections would remain unchanged.</p> <p>Conflicts with direct residential and business accesses onto MT 72 would continue.</p>	<p>Skewed intersections would be rebuilt perpendicular to MT 72.</p> <p>Four accesses near the US 310 intersection would be consolidated by means of a new access road to improve safety at the reconfigured US 310 intersection.</p> <p>Minor modifications to residential and Kapor Lumber accesses along MT 72. Minor adjustments and/or consolidation to Kapor Lumber accesses on US 310 may be required to improve intersection geometry.</p> <p>Approximately 10 accesses would be relocated due to access management within 150 m (500 ft) of public road intersections to improve travel and safety.</p>	<p>Skewed intersections would be rebuilt perpendicular to MT 72.</p> <p>Removing portion of MT 72 at US 310 and adjusting remaining access points on MT 72 and Ridgeway Lane would adversely affect convenience of accessing residential area.</p> <p>MT 72 access to/from east side of Ridgeway Lane would be eliminated with cul de sac on Ridgeway Lane. Access to east side of Ridgeway Lane would require out-of-direction travel via US 310.</p> <p>Approximately 10 accesses would be relocated due to access management within 150 m (500 ft) of public road intersections to improve travel and safety.</p>	Same impacts as Ridgeway North.
12-m (40-ft) Typical Section	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section, but wider shoulders also provide additional benefits of improved access to uses adjacent to the highway such as school bus stops, mail boxes, highway maintenance, and fishing accesses.	Same impacts as 9.6-m (32-ft) typical section with the additional benefits from wider shoulders.	Same impacts as 9.6-m (32-ft) typical section with the additional benefits from wider shoulders.

3.1.2.3 Mitigation

Access relocations will be coordinated with affected property owners to minimize impacts to farming and business operations.

3.1.3 Accident Occurrence

3.1.3.1 Affected Environment

As highlighted in the Purpose of and Need for Action in this EA (Section 1.0), improving safety is one of the primary goals of this project. Crash rates in this corridor exceed the statewide averages for rural primary highways.

Several crash analyses have been performed on this corridor in the last decade, and there are four to five areas of concern. Many of these had been identified previously as problem areas, but no recent improvements were undertaken as they will be addressed by this project. Table 3.5 shows a summary of the crashes by segment throughout the study corridor. These represent crashes occurring between 1-1-1992 and 12-31-2001.

Table 3.5 Crash Summary by Segment (1-1-1992 through 12-31-2001)

Segment MT 72 Reference Post	Number of Crashes: Total/ with Injuries/ with Fatalities	Crash Characteristics
Belfry Area (+/- RP 10.3 – 11.0)	13 total 4 w/ injuries 0 w/ fatalities	<ul style="list-style-type: none"> • 4 crashes were intersection related • 4 were right-angle collisions
Rural Corridor (+/- RP 11.0 – 21.5)	88 total 32 w/ injuries 3 w/ fatalities	<ul style="list-style-type: none"> • 33 were single car crashes with fixed objects • 15 resulted in an overturned vehicle • 15 crashes involved wildlife or domestic animals • 4 crashes occurred while overtaking another vehicle • 4 crashes were intersection-related

Source: Crash report provided by Montana Department of Transportation. Data compiled by DEA.

Between 1996 and 2002, MDT performed several analyses of crash locations, which are summarized below:

- A 1996 analysis by MDT identified a cluster between +/- RPs 10.4 and 11.2, which includes the intersection of MT 72 and S-308. Signs and luminaires were installed at this location in August 2001 in an attempt to reduce crashes. At this time, there are no data available to analyze the effectiveness of this treatment.
- In 1997 and 1998 an accident cluster was identified between +/- RPs 14.7 and 15.5. The section of roadway includes the sub-standard "Lynn's Corner", which has a reduced speed limit of 72 kph (45 mph). It is well known among the nearby residents as a place where accidents frequently occur. Previous recommendations for improvements included reconstruction of the curve to a standard radius with wider shoulders.

- A 2002 analysis by MDT identified accident clusters between +/- RPs 11.9 and 12.6 and between +/- RPs 12.9 and 13.7. No feasible countermeasures were recommended by MDT to address a specific trend.
- The intersection of MT 72 with US 310 is a high accident location. The intersection-related crashes are generally those between +/- RPs 21.4 and 21.5. Three out of the four accidents at this location occurred at night. One concern with this intersection is the one-way US 310 to MT 72 southbound leg of this intersection, which is often mistaken for the main roadway by motorists traveling northbound on MT 72; consequently, northbound vehicles will be traveling the wrong way on the one-way southbound lane, leading to potential head-on collisions. Another concern is the single westbound lane on MT 72, which is commonly mistaken by motorists as an eastbound left-turn lane, resulting in eastbound traffic sitting in the westbound travel lane waiting to turn north on US 310. Finally, immediately south of this intersection is a local road to the west accessing a residential area. The higher speed at which southbound vehicles on US 310 move through the dedicated MT 72 southbound leg of the intersection is a concern for local residents turning onto the local road.
- The 2002 accident analysis prepared by MDT identified some additional concerns in the corridor. In 35 percent of the recorded crashes, the first and/or most harmful event was reported as "overturn" or "collision with ditch". These were scattered throughout the corridor. Mitigation for this type of crash may include reconstruction of the roadway with a wider shoulder, possibly including rumble strips, flatter side slopes, improved clear zone, and improved ditch configuration.
- A memorandum from MDT stated that another potential concern is the visual alignment of the power line north of +/- RP 19, which could be mistaken by drivers for the roadway alignment. However, the accident history does not indicate a problem in this area.

MDT recommended improvements to address crash locations. These recommendations are presented in Table 3.6 on the following page.

Table 3.6 Recommended Safety Improvements

Location	Problem	Recommended Improvements
+/- RP 10.3 – 11.0 In Belfry	<ul style="list-style-type: none"> • sharp curve between Vaill Avenue and Wisconsin Street • intersection related crashes 	<ul style="list-style-type: none"> • flatten curve radius or realign, restrict on-street parking near intersection • provide illumination, restrict parking near intersections
+/- RP 11.0 – 21.5 Rural highway segment	<ul style="list-style-type: none"> • narrow shoulders • insufficient clear zone • steep side-slopes • poor sight-distance • skewed intersections • crashes while turning • crashes while overtaking 	<ul style="list-style-type: none"> • provide wider shoulders • create sufficient clear zone and remove obstructions • flatten side slopes • improve horizontal and vertical curves to provide adequate sight distance • re-align intersections to eliminate skew • provide left or right turn refuges • improve alignment to provide more frequent passing zones
+/- RP 14.9 Lynn's Corner	<ul style="list-style-type: none"> • sub-standard radius • narrow shoulders 	<ul style="list-style-type: none"> • flatten curve radius • provide wider shoulders
+/- RP 21.5 Junction with US 310	<ul style="list-style-type: none"> • visual alignment of SB right-turn ramp • clarity of traffic controls and lane markings 	<ul style="list-style-type: none"> • relocate the ramp with a smaller radius to change the alignment • provide illumination

Source: Crash report provided by Montana Department of Transportation. Recommendations compiled by DEA.

3.1.3.2 Impacts by Alternative

The No-Build Alternative does not provide opportunity to decrease accident rates or improve roadway geometry. In addition, under the No-Build Alternative, MT 72 traffic would remain in front of the Belfry School and travel through a residential neighborhood. All of the build alternatives incorporate recommended safety improvements to reduce accidents. The build alternatives provide for improved safety and an opportunity to decrease accidents by improving roadway deficiencies (e.g. narrow shoulders, steep side slopes, and inadequate clear zones), improving intersections, correcting roadway geometry, and improving sight distances.

In the Belfry Area, the Preferred Alternative (Railroad Alignment Alternative) provides safety benefits by diverting traffic from Vaill Avenue and Wisconsin Street to Railroad Avenue. This relocates MT 72 from an established residential area to a less developed residential/commercial area, which improves pedestrian safety. Most importantly, this alternative would improve safety in front of the Belfry School because MT 72 traffic would be diverted to the west side of town. The Broadway Avenue Alternative also improves safety by relocating MT 72 from a neighborhood street to a commercial street. Although safety would be improved at the Belfry School by the implementation of a school drop off/pick-up area in a proposed new cul de sac on Wisconsin Street, MT 72 traffic would continue to pass by the northern portion of the school at Broadway Avenue.

In the Rural Corridor, Lynn's Corner would be improved for all build alternatives resulting in improved safety. The MT 72 and US 310 intersection would be improved under all build alternatives. The Modified Existing Alignment Alternative improves the intersection at its existing location, whereas the Ridgeway North and South Alternatives improve the intersection by moving it south on a new alignment. All build alternatives can potentially reduce icing conditions at the bluff

and Sand Creek bridges; however, the Ridgeway Lane Alternatives could create a new icing problem due to the drifting snow conditions in this area.

The wider shoulders in the 12-m (40-ft) typical section offer additional safety benefits in comparison with the 9.6-m (32-ft) typical section. These benefits include improved roadside safety as there is more recovery room for vehicles that stray outside of the travel way, more room for agricultural equipment traveling on the highway, improved sight distance, and opportunities for disabled vehicles to pull completely out of the travel lane. Comparisons among the alternatives for safety are included in Tables 3.7 and 3.8 for the Belfry Area and Rural Corridor, respectively.

Table 3.7 Safety Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6 m (32-ft) Typical Section	<p>Tight, low-speed curve at Vaill Avenue and Wisconsin Street would remain.</p> <p>Safety issues at Belfry School would not be addressed.</p> <p>Steep side slopes, insufficient clear zones, and narrow shoulders would remain.</p> <p>Skewed (i.e., not perpendicular) intersections in rural corridor would remain.</p>	<p>Tight, low-speed curves through town (i.e., sharp curve at Vaill Avenue and Wisconsin Street in front of the Belfry School) would remain, but there would be no highway traffic on it.</p> <p>Reduced traffic volumes on Wisconsin Street and Vaill Avenue would improve pedestrian safety near Belfry School.</p> <p>Diverting traffic from Vaill Avenue to Railroad Avenue would be more compatible with pedestrian movements in town. Traffic is diverted from an established residential area to a less developed residential/ commercial area.</p> <p>Shoulders would be paved and/or widened, and clear zones and side slopes would be improved to meet MDT standards, which would improve safety for school bus stops, moving agricultural equipment, and the traveling public.</p> <p>Improved driveway and public road geometry increases safety in rural section.</p> <p>Fewer potential driveway conflicts from highway access in town (see also Table 3.3).</p>	<p>Sharp curve at Vaill Avenue and Wisconsin Street near school would be eliminated and replaced with an improved curve one block north at Broadway Avenue and Wisconsin Street.</p> <p>Reduced traffic volumes on Wisconsin Street and Vaill Avenue would improve pedestrian safety for southern portion of Belfry School. However, traffic volumes at Wisconsin Street and Broadway Avenue for northern portion of the school are unchanged from no-build.</p> <p>Cul de sac on Wisconsin Street would provide an opportunity for a school drop-off/pick-up area, which improves school safety.</p> <p>Diverting traffic from Vaill Avenue to Broadway Avenue would be more compatible with pedestrian movements in town. Traffic would be diverted from a residential to commercial area.</p> <p>Shoulders would be paved and/or widened, and clear zones and side slopes would be improved to meet MDT standards, which would improve safety for school bus stops, moving agricultural equipment, and the traveling public.</p> <p>Improved driveway and public road geometry increases safety in rural section.</p> <p>Fewer potential driveway conflicts from highway access in town (see also Table 3.3).</p>

Table 3.7 Safety Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane) (continued)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
12-m (40-ft) Typical Section	Same impacts as 9.6-m (32-ft) typical section.	<p>Same impacts as 9.6-m (32-ft) typical section in town.</p> <p>In rural portion, wider shoulders would provide improved roadside safety as there is more recovery room for vehicles that stray outside of the travel way.</p> <p>Wider cross-section in rural portion of corridor would improve sight distance.</p> <p>Disabled vehicles would be able to pull completely out of the travel lane, and there is more area for agricultural equipment traveling on the highway in rural portion of corridor.</p> <p>Improved driveway and public road geometry would increase safety in rural section.</p>	<p>Same impacts as 9.6-m (32-ft) typical section in town.</p> <p>In rural portion, same benefits of wider shoulders as Railroad Alignment Alternative.</p>

**Table 3.8 Safety Impacts by Alternative, Rural Corridor
(North Dutch Lane to US 310 Intersection)**

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	<p>Steep side slopes, insufficient clear zones, and narrow shoulders would remain.</p> <p>Limited sight distances and undesirable approach angles for county road intersections would continue to exist.</p> <p>Substandard curve at Lynn's Corner (high accident location) would remain.</p> <p>Poor intersection geometry at US 310 intersection (curves, ramps, sight distances, speeds, signage) would not be addressed.</p> <p>Bluff-area icy conditions/curve would not be addressed.</p>	<p>Shoulders would be widened and include rumble strips. Clear zones and side slopes would be improved to meet MDT standards, which will improve safety for school bus stops, moving agricultural equipment and the traveling public.</p> <p>Skewed county road intersections would be improved.</p> <p>Lynn's Corner would be realigned to meet MDT standards for safety.</p> <p>Alternative would provide a reconfigured MT 72 and US 310 intersection, improving safety. Eliminating the southbound "off ramp" would reduce speed through intersection and improve intersection safety.</p> <p>Slight realignment to east may lessen shadow cast by bluff and may improve bluff-area icy conditions.</p> <p>Replacement of structures over Sand Creek Canal may reduce a source of ice and would improve highway safety.</p>	<p>Shoulders would be widened and include rumble strips. Clear zones and side slopes would be improved to meet MDT standards, which will improve safety for school bus stops, moving agricultural equipment and the traveling public.</p> <p>Skewed county road intersections would be improved.</p> <p>Lynn's Corner would be realigned to meet MDT standards for safety.</p> <p>Alternative would provide a new MT 72 and US 310 intersection south of existing intersection, improving safety.</p> <p>The bluff area, which casts a shadow and results in icy conditions on MT 72, would be avoided.</p> <p>Replacement of structures over Sand Creek Canal may reduce a source of ice and would improve highway safety.</p> <p>Public has safety concerns about drifting snow across Ridgeway Lane area.</p>	<p>Same impacts as Ridgeway North Alternative.</p>

**Table 3.8 Safety Impacts by Alternative, Rural Corridor
(North Dutch Lane to US 310 Intersection) (continued)**

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
12-m (40-ft) Typical Section	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section but wider shoulders would provide improved roadside safety as there is more recovery room for vehicles that stray outside of the travel way. Wider typical section in rural portion of corridor would improve sight distance. Disabled vehicles would be able to pull completely out of the travel lane, and there is more area for agricultural equipment traveling on the highway in rural portion of corridor.	Same impacts as 9.6-m (32-ft) typical section with the additional benefits provided by wider shoulders.	Same impacts as 9.6-m (32-ft) typical section with the additional benefits provided by wider shoulders.

3.1.3.3 Mitigation

There are no adverse safety impacts that would result from any of the build alternatives. Therefore, mitigation would not be required.

3.1.4 Pedestrians and Bicycles

3.1.4.1 Affected Environment

There is no formal bicycle or pedestrian infrastructure in the project corridor, and the narrow shoulder widths north of Belfry require cyclists to share the travel lane with fast-moving vehicles. In both the Belfry Area and the Rural Corridor, the unpaved shoulder provides an uneven and potentially dangerous riding surface.

In the Belfry Area, there are no sidewalks along MT 72, and pedestrians must walk along the highway shoulder. The shoulder is of sufficient width to accommodate pedestrian traffic along most of the route, but it is not a defined pedestrian-only area as a sidewalk would be. Adjacent to the Belfry School, three marked student crosswalks aligned with openings in the school's fence are defined through signage and striping. Crossing guards are not posted for the crosswalks, but students generally cross at the designated locations. There is some illumination in the vicinity of the crosswalks. Students generally do not need to walk at nighttime unless they are going to and from after-school activities.

Belfry residents and the Belfry School District have expressed interest in improving driver awareness of the school crossings on Wisconsin Street. The school district recently submitted a request to MDT for a study of the crosswalks and installation of a warning device. Preliminary discussions revolved around the installation of a flashing yellow beacon mounted on a school speed limit sign. The school and residents have also voiced the desire to have the highway rerouted to bypass the school.

The project area does not draw enough recreational bicycle traffic to justify providing bicycle lanes along MT 72, and the long distances between houses in rural areas discourages significant pedestrian traffic along the highway. However, pedestrians do use the highway to access mailboxes, for school bus stops, and fishing access. Highway improvements such as wider shoulders would improve conditions for those bicyclists and pedestrians who do use the highway corridor.

3.1.4.2 Impacts by Alternative

Tables 3.9 and 3.10 provide impacts for each project alternative for the Belfry Area and Rural Corridor, respectively. Pedestrian and bicycle safety concerns would not be addressed by the No-Build Alternative. All of the build alternatives would improve both pedestrian and bicycle safety. In the Belfry Area, the Railroad Alignment Alternative would reroute highway traffic outside of the town of Belfry, which would reduce pedestrian and bicycle conflicts with fast-moving vehicles. For the Broadway Avenue Alternative, traffic would be diverted from the school and residential area to the commercial area of town, reducing potential pedestrian and/or bicycle conflicts. Sidewalks that would be provided by both the Railroad Alignment Alternative and the Broadway Avenue Alternative would provide a safer walking and/or riding surface. In the Rural Corridor, wider shoulders for all of the alternative alignments and both of the typical sections would provide a safer place for pedestrians and bicycles to travel on the highway.

The 12-m (40-ft) typical section provides additional benefits by further distancing pedestrians and bicycles from vehicular traffic. According to the AASHTO Guide for the Development of Bicycle Facilities (1999), a 1.2-m (4-ft) area is recommended when designing for bicycle use. The proposed design for all build alternatives includes rumble strips in the shoulders. Therefore, in the 9.6-m (32-ft) typical section, the clear area outside the rumble strips that is useable for bicyclists would be reduced to 0.8 m (2.5 ft); whereas, the 12-m (40-ft) typical section could provide the AASHTO recommended 1.2-m (4-ft) clear area for bicycle use.

Table 3.9 Pedestrian and Bicycle Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No opportunity to improve pedestrian facilities and connections.	<p>Would enhance pedestrian connections in town and to school by improving sidewalks on MT 72 along Railroad Avenue and at Broadway Avenue intersection.</p> <p>In rural section, wider shoulders would improve conditions for bicyclists and pedestrians, school bus pickup and drop-off, and mail delivery and pickup.</p>	<p>Would enhance pedestrian connections in town and to school by improving sidewalks on MT 72 from S-308 along Broadway Avenue to Wisconsin Street.</p> <p>In rural section, wider shoulders would improve conditions for bicyclists and pedestrians, school bus pick-up and drop-off, and mail delivery and pick-up.</p>
12-m (40-ft) Typical Section	Same impacts as 9.6-m (32-ft) typical section.	<p>Same impacts as 9.6-m (32-ft) typical section in town.</p> <p>In rural portion of the corridor, the wider shoulder would more comfortably accommodate pedestrians and bicyclists due to the increased distance from high-speed vehicular traffic.</p> <p>The wider shoulder also meets AASHTO recommendations for 1.2-m (4-ft) clear area for bicycle use in the shoulders.</p>	<p>Same impacts as 9.6-m (32-ft) typical section in town.</p> <p>Same impacts as 12-m (40-ft) Railroad Alignment Alternative in Rural Corridor.</p>

Table 3.10 Pedestrian and Bicycle Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No improvements for pedestrians or bicyclists.	Wider shoulders would improve conditions for bicyclists and pedestrians, school bus pickup and drop-off, and mail and delivery pickup.	Same impacts as Modified Existing Alignment.	Same impacts as Modified Existing Alignment.
12-m (40-ft) Typical Section	Same impacts as 9.6-m (32-ft) typical section.	<p>Wider shoulders would more comfortably accommodate pedestrians and bicyclists due to the increased distance from high speed vehicular traffic.</p> <p>The wider shoulder also meets AASHTO recommendations for 1.2-m (4-ft) clear area for bicycle use in the shoulders.</p>	Same impacts as Modified Existing Alignment.	Same impacts as Modified Existing Alignment.

3.1.4.3 Mitigation

There are no adverse pedestrian and bicycle impacts that would result from any of the build alternatives. Therefore, mitigation would not be required.

3.2 Social / Economic

Guidance provided by the National Environmental Policy Act (NEPA, 42 U.S.C. 4332 (2)(c)), Montana Environmental Policy Act (MEPA, 2-3-104 and 75-1-201 M.C.A.), MDT and the FHWA Technical Advisory T6640.8A identify social and economic subject areas requiring analysis. The following subjects have been identified and are documented in this section:

- Land Uses
- Parks and Recreation
- Prime and Important Farmlands
- Farm Operations and Irrigation
- Social Conditions
- Economic Conditions
- Environmental Justice
- Right-of-Way
- Relocations/Acquisitions
- Utilities

3.2.1 Land Uses

3.2.1.1 Affected Environment

The MT 72 project area is located in Carbon County. The project begins in the town of Belfry and terminates at the US 310 intersection just south of Bridger.

Belfry Area Land Use. The town of Belfry is unincorporated, and no zoning exists. The primary land uses in Belfry include mostly residential and some commercial development. Commercial uses directly affected by MT 72 occur at the junction of highway S-308 and Vaill Avenue. Additional commercial uses are present on Broadway Avenue, north of Vaill Avenue. Land uses on the Wisconsin Street alignment of MT 72 include an integrated mix of institutional (Belfry K-12 School) and residential. Agricultural land uses surround the town limits.

Rural Corridor Land Use. The Rural Corridor consists primarily of agricultural land uses with several commercial businesses, including a log home construction business and a lumber company, near the US 310 intersection.

Carbon County Land Use. Carbon County does not have any zoning regulations in place for unincorporated areas; therefore, zoning does not influence land uses in the county.

Carbon County is 5,334.3 sq. km (+/- 2,059.6 sq. mi.) in area. Agriculture is the primary land use in the county, with 80 percent of the county land [429,316 ha (1,060,862 ac)] in agricultural use. The remaining 20 percent of the land area uses include tract land, commercial tracts, town sites, exempt properties and other unclassified lands. Table 3.11 provides land use classifications and totals. Privately owned land accounts for 53.1 percent of the land in the county, while the remaining 46.9 percent is held by public entities, including Federal lands.

The county issued a draft growth policy in January of 2002. This policy replaces the 1978 Comprehensive Plan for the county and is intended to act “as a general guide for development and conservation decisions” in the county. The policy addresses issues regarding land use, water resources, financial management, and economic vitality, and identifies specific measures to help the county maintain its agricultural land use and protect private property rights.

Carbon County Agricultural Use. Irrigated land accounts for approximately 24,740 ha (61,133 ac) or 5.7 percent of agricultural lands in Carbon County. Grazing occurs on a mix of private and public land throughout the county and is considered the largest agricultural land use classification, with 402,370 ha (994,098 ac) or 93.7 percent of private/public land available for this use. Of lands devoted to grazing, 55.4 percent occurs on private lands, and the remaining is on public lands.

Carbon County Industrial Use. NorthWestern Energy (formerly Montana Power) is the primary supplier of energy to the State of Montana, and utility lines are dispersed throughout the county, primarily along roadway rights-of-ways. Other industrial uses of land in the county include oil and gas and mining operations. The principal mineral exports for Montana are coal, talc, and bentonite.

Carbon County Residential Use. The number of housing units in Carbon County increased from 4,702 to 5,522 (17.5 percent) between 1990 and 1999, according to the Carbon County Growth Policy website. In 1990, 893 (19 percent) of the 4,702 housing units in the county were seasonal or vacation homes.

Table 3.11 Carbon County Land Use Classifications

Owner	Acres	Hectares	Sq. Miles	Sq. Km.	Percent of Total
Private	700,299	283,373	1,094.1	2,833.8	53.1
U.S. Forest Service	325,620	131,774	508.8	1,314.7	24.7
Bureau of Land Management	217,443	87,996	339.8	880.0	16.5
State Trust Land	41,585	16,829	65.0	168.3	3.2
National Park Service	26,794	10,843	41.9	108.4	2.0
Water	4,849	1,962	7.6	19.6	0.4
Other State Land	1,159	469	1.8	4.7	0.1
Fish and Wildlife Service	261	106	0.4	1.1	**
Tribal Land	192	78	0.3	0.8	**
GRAND TOTAL	+/- 1,318,132	+/- 533,430	+/- 2,059.6	+/- 5,334.3	+/- 100.0

** Less than 0.1 percent

+/- Totals are approximate due to rounding of numbers

Source: Land Stewardship, NRIS.state.mt.us/mapper/reportsASP/stewardship.asp, 2002.

3.2.1.2 Impacts

There are no impacts for the No-Build Alternative.

There would be no adverse impacts to land uses under any of the build alternatives. All alternatives would be consistent with the draft Carbon County Growth Policy, 2002. No changes

are anticipated to the current land use patterns in the corridor from the alternatives. There might be some beneficial effects on land uses from safer access to residential, agricultural, and commercial lands in the corridor under all of the build alternatives.

The proposed build alternatives are not likely to induce population growth. MT 72 would remain a two-lane highway; therefore, improvements would not increase capacity. Even with the improvements to the road and the affordability of property in the area, growth is not likely to increase because MT 72 is not very close to Billings and is not likely to become a commuter's route. The improved road would not be expected to bring additional traffic to the area that would not be there under current conditions.

3.2.1.3 Mitigation

No adverse land use impacts were identified for any alternative. Consequently, no mitigation is necessary.

3.2.2 Parks and Recreation

3.2.2.1 Affected Environment

The immediate area in the MT 72 project corridor is characterized by rural/agricultural land uses and does not contain any major parks or recreational lands. The only park or recreational amenities within the project area are a small school-owned "picnic area" in Belfry and unofficial fishing locations on the Clarks Fork and other tributaries.

The Belfry K-12 school has various recreation and athletic facilities for their students, faculty, and the community at large. An undeveloped school-owned lot across the street from the Belfry School provides parking for school staff and visitors and a picnic area. The picnic facilities are west of the parking area and include a picnic table, a picnic table under a shelter, and a swing set. This site is occasionally used by people traveling on MT 72.

Although there is no official fishing access in the corridor, the Clarks Fork, Silver Tip Creek, and other smaller creeks are used for fishing and other activities. Currently, fishermen park vehicles on the shoulder or MDT right-of-way to access the rivers, especially on the south side of the existing Clarks Fork "south" bridge. BLM administers land in the project area along the Clarks Fork. BLM desires to increase public access to recreational lands and supports improvements to MT 72 that would potentially improve access to BLM recreational lands.

Outdoor areas provide recreational opportunities in the nearby area. Red Lodge Mountain Resort offers 70 trails for downhill skiing from November to April. The Red Lodge area also offers cross-country skiing and snow shoeing in the winter and hiking and fishing in the summer. The Custer National Forest is located 24 km (+/- 15 mi) from the eastern end of the project. The regional Clark Pioneer Community Center is located in Clark, Wyoming, approximately 34 km (+/- 21 mi) from the project area. The nearby communities of Bridger and Red Lodge, which are outside the project area, have recreational facilities.

3.2.2.2 Impacts

There are no impacts with the No-Build Alternative.

The MT 72 project corridor does not have any major parks or recreational land uses. Most of the proposed alternatives would have minor impacts to these types of land uses. In the Belfry area, the Preferred Alternative (Railroad Alignment) would have positive impacts to recreational facilities behind the Belfry School, which would benefit by improved pedestrian and vehicular safety. The Preferred Alternative also may enhance access to the BLM public land near the new Clarks Fork “south” bridge approximately 237 m (778 ft) downstream of the existing Clarks Fork “south” bridge. The realignment of MT 72 in the Railroad Alignment Alternative goes through this BLM parcel along the Clarks Fork. BLM and MFWP are interested in developing this site for fishing. The Railroad Alignment Alternative provides an opportunity to provide new recreational access to this BLM site.

Due to the realignment of MT 72, the Railroad Alignment Alternative could impact the informal fishing access and parking along the roadway at the existing Clarks Fork “south” bridge because the existing bridge would no longer be in public (MDT) right-of-way. There would be no fishing access impact under the Broadway Avenue Alignment Alternative.

The Broadway Avenue Alternative would impact the picnic area across from the school. The proposed cul de sac in front of the school would encroach into this area and would require approximately 0.1 ha (0.4 ac) or 60 percent of the parcel. This would potentially eliminate its use as a picnic area. Table 3.12 details the impacts to recreational resources in the Belfry Area.

There are no parks or recreational areas in the rural corridor; therefore, there would be no impacts in this segment from any alternative.

Table 3.12 Parks and Recreation Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts.	Informal fishing access at existing Clarks Fork “south” bridge could be impacted because this area would no longer be in MDT right-of-way. Opportunity to provide access to BLM property for potential future official fishing access.	Informal fishing access at Clarks Fork “south” bridge would not be impacted. Cul de sac proposed on Wisconsin Street could impact the school-owned lot used as a picnic area across from school.
12-m (40-ft) Typical Section	No impacts.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

3.2.2.3 Mitigation

Under the Preferred Alternative, Railroad Alignment, there would be no impact to the picnic area, so no mitigation is required. If the Broadway Avenue Alternative is selected as the Preferred Alternative, MDT would coordinate options with the school to relocate the picnic area or otherwise mitigate for the loss of the picnic area function (although per May 7, 2004 correspondence in Appendix E, the school does not consider the picnic area significant). MDT will continue to coordinate with BLM and MFWP on their agency plans for development of the BLM parcel on the Clarks Fork.

3.2.3 Prime and Important Farmlands

3.2.3.1 Affected Environment

The majority of land adjacent to the proposed project is used for agricultural purposes, predominantly grazing and cropland as previously described in the Land Use section. The 1981 Farmland Protection Policy Act (FPPA) requires that the effects of proposed highway projects be examined before any farmland is acquired.

US Congressional Public Law 95-87 (Federal Register January 31, 1978: Part 657) requires the US Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) to identify and map prime and important farmland. These farmlands are protected in accordance with the FPPA.

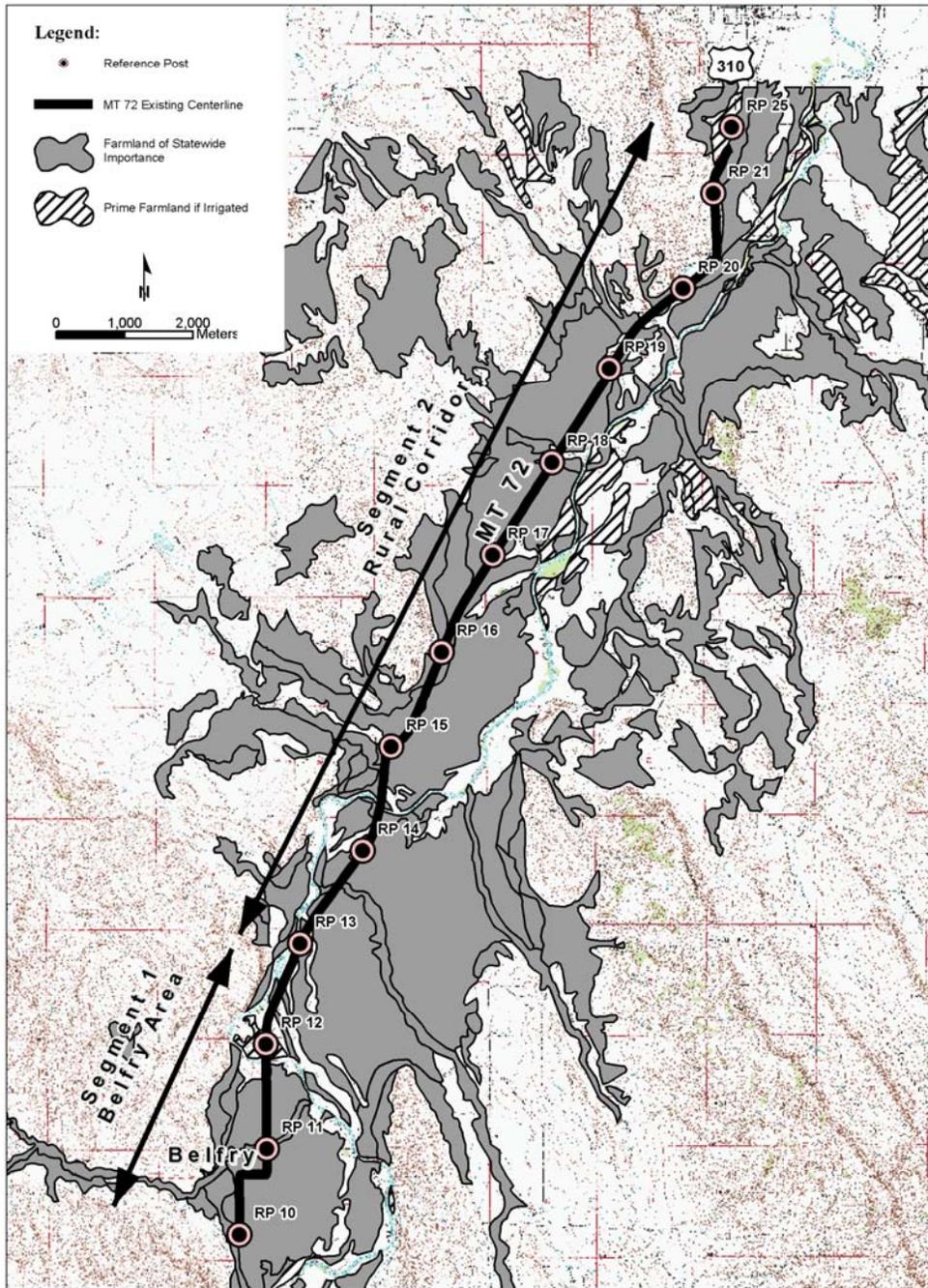
Prime farmland is considered to be of national importance and has been identified as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, oilseed, and other agricultural crops with minimum inputs of resources, as determined by the Secretary of Agriculture.

In addition to the prime farmlands, the farmland program encourages the identification of farmland of statewide importance. 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.

NRCS mapping indicates a total of 33,429 ha (82,604 ac) of "prime if irrigated" farmland within Carbon County. Another 51,280 ha (126,716 ac) are classified as "farmland of statewide importance."

As illustrated in Figure 3.1, the existing MT 72 alignment traverses farmland designated as farmland of statewide importance throughout most of the corridor as well as a few areas of prime farmland.

Figure 3.1 Prime Farmland (if Irrigated) and Farmland of Statewide Importance



Source: NRCS Soil Survey Geographic (SSURGO) Database

3.2.3.2 Impacts

The study area was inventoried using aerial photographs, the NRCS Carbon County Soil Survey, and site visits. The study area is defined as the area delineated for each build alternative alignment and typical section. Potential impacts were determined using the difference between the existing right-of-way and the proposed right-of-way for each alternative alignment and typical section. The existing MT 72 alignment does not have continuous designated right-of-way through the project area. For this reason, prescriptive use right-of-way was used to define the existing right-of-way in some areas.

The FPPA definition of farmlands includes all areas in non-urban use. In addition to lands currently in crop production, this definition includes forested, idle, pasture, open and recreational lands as well as unpaved roads, rural residences, and farm buildings. As is required by the FPPA, MDT has coordinated with the NRCS, and the FPPA Farmland Conversion Impact Rating forms (Form CPA-106) have been completed and approved by NRCS (see Appendix B). For the CPA-106 Form, the impacts to prime farmlands, farmlands of statewide importance, and site assessment criteria were calculated according to FPPA guidelines. Each alternative would result in less than 160 total points, therefore, under the provisions of 7 CFR.658.4(c)(2), no additional consideration for protection is necessary.

Information from the CPA-106 form was used as the basis for the following farmland impact analysis. Farmland impact is divided into direct and indirect impacts. Direct impacts include those areas that would be used for road construction and right-of-way acquisition. Indirect impacts were calculated for areas that would become non-farmable because severance of parcels may restrict access and/or operations due to the size and shape of the parcel (i.e. creation of "remainder parcels").

The indirect impacts that convert existing farmland into non-farmable land would occur under the Modified Existing Alignment, Ridgeway North and Ridgeway South Alignment Alternatives. Fragmentation of the K-E-W parcel (at Lynn's Corner) under these alternatives would isolate 3.4 ha (8.3 ac) of farmland in 32-ft typical section and 3.3 ha (8.1 ac) of farmland in 40-ft typical section. Additionally, the Ridgeway North Alignment would fragment the Meinhardt parcel and convert approximately 0.3 ha (0.8 ha) of farmland into non-farmable land for both the 32-ft and 40-ft typical sections. Impacts to the operations of farms within the study area are described in Tables 3.15 and 3.16.

There is no impact to prime farmlands or farmlands of statewide importance for the No-Build Alternative.

In the Belfry Area, the Railroad Alignment Alternative impacts more farmland acreage than the Broadway Avenue Alternative. For the Railroad Alignment 9.6-m (32-ft) Alternative, direct farmland impacts would be 10.0 ha (24.6 ac). For the Broadway Avenue 9.6-m (32-ft) Alternative, the direct impacts would be 6.4 ha (15.9 ac). The 12-m (40-ft) typical section alternative would result in a minimal increase of approximately 0.4 ha (0.8 ac) additional farmland impacts for the Railroad Alignment Alternative.

For the Modified Existing 9.6-m (32-ft) Alternative, in addition to the 35.0 ha (86.5 ac) of direct farmland impacts, 3.4 ha (8.3 ac) of farmland would be indirectly impacted for a total of 38.4 ha (94.8 ac). For the Ridgeway North 9.6-m (32-ft) Alternative, the direct and indirect impacts total 41.0 ha (101.3 ac), and for the Ridgeway South 9.6-m (32-ft) Alternative, the direct and indirect impacts total 42.1 ha (103.9 ac). The 12-m (40-ft) typical section alternatives would result in a small increase of less than 2.0 ha (4.9 ac) in additional farmland impacts.

In the Rural Corridor, although the acreage of farmland impacts are similar, the Ridgeway North and Ridgeway South Alternatives impact more acres of farmlands than the Existing Modified Alignment Alternative. For these alternatives, the 12-m (40-ft) typical sections impact more farmland than the 9.6-m (32-ft) typical sections.

Tables 3.13 and 3.14 summarize direct impacts to farmlands under each build alternative for the Belfry Area and Rural Corridor, respectively. Impacts to the operations of farms within the study area are described in Tables 3.15 and 3.16.

Table 3.13 Prime and Important Farmland Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts.	Statewide Importance: 7.4 ha (18.2 ac) Prime if Irrigated: 2.6 ha (6.4 ac) Total Direct: 10.0 ha (24.6 ac) Total Indirect: 0 ha (0 ac) TOTAL: 10.0 ha (24.6 ac)	Statewide Importance: 5.2 ha (12.7 ac) Prime if Irrigated: 1.3 ha (3.2 ac) Total Direct: 6.4 ha (15.9 ac) Total Indirect: 0 ha (0 ac) TOTAL: 6.4 ha (15.9 ac)
12-m (40-ft) Typical Section	No impacts.	Statewide Importance: 7.7 ha (19.0 ac) Prime if Irrigated: 2.7 ha (6.7 ac) Total Direct: 10.4 ha (25.7 ac) Total Indirect: 0 ha (0 ac) TOTAL: 10.4 ha (25.7 ac)	Statewide Importance: 5.2 ha (12.7 ac) Prime if Irrigated: 1.3 ha (3.2 ac) Total Direct: 6.4 ha (15.9 ac) Total Indirect: 0 ha (0 ac) TOTAL: 6.4 ha (15.9 ac)

Source: DEA GIS Analysis, November, 2003.

Table 3.14 Prime and Important Farmland Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No impacts.	Statewide Importance: 34.2 ha (84.5 ac) Prime if Irrigated: 0.8 ha (2.0 ac) Total Direct: 35.0 ha (86.5 ac) Total Indirect: 3.4 ha (8.3 ac) TOTAL: 38.4 ha (94.8 ac)	Statewide Importance: 37.3 ha (92.2 ac) Prime if Irrigated: * Total Direct: 37.3 (92.2 ac) Total Indirect: 3.7 ha (9.1 ac) TOTAL: 41.0 ha (101.3 ac)	Statewide Importance: 38.7 ha (95.6 ac) Prime if Irrigated: * Total Direct: 38.7 ha (95.6 ac) Total Indirect: 3.4 ha (8.3 ac) TOTAL: 42.1 ha (103.9 ac)
12-m (40-ft) Typical Section	No impacts.	Statewide Importance: 36.3 ha (89.7 ac) Prime if Irrigated: 0.9 ha (2.2 ac) Total Direct: 37.2 (91.8 ac) Total Indirect: 3.3 ha (8.1 ac) TOTAL: 40.5 ha (99.9 ac)	Statewide Importance: 39.3 ha (97.0 ac) Prime if Irrigated: * Total Direct: 39.3 (97.0 ac) Total Indirect: 3.6 ha (9.0 ac) TOTAL: 42.9 ha (106.0 ac)	Statewide Importance: 40.6 ha (100.3 ac) Prime if Irrigated: * Total Direct: 40.6 (100.3 ac) Total Indirect: 3.3 ha (8.1 ac) TOTAL: 43.9 ha (108.4 ac)

*Less than 0.1 ha (0.3 ac)
Source: DEA GIS Analysis, November, 2003.

3.2.3.3 Mitigation

Because all alternatives for this project received total point values of less than 160 points, no mitigation is required. This project will not have a significant impact to prime and important farmland. Although not required, reverting highway parcels whenever possible to farmland would have a positive impact on retaining farmlands.

3.2.4 Farm Operations

3.2.4.1 Affected Environment

The majority of the project area is agricultural. Two property owners – the Spauldings and the Meinhardts – farm parcels on each side of the existing highway. A variety of other farm operators, including the Wolfes, Brown Trust, Hergenriders, Aisenbreys, K-E-W Trust, Morgans, Petersons, Richards, and others, also farm in the project area.

Farming operations require the movement of agricultural equipment through the MT 72 corridor to access farm parcels in production. All farms contain farm structures, such as corrals, barns, and feed areas, which are important to operations. Livestock underpass structures are present near Silver Tip Creek at +/- RP 13.6 and north of Oliver Lane at +/- RP 18.1.

3.2.4.2 Impacts

There are no impacts to farming operations in the No-Build Alternative; however, this alternative would not provide an opportunity to improve conditions for the movement of agricultural equipment in the corridor.

All of the build alternatives would substantially improve the safe movement of farm equipment through the corridor by providing wider shoulders, addressing skewed driveways and accesses, and improving clear zones and recoverable areas. The 1.2-m (4-ft) shoulders under the 9.6-m (32-ft) typical section would improve the existing conditions by allowing farm vehicles to move to the side of the highway and allow faster moving vehicles to more easily pass on the two-lane facility. The 2.4-m (8-ft) shoulders under the 12-m (40-ft) typical section would provide a greater benefit because this width would provide more room for slow-moving farm equipment to move between farm parcels and reduce conflicts with other vehicular traffic on MT 72. In addition to these beneficial impacts, there would be some adverse impacts to farming operations on particular parcels, as detailed in Tables 3.15 and 3.16.

Table 3.15 Farm Operations Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	Continued conflicts with vehicles and farm equipment.	<p>Safety and movement of farm equipment through the corridor would improve with 1.2-m (4-ft) shoulders.</p> <p>The proposed alignment bisects the Brown Trust property (farmed by heirs Dean and Dena Spaulding) and would adversely affect production at feedlots. Access to corrals, outbuildings, fuel storage, and mechanic's shop would be adversely affected. Efficiency of operations would be greatly reduced. Could require reconstruction of 4 farm structures elsewhere on the property.</p> <p>Spaulding property is currently bisected by existing MT 72 alignment. Relocating MT 72 may provide an opportunity to reconnect property and improve farmland productivity.</p> <p>The relocated MT 72 would bisect farming operations of Ronald A. and Kathleen A. Wolfe north of Clarks Fork. (The Wolfes have immediate plans to change use of parcel from farming to hunting club.)</p>	<p>Safety and movement of farm equipment through the corridor would improve with 1.2-m (4-ft) shoulders.</p> <p>Consolidates some accesses and replaces some irrigation structures. Changes would not alter operations.</p>
12-m (40-ft) Typical Section	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section except 2.4-m (8-ft) shoulders would further improve safety and movement of farm equipment through the corridor because equipment would have a wider shoulder area.	Same impacts as 9.6-m (32-ft) typical section except 2.4-m (8-ft) shoulders would further improve movement of farm equipment through the corridor because equipment would have a wider shoulder area.

**Table 3.16 Farm Operations Impacts by Alternative, Rural Corridor
(North Dutch Lane to US 310 Intersection)**

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	Continued conflicts with vehicles and farm equipment.	Safety and movement of farm equipment through the corridor would improve with 1.2-m (4-ft) shoulders. The eastward shift of the existing MT 72 alignment near the Alfred Hergenrider property would impact their corrals, stock shelter and feed lot. The eastward shift would impact Aisenbrey grain silos and silage pit. The eastward shift of the existing alignment at Lynn's Corner would partition farm property and reduce use of some land on the K-E-W Trust property. The partitioned parcel may not be large enough to maintain in agricultural use unless combined with adjoining parcels to west of alignment.	Safety and movement of farm equipment through the corridor would improve with 1.2-m (4-ft) shoulders. Same impacts to Hergenrider, Aisenbrey and K-E-W Trust as Modified Existing Alignment. Would divide fields of two properties: Peterson and Meinhardt. Remainder parcel on Meinhardt property may be too small to farm independently. Efficiency of operations would be greatly reduced. Impact would be adverse.	Safety and movement of farm equipment through the corridor would improve with 1.2-m (4-ft) shoulders. Same impacts to Hergenrider, Aisenbrey and K-E-W Trust as Modified Existing Alignment. Would divide fields of three properties: Peterson, Richards, and Meinhardt. Remainder parcel on Meinhardt property may be too small to farm independently. Efficiency of operations would be greatly reduced. Impact would be adverse.
12-m (40-ft) Typical Section	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section except 2.4-m (8-ft) shoulders would improve movement and safety of farm equipment through the corridor because equipment would have a wider shoulder.	Same impacts as 9.6-m (32-ft) typical section except 2.4-m (8-ft) shoulders would improve movement and safety of farm equipment through the corridor because equipment would have a wider shoulder.	Same impacts as 9.6-m (32-ft) typical section except 2.4-m (8-ft) shoulders would improve movement and safety of farm equipment through the corridor because equipment would have a wider shoulder.

3.2.4.3 Mitigation

Right-of-way acquisition from farmlands would comply with FHWA and MDT standard procedures for land acquisition (see Section 3.2.10.3).

The opportunity for mitigation was investigated for specific parcels. For the Preferred Alternative (Railroad Alignment Alternative), the relocated MT 72 would bisect the Brown Trust property. The Brown Trust property is currently farmed by the Spauldings; bisection of the property adversely impacts efficiency of operations because of the potential creation of a remainder parcel and relocation of farm structures and equipment on this property. However, the Spauldings also own

land that is currently bisected by the MT 72 alignment east of the Brown Trust property. It may be possible that the parcels on the abandoned MT 72 alignment could be rejoined and returned to farming. Some farm structures (barns) and operations from the Brown Trust property could be moved east, and a new single access point could be provided to the combined parcels.

For the Wolfe property, there is no additional mitigation for this parcel.

In the Rural Corridor, the Modified Existing Alignment would partition the K-E-W property (at Lynn's Corner) and create a remainder parcel that could not be efficiently farmed. Unless the remainder parcel could be combined with other farmlands to the west that are under different ownership, there is no additional mitigation for this impact. The corrals, stock shelters and feedlot on the Alfred Hergenrider property will potentially be relocated elsewhere on the property. The Aisenbrey grain silos and silage pit will potentially be relocated somewhere else on the property.

During the design phase of this project, coordination will occur with the affected farm owners to minimize impacts to operations.

For all farms potentially affected by MT 72 reconstruction activities, mitigation will include in-kind replacement of irrigation ditches, stockpasses, fences, and gates that may be relocated or altered during construction.

3.2.5 Irrigation

3.2.5.1 Affected Environment

Irrigated agricultural properties are serviced through a network of canals fed by the Clarks Fork and its tributaries (Silver Tip Creek, Bear Creek, Dry Creek, and Sand Creek). There are four major and 24 minor irrigation crossings of MT 72. In addition to the considerable number of crossings, many irrigation canals and ditches are close to or within the highway right-of-way.

Seven irrigation companies manage at least 11 irrigation canals and ditches in the corridor. The companies (and the ditches they manage) include:

- Youst Ditch Company (Youst Ditch)
- Sand Creek Canal Company (Sand Creek Canal – Fromberg Ditch, Lincoln Ditch, and Lynne Ditch)
- Golden Ditch Company (Golden Ditch)
- Dry Creek Canal Company (Dry Creek Canal)
- Holland Ditch Company (Holland Ditch)
- Mutual Ditch Company (Mutual Ditch)
- Rock Creek (Clear Creek Ditch)

Along the existing MT 72 alignment, there are numerous irrigation facilities within the roadway corridor. These facilities and their locations are shown below:

<u>+/- RP*</u>	<u>Irrigation Facility</u>
10.9	Youst Ditch
11.0	Bear Creek
11.9	Clarks Fork of the Yellowstone

13.2	Unnamed drainage
13.6	Silver Tip Creek
14.4	Clarks Fork of the Yellowstone
14.5	Dry Creek Canal
Not available	Unnamed drainage
15.5	Kuchinski Ditch
16.48	Dry Creek Canal
16.52	Dry Creek Canal
16.5	Unnamed drainage
19.11	Irrigation waste ditch
19.14	Irrigation waste ditch
19.4	Irrigation waste ditch
19.7	Unnamed drainage
19.9	Sand Creek Canal
20.4	Sand Creek Canal

*Reference posts were determined from aerial photographs, and should be considered approximate.

3.2.5.2 Impacts

Impacts to irrigation systems were identified as a concern for residents at public meetings. Irrigation systems could be impacted in a number of ways, including realignment, replacement of conveyances, and/or ditch relocations. For all of the project build alternatives, roadway improvements would have either no effect or a beneficial effect on irrigation system operations by upsizing culverts and improving flows. Tables 3.17 and 3.18 describe the impacts to specific systems for each alternative.

Table 3.17 Irrigation Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts	<p>Would affect some irrigation waste ditches in Belfry area but would not adversely impact irrigation operations.</p> <p>New conveyances on the Youst Ditch system would improve irrigation operations of the Brown property parcel by consolidating western parcels.</p> <p>Would require irrigation ditch relocations in rural corridor. In most cases, would not affect irrigation system or irrigated lands. In some cases, relocated ditches would improve irrigation operations. None would adversely impact irrigation operations.</p>	<p>Replacement of culverts at Youst Ditch (+/- RP 10.9) and Bear Creek (+/- RP 10.9) on existing MT 72 would improve conveyance structures.</p> <p>Would require irrigation ditch relocations in rural corridor. In most cases, would not affect irrigation system or irrigated lands. In some cases, relocated ditches would improve irrigation operations. None would adversely impact irrigation operations.</p>
12-m (40-ft) Typical Section	No impacts	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

**Table 3.18 Irrigation Impacts by Alternative, Rural Corridor
(North Dutch Lane to US 310 Intersection)**

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No impacts.	Would require irrigation ditch relocations in rural corridor. In most cases, would not affect irrigation system or irrigated lands. In some cases, relocated ditches would improve irrigation operations. None would adversely impact irrigation operations. Could impact irrigation to western parcel of K-E-W Trust property. Improvements to Sand Creek Canal conveyances would have a beneficial effect on Nash and Meinhardt properties	Same impacts as Modified Existing Alignment Alternative. Would require additional work and potential realignment of Sand Creek Canal, but these changes would not affect the operation of the irrigation system or the irrigated properties served by the canal.	Same impacts as Ridgeway South Alternative.
12-m (40-ft) Typical Section	No impacts.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

3.2.5.3 Mitigation

Impacted irrigation canals and ditches would be relocated in consultation with ditch owners to minimize impacts to farming operations. Measures to minimize temporary disruptions during construction are discussed in Section 3.4, Construction Impacts.

3.2.6 Social Conditions

3.2.6.1 Affected Environment

General community characteristics, community and public facilities, and emergency services found in Carbon County and the town of Belfry are described in this section.

Carbon County Characteristics. Carbon County, Montana was established in 1895 and named “Carbon” because of the coal deposits mined in the area. The county is home to 15 towns and large rural tracts. Red Lodge is the county seat. According the 2000 U.S. Census, the county population grew 18.2 percent between 1990 and 2000. The 2001 population was 9,696.

Belfry Community Characteristics. Belfry’s town boundaries occupy approximately 16 square blocks. The unincorporated town was founded in 1905 and named after Dr. William Belfry. According to the 2000 U.S. Census, the population of Belfry is 219 persons.

Belfry Community Facilities. The basic community services in Belfry include the Belfry K-12 School, two churches, and a post office. The Belfry school’s multi-purpose room is used for special functions and community activities.

Belfry Emergency Services. Belfry is under Carbon County jurisdiction, and the Carbon County Sheriff's Office and Fire District provide emergency services including fire protection and law enforcement.

Bridger's Clarks Fork Valley (CFV) Emergency Medical Services (EMS), stationed in Bridger Montana, serves the towns of Bridger, Belfry, Fromberg, as well as many miles of rural highway and residential areas. In addition to responding to residential medical calls, the Bridger CFV EMS also assists with motor vehicle accidents. Belfry Fire Department is located in town on State Street and has at least 13 volunteer firefighters and one paramedic who assist Bridger CFV EMS with medical and emergency calls.

The main health care facilities within the project area are located in Red Lodge and include the Beartooth Hospital and Health Center and the Red Lodge Clinic. The hospital has 22 beds and provides long-term care, a family birthing center, and 24-hour emergency and in-patient services. Emergency paramedic services are dispatched in conjunction with the County Sheriff's Office through a wireless communication facility in Red Lodge that opened in September 2001. Ambulances operate on a volunteer basis and are stationed out of Bridger and Red Lodge. There are three advanced life support services. These are based in Bridger, Joliet, and Red Lodge.

Belfry Schools. Carbon County has six school districts. The Belfry District encompasses the Belfry area and parts of Wyoming. School buses serving the Belfry area have at least 20 stops on three designated routes. Eight of these stops are along MT 72, with only one situated in the segment of MT 72 study area between Belfry and Bridger. In 1998 the Belfry K-12 School enrollment was 127, the majority of which were in grades K-6.

3.2.6.2 Impacts

There are no changes in the No-Build Alternative.

All of the build alternatives would generally improve access to social services in the corridor because of safer roadway conditions and the addition of shoulders. There would be some changes in the local street network in Belfry that would result in changes to travel patterns for emergency response. The impacts from these changes are not expected to be substantial because the geographic area of Belfry is small. For the Rural Corridor segment, the Ridgeway Lane Alternatives have changes to the existing street network that could change emergency access. None of the alternatives is likely to induce growth or otherwise strain existing services beyond capacity (for more discussion on potential growth, refer to Section 3.2.1.2, Impacts on Land Use). The widened roadway would allow safer passage through the county for emergency service vehicles, school buses, and large farm vehicles when they need to be on the road. Impacts are detailed in Tables 3.19 and 3.20 for the Belfry Area and Rural Corridor, respectively.

Table 3.19 Social Conditions Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No change.	<p>Current emergency vehicle and fire support access from Bridger at several existing eastern intersections in Belfry would be reduced to one intersection on west side (at Railroad Avenue (MT 72) and Broadway Avenue). MT 72 along Wisconsin Street north of town is removed, and one block of Vaill Avenue between Railroad Avenue (MT 72) and Montana Street is removed. Emergency access would become longer and more circuitous for some areas but shorter for others. Redistribution of access could slightly affect emergency response times but is not expected to have a substantial effect because the geographic area of Belfry is small.</p> <p>Fire access in Belfry would not change.</p> <p>Hospital access from Belfry to Red Lodge would be via S-308 similar to existing conditions.</p> <p>The addition of 1.2-m (4-ft) shoulders would provide areas for vehicles to pull off the highway for law enforcement or to allow fire and emergency vehicles to pass.</p>	<p>Current emergency vehicle and fire support access from Bridger on the east side is via existing intersections with MT 72/ Wisconsin Street (Wisconsin at Carbon, Wisconsin at Broadway, and Wisconsin at Vaill). The Wisconsin Street at Vaill Avenue intersection would be eliminated when Wisconsin Street is turned into a cul de sac, just south of Vaill Avenue. Emergency access from Bridger would become longer and more circuitous for some areas but shorter for others. Redistribution of access could slightly affect emergency response times but is not expected to have a substantial effect because the geographic area of Belfry is small.</p> <p>Belfry fire access would be the same as the Railroad Alignment Alternative.</p> <p>Hospital access from Belfry to Red Lodge would be via S-308 similar to existing conditions.</p> <p>The benefits of the addition of 1.2-m (4-ft) shoulders would be the same as the Railroad Alignment Alternative.</p>
12-m (40-ft) Typical Section	No change.	<p>Same impacts as 9.6-m (32-ft) typical section with benefits of an additional 1.2 m (4-ft) for a total of 2.4 m (8-ft) to move entirely out of the travel lane for law enforcement and emergency services.</p>	<p>Same impacts as 9.6-m (32-ft) typical section with additional benefits of wider shoulders.</p>

Table 3.20 Social Conditions Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No change.	No change to emergency access. The addition of 1.2-m (4-ft) shoulders would provide areas for vehicles to pull off the highway for law enforcement or to allow fire and emergency vehicles to pass.	Emergency access from Bridger to the hospital in Red Lodge for Ridgeway residents east of proposed MT 72 alignment would be impacted by Ridgeway Lane cul de sac on the east side of MT 72, causing slightly circuitous travel. The addition of 1.2-m (4-ft) shoulders would provide areas for vehicles to pull off the highway for law enforcement or to allow fire and emergency vehicles to pass.	Same impacts as Ridgeway North Alternative
12-m (40-ft) Typical Section	No change.	Same impacts as 9.6-m (32-ft) typical section with benefits of an additional 1.2 m (4 ft) for a total of 2.4 m (8 ft) to move entirely out of the travel lane for law enforcement and emergency services.	Same impacts as 9.6-m (32-ft) typical section with benefits of an additional 1.2 m (4 ft) for a total of 2.4 m (8 ft) to move entirely out of the travel lane for law enforcement and emergency services.	Same impacts as Ridgeway North Alternative

3.2.6.3 Mitigation

No mitigation is required or proposed.

3.2.7 Economic Conditions

3.2.7.1 Affected Environment

Income. The median household income in Carbon County 1999 was \$32,139. In 1999, 11.6 percent of the population was at or below the U.S. Census poverty threshold, which is lower than the statewide average of 14.6 percent.

Employment. Approximately 30 percent of residents of Carbon County work outside the county. Private businesses account for the largest percentage (43.1 percent) of jobs and wages (39 percent) in Carbon County. The governmental sector accounts for 17 percent. Large private industry employers in the county include Beartooth Hospital and Health Care Center, Beartooth IGA, Beartooth Industries, Red Lodge Mountain Resort, Rock Creek Resort and Yellowstone Furniture Manufacturing Company. According to the Montana Department of Labor, the annual average unemployment rate for 2002 in Carbon County was 4.2 percent as compared to 4.6 percent for the state of Montana.

Local Employment Data. According to 2001 Red Lodge labor statistics, Beartooth Hospital and Health Care Center has 125 year round employees, Beartooth IGA employs 35 year round, Red Lodge Mountain Resort employs 60 year round and 208 seasonal employees, and Rock Creek Resort employs 80 seasonal employees.

Within the project area, there are small commercial businesses in Belfry, including retail and services. At the northern end of the project, two lumber businesses – Kapor Lumber and Thunder Mountain Log Works – provide local employment and generate revenue for products shipped out of the area.

Tourism. Tourism is the largest industry in Carbon County. The U.S. Census Bureau 1997 Economic Census shows that approximately \$55,000,000 was generated in sales for tourist-related industrial sectors, which accounts for 75 percent of the local gross industrial product for Carbon County. The largest attraction for tourism in Carbon County is its proximity to Yellowstone National Park via the Beartooth Highway (US 212). The northern terminus of this scenic byway is at Red Lodge, the county seat. Red Lodge touts itself as the “gateway” to the northeast entrance to Yellowstone National Park. Other area attractions include Gallatin National Forest, Washoe Ghost Town, Cooney State Park, Custer National Forest, the Nez Pierce Trail, Red Lodge Historic/Commercial district, skiing at Red Lodge Mountain Resort, a National Historic Site, Beartooth Highway, and abundant public campsites and hiking trails.

MT 72 holds regional significance for tourists as it is the primary north/south route used to drive to Cody, WY, which is the first major town at the eastern entrance to Yellowstone National Park.

Agriculture. More than half of the land in Carbon County is dedicated to agriculture and ranching. Economically, Carbon County's most profitable sector is grazing, which includes agriculture as well as ranching. In 1996, this industry accounted for \$7,400,000 in industrial output. Range-fed cattle, sheep, lambs, and goats generated \$7,000,000; agriculture, forestry and fishing services generated the remaining \$400,000. For the 1999 crop year, the largest crop produced was barley, which accounted for 64 percent of production, followed by wheat (21 percent), corn (12 percent), and oats (3 percent).

Mining. Mining has historically been an important industry in Carbon County and is still a key component of the local economy. The principal mineral exports for Montana are coal, talc, and bentonite. Other energy resources, such as oil and gas, are also found in the county. Exploration and production of coal, oil, and gas are expected to be stable or increase.

In 2000, there were five active mining operations in the county, which accounted for \$657,577 in annual wages. Overall, the mining industry accounted for \$1,766,000 in revenue in 1999, which is a decrease from previous years.

3.2.7.2 Impacts

MT 72 is an important regional highway. For the major industries in Carbon County, improvements to the highway would enhance regional access to and through the area and could create economic benefits for the county and area residents through better access to tourist-related attractions. The agricultural industry could benefit from safety and access improvements to the highway, particularly for movement of goods and equipment.

The rate of growth is not projected to change as a result of the implementation of any of the build alternatives. Therefore, employment would not be expected to increase substantially as a result of the highway improvements. Businesses in the Belfry Area could benefit by better business access. Both of the Belfry Area alternatives would provide increased visibility of local businesses and could increase business for commercial operations on Broadway Avenue.

Properties and/or businesses that would be impacted from one or more alternatives include:

Belfry Area

- Krum's (Around the Corner) Gift Shop – business would require relocation/acquisition as a result of the Railroad Alignment Alternative or the Broadway Avenue Alternative.
- Webb Coal Scale Property (previously Holland Lumber) – northwest corner of property site, but not structure, would be impacted by the Broadway Avenue Alternative, resulting in the need to modify access to the back of the building. The front access would not be impacted. The main part of this building has not been in operation for decades; therefore, the modified access would have no impact on the use of the building. To avoid the Webb Coal Scale building, a tighter 40 kph (25 mph) instead of a 72 kph (45 mph) curve was used at Railroad Avenue and Broadway Avenue.
- Kose Grocery – the north side of the property site, but not the structure, would be impacted by the improvements to Broadway on the Broadway Avenue Alternative. This building has an overhang on the north side, and to avoid impacting the overhang, the Broadway Avenue sidewalk would be reconstructed in front of this building, and the overhang would be retained or reconstructed.
- Wolfe Property – current use of the Wolfe property is agricultural, but the owners have plans to convert this property to a hunting club. The Railroad Alignment Alternative may impact the future viability of a hunting club.

Rural Corridor

- Thunder Mountain Log Works – business would require relocation or acquisition as a consequence of the Modified Existing Alignment Alternative, or change in business access with the two Ridgeway alternatives. This change in access for the Ridgeway alternatives would not likely impact business.
- Kapor Lumber – The property may be impacted as a result of Modified Existing Alignment. The area of the property that potentially may be impacted could include some of the area currently used for storing inventory outside. It is likely that this function could be relocated on the site. The business would require change in business access with the Modified Existing Alignment Alternative or the two Ridgeway alternatives. In the Modified Existing Alignment Alternative, the changes in access may impact operations but are not likely to impact the viability of the business.

Project costs for the right-of-way acquisition, design, and construction of the Preferred Alternative, the Railroad Alignment Alternative, in the Belfry Area is approximately 18 percent higher than for

the Broadway Avenue Alternative. Project costs for the wider typical section would increase for both alternatives by approximately 9 percent. In the Rural Corridor, the Preferred Alternative, the Modified Existing Alignment Alternative, would cost approximately 10 percent more than the Ridgeway North Alternative and 7 percent more than the Ridgeway South Alternative. Project costs for the wider typical section in the Rural Corridor would increase 17 or 18 percent, depending on the alternative. Project costs for each alternative alignment and typical section are detailed in Tables 3.21 and 3.22.

The following tables discuss the economic impacts of the alternatives. Operational impacts to agricultural businesses are discussed in the 3.2.4, Farming Operations.

Table 3.21 Economic Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts.	Commercial business impacts would include relocation/acquisition of Krum's gift shop, and potential impacts to the proposed development of the Wolfe property as a hunting club. Rerouting MT 72 to western edge of town could result in small time savings for tourist-related through-traffic. Relocating travel corridor to Railroad Avenue with an improved Broadway Avenue intersection would provide better access and visibility to commercial center. Total project cost is estimated to be \$4.7 million.	Commercial business impacts would include relocation of Krum's gift shop, modifying access to back of Webb Coal Scale property (no structure impacts), and reconstruction of the sidewalk in front of Kose Grocery while retaining the overhang, or if needed, the overhang would be reconstructed. Relocating travel corridor through downtown could enhance economic opportunity, as the traffic would now travel through commercial center of town. Total project cost is estimated to be \$4.0 million.
12-m (40-ft) Typical Section	No impacts.	Same impacts as 9.6-m (32-ft) typical section, except project costs would increase by 9% to \$5.1 million.	Same impacts as 9.6-m (32-ft) typical section, except project costs would increase by 9% to \$4.4 million.

**Table 3.22 Economic Impacts by Alternative, Rural Corridor
(North Dutch Lane to US 310 Intersection)**

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No impacts.	Thunder Mountain Log Works would be relocated or acquired. Kapor Lumber property would be impacted. Kapor Lumber accesses could be modified and/or consolidated to improve MT 72/US 310 intersection geometry. The changes in access may impact operations but are not likely to impact viability of business. Total project cost is estimated to be \$11.3 million.	Would change MT 72 access to Kapor Lumber and Thunder Mountain Log Works, but improve their access off US 310 and not likely impact business operations or viability of business. Total project cost is estimated to be \$10.3 million.	Same impacts as Ridgeway North Total project cost is estimated to be \$10.6 million.
12-m (40-ft) Typical Section	No impacts.	Same impacts as 9.6-m (32-ft) typical section, except project costs would increase by 18% to \$13.3 million.	Same impacts as 9.6-m (32-ft) typical section, except project costs would increase by 17% to \$12.1 million.	Same impacts as 9.6-m (32-ft) typical section, except project costs would increase by 18% to \$12.5 million.

3.2.7.3 Mitigation

Relocations will be mitigated in accordance with MDT practices, as described in Section 3.2.10, Relocations/Acquisitions. No other adverse economic conditions have been identified, so additional mitigation will not be required.

3.2.8 Environmental Justice

3.2.8.1 Affected Environment

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations, directs federal agencies to consider impacts to minority and low-income populations as part of environmental analyses to ensure that federally-funded projects do not result in disproportionately high and adverse environmental or human health impacts to these populations. FHWA issued a guidance document that establishes policies and procedures for complying with EO 12898 (FHWA 1998). This guidance defines a “disproportionately high and adverse effect” as one that is predominately borne by, suffered by, or that is appreciably more severe or greater in magnitude for minority and low-income populations than the adverse effect that will be suffered by the non-minority population and/or the non-low-income population.

Information on minority and low-income populations was obtained primarily from the 2000 US Census as described below.

Minority Populations. Minority populations are defined by the FHWA guidance as persons that are Black, Hispanic, Asian American, or American Indian. Approximately 97 percent of Carbon County residents and 98 percent of Belfry and Bridger residents are white. There is no identifiable minority community in the study area. Minorities account for 9.4 percent of the state of Montana’s residents.

Low-Income Populations. The 1999 median household income in Carbon County of \$32,139 is slightly less than the statewide median household income of \$33,024. However, fewer of the county’s residents live in poverty. Poverty rates are 11.6 percent for Carbon County and 14.6 percent for the state of Montana.

3.2.8.2 Impacts

The neighborhoods surrounding the proposed project alignments do not have higher percentages of lower income or minority people than other areas in the county. There are no readily identifiable minority or low-income populations in the project area. Therefore, environmental justice impact analysis is not required for this project.

3.2.8.3 Mitigation

No mitigation required or proposed.

3.2.9 Right-of-Way

3.2.9.1 Affected Environment

The existing right-of-way through the corridor was estimated using the county assessor’s records available on MDT’s website. In some areas these maps show the property lines extending to the centerline of the highway, indicating that the highway may be located on an easement or prescriptive right. For those areas where a right-of-way was clearly separate from the adjacent properties, the width was measured and is reported in the following table.

Table 3.23 Existing Right-of-Way Widths

Segment	Existing Right-of-Way Width
Belfry Area – Town: Vaill Avenue right-of-way	18 m (60 ft)
Belfry Area – Town: Broadway Avenue right-of-way	24 m (80 ft)
Rural Corridor	8.5 to 18 m (28 to 60 ft) Some sections of roadway may be on an easement or under prescriptive right

Source: State of Montana Cadastral Mapping Project Website, widths measured and compiled by DEA, 2002.

3.2.9.2 Impacts

No additional right-of-way would be needed for the No-Build Alternative.

Additional right-of-way would be required for all of the build alternatives as described in Tables 3.24 and 3.25. Total right-of-way requirements were estimated on the basis of the approximate right-of-way required plus the prescriptive right areas, which were estimated from fence lines and/or adjacent property ownership.

For the Belfry Area, right-of-way requirements would generally fall within an 18-m (60-ft) width. The Railroad Alignment Alternative would require the most right-of-way in the Belfry Area at 19.7 ha (48.8 ac) for the 9.6-m (32-ft) typical section, or 20.5 ha (50.6 ac) for the 12-m (40-ft) typical section. Of the total Railroad Alignment right-of-way, the new right-of-way required is 15.0 ha (37.2 ac) for the 9.6-m (32-ft) typical section and 15.8 ha (39.0 ac) for the 12-m (40-ft) typical section.

The right-of-way would vary among the proposed alignments in the Rural Corridor. The Modified Existing Alignment Alternative would require the most new right-of-way in the Rural Corridor. For the 9.6-m (32-ft) section, 47.2 ha (116.6 ac) would be the required new right-of-way. For the 12-m (40-ft) section, 50.3 ha (124.3 ac) would be the required new right-of-way for the Modified Existing Alignment. The Ridgeway South Alternative would require the least new right-of-way. The 9.6-m section would require 44.0 ha (108.8 ac) new right-of-way, and the 12-m (40-ft) section would require 46.9 ha (115.9 ac). Tables 3.24 and 3.25 show the complete quantities.

Total right-of-way requirements for the Preferred Alternative (combining the Belfry Area and Rural Corridor) would be 105.3 ha (260.4 ac) for the 9.6-m typical section or 109.2 ha (269.9 ac) for the 12-m (40-ft) typical section.

Table 3.24 Right-of-Way Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts.	Approximate New Right-of-Way Required: 15.0 ha (37.2 ac) Assumed Easement or Prescriptive Right: 4.7 ha (11.6 ac) TOTAL: 19.7 ha (48.8 ac)	Approximate New Right-of-Way Required: 9.3 ha (23.0 ac) Assumed Easement or Prescriptive Right: 8.7 ha (21.5 ac) TOTAL: 18.0 ha (44.5)
12-m (40-ft) Typical Section	No impacts.	Approximate New Right-of-Way Required: 15.8 ha (39.0 ac) Assumed Easement or Prescriptive Right: 4.7 ha (11.6 ac) TOTAL: 20.5 ha (50.6 ac)	Approximate New Right-of-Way Required: 9.9 ha (24.5ac) Assumed Easement or Prescriptive Right: 8.7 ha (21.5 ac) TOTAL: 18.6 ha (46.0 ac)

Table 3.25 Right-of-Way Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No impacts.	Approximate New Right-of-Way Required: 47.2 ha (116.6 ac) Assumed Easement or Prescriptive Right: 38.4 ha (95.0 ac) TOTAL: 85.6 ha (211.6 ac)	Approximate New Right-of-Way Required: 44.1 ha (108.9 ac) Assumed Easement or Prescriptive Right: 23.3 ha (57.7ac) TOTAL: 67.4 ha (166.6 ac)	Approximate New Right-of-Way Required: 44.0 ha (108.8 ac) Assumed Easement or Prescriptive Right: 22.4 ha (55.3 ac) TOTAL: 66.4 ha (164.1 ac)
12-m (40-ft) Typical Section	No impacts.	Approximate New Right-of-Way Required: 50.3 ha (124.3 ac) Assumed Easement or Prescriptive Right: 38.4 ha (95.0 ac) TOTAL: 88.7 ha (219.3 ac)	Approximate New Right-of-Way Required: 46.9 ha (115.8 ac) Assumed Easement or Prescriptive Right: 23.3 ha (57.7ac) TOTAL: 70.2 ha (173.5 ac)	Approximate New Right-of-Way Required: 46.9 ha (115.9 ac) Assumed Easement or Prescriptive Right: 22.4 ha (55.3 ac) TOTAL: 69.3 ha (171.2 ac)

Most of the new right-of-way required for the reconstruction of MT 72 is in private ownership. However, each of the Belfry Area alternatives impacts public property. These impacts are detailed in Table 3.26. There would be no impacts to public property in the Rural Corridor.

Table 3.26 Public Property Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts.	Impacts small amount of BLM property: 0.3 ha (0.8 ac) Impacts small amount of land owned by Belfry at the sewage lagoon: 0.2 ha (0.5 ac)	Impacts small amount of 2 Belfry School properties; the school bus facility (0.1 ha (0.1 ac)) and the school-owned parking lot and picnic area across from the school (0.3 ha (0.8 ac)). (Per May 7, 2004 correspondence, school does not consider picnic area significant).
12-m (40-ft) Typical Section	No impacts.	Same impacts as 9.6-m (32-ft) typical section	Same impacts as 9.6-m (32-ft) typical section

3.2.9.3 Mitigation

Right-of-way will be acquired in accordance with MDT relocation policy, as described in section 3.2.10.3.

3.2.10 Relocations/Acquisition

3.2.10.1 Affected Environment

Right-of-way requirements would require acquisition of property adjacent to the existing MT 72 corridor and along newly proposed alignments. This property consists of a small amount of public land with the vast majority being private lands, residences, and businesses.

Due to alignment shifts for bridge construction and to improve existing curves, portions of the existing highway right-of-way may not be required for the newly proposed alignments. In these instances, the remaining parcels of the former highway right-of-way could potentially be reverted back to private ownership. Final determination with respect to the ultimate ownership of these remainders would be considered as the design and right-of-way documentation in final design is further refined.

3.2.10.2 Impacts

No structures are impacted in the No-Build Alternative.

Few relocations of private homes or residences would be anticipated for any of the build alternatives in most of the project corridor. Impacts that have been identified as potential relocations are close to proposed right-of-way and, therefore, could be impacted. The results of final design will determine the impact to these properties.

Within the Belfry Area, the Preferred Alternative (Railroad Alignment Alternative) has more relocations/acquisitions than the Broadway Alternative. The Krum's gift shop business is impacted. In addition to this property, the Preferred Alternative also impacts two mobile homes on the Toogood property and four farm structures on the Brown Trust property.

The Broadway Alternative impacts the Krum gift shop and two Toogood mobile homes but not the farm structures on the Brown Trust property.

Several property owners in the Rural Corridor section could be affected. The properties impacted vary by alternative. Depending on the property, a residence or other structure might be relocated on-site or removed. Tables 3.27 and 3.28 detail relocations/acquisitions for residences, farms, and businesses.

Table 3.27 Relocation/Acquisition Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts.	7 relocations/acquisitions: Krum's gift shop business (former Junction Exxon); 2 mobile homes on the Toogood property; and 4 farm structures on Brown Trust property (see Farm Operations).	3 relocations/acquisitions: Krum's gift shop business (former Junction Exxon) and 2 mobile homes on the Toogood property.
12-m (40-ft) Typical Section	No impacts.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

Table 3.28 Relocation/Acquisition Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No impacts.	1 relocation/acquisition: Thunder Mountain Log Works. Potential relocation of Aisenbrey grain silos and silage pit.	1 potential relocation/acquisition: Feller property (driveway impacted by alignment and ROW is close to residence); and relocation of Aisenbrey grain silos and silage pit.	1 relocation/acquisition: Peterson property. 2 potential relocations/acquisitions: 1 farm structure on Richards property and 1 additional structure on Peterson property; and, relocation of Aisenbrey grain silos and silage pit.
12-m (40-ft) Typical Section		Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

3.2.10.3 Mitigation

The acquisition of land or improvements for highway construction is governed by state and federal laws and regulations designed to protect both landowners and the public. Affected landowners are entitled to receive fair market value for any land or buildings acquired and any damages as defined by law to remaining land due to the effects of highway construction. Right-of-way acquisition for this project will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646 as amended), (42 U.S.C. 4601, et. Seq.), the Uniform Relocations Act Amendments of 1987 (P.L. 100-17), and 23 U.S.C. 317 for appropriation of public lands for highway right-of-way use.

No person shall be displaced by a federal aid project unless and until adequate replacement housing has been offered to all affected persons regardless of race, color, religion, sex or national origin.

3.2.11 Utilities

3.2.11.1 Affected Environment

The following utility providers maintain active infrastructure within the project corridor. The sections below describe the parts of the systems that lie within the existing or proposed highway corridors. Additional utility information will likely be discovered and would be incorporated into the design during preparation of construction documents.

Town of Belfry Carbon County Water District #1. Carbon County Water District #1 provides domestic water service to the town of Belfry. A 15.2-cm (6-in) water main extends from the reservoir west of the town along S-308, across MT 72, and eastward down Vaill Avenue. A water pump house is located at the intersection of Railroad and Broadway Avenues, on the northwest corner of the intersection. A 10.1-cm (4-in) water main exits this pump house and crosses Railroad Avenue, extending eastward down Broadway Avenue. The water mains are buried 1.6 to 1.9 m (5 to 6 ft) deep.

Town of Belfry Sewer District #5. The unincorporated town of Belfry maintains a sanitary sewer collection system, which drains to a lift station at the intersection of Bear Creek Lane and Wisconsin Street. Wastewater is then pumped to sewage lagoons located north of the town.

Town of Belfry Storm Sewer. The town of Belfry does not have a storm sewer system of pipes and catch basins to collect runoff. Instead, runoff flows are conveyed via the streets and discharge directly to Bear Creek or Youst Ditch.

MDU. MDU maintains a 76-mm (3-in) natural gas line on the MT 72 bridge over Bear Creek on the north side of Belfry, and on the first bridge over the Clarks Fork north of Belfry. In addition, MDU has a 32-mm (1¼-in) gas service in the Railroad Avenue right-of-way that serves a residence approximately 274 m (900 ft) north of Bear Creek.

Northwestern Energy (formerly Montana Power). Northwestern Energy supplies electricity and gas to the area around Belfry. Power poles are located along the length of the existing highway. Northwestern Energy also maintains a 253-mm (10-in) natural gas pipeline that crosses MT 72 near the Hergenrider property south of Silver Tip Creek.

Williston Basin Pipeline and Exxon Pipeline. Williston Basin owns and operates two large diameter natural gas pipelines in the project corridor that are the sole source of natural gas for the towns of Bridger, Fromberg, Laurel, and Billings. The "yellow" pipeline ranges in size from 25 to 30 cm (10 to 12 in), and the "red" pipeline is 30 cm (12 in) in diameter. These pipelines cross the existing MT 72 alignment just north of the intersection of Webber Lane and MT 72. A valving station is located just off the edge of pavement on the north side of the highway, near the point where the pipelines cross. The pipelines are not currently attached to any structures on the project.

Qwest Communications. Qwest has underground communications facilities that run throughout the length of the project corridor. Relocation of these lines would need to be incorporated into the design of the new roadway.

3.2.11.2 Impacts

Potential disruptions could occur for all utility systems in the corridor, except water mains and sewer systems, which are located deep below ground and outside the area of potential impact. Power poles; natural gas pipelines, valving systems, and individual connections; stormwater systems; and communications systems could all be impacted by construction activities. The regulator station for the Williston Basin Pipeline and Exxon Pipeline is close to the clear zone for the new alignment. Utility connections would be built into all alternatives, and users and systems should not be affected by any of the build alternatives. The stormwater system would likely improve over the existing condition.

3.2.11.3 Mitigation

Utility relocations will be coordinated with the utility owners prior to construction. The proposed roadway alignment design will ensure the Williston/Exxon pipeline facilities are outside the clear zone and that drainage will be intercepted or diverted around the pipeline facilities.

3.3 Environmental

This section describes the physical and natural environment that may be affected by the proposed alternatives. Specific resource areas identified for analysis include:

- Cultural and Historic Resources
- Air Quality
- Noise
- Water Resources
- Wetlands
- Vegetation
- Wildlife and Migratory Birds
- Aquatic Species
- Threatened and Endangered Species
- Floodplains
- Water Body Modification
- Hazardous Materials
- Visual Resources
- Section 4(f) and Section 6(f) Resources

3.3.1 Cultural and Historic Resources

3.3.1.1 Affected Environment

Historic and cultural resources are defined in Section 301 of the National Historic Preservation Act (NHPA) of 1966, as amended, as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places (NRHP) [16 USC 470W]." Cultural resources are determined for listing on the NRHP through consideration of established criteria. In order to be eligible for listing on the NRHP, the property in question must be important in American history, architecture, archaeology, engineering, or culture and possess

integrity of location, design, setting, materials, workmanship, feeling, and association. In addition, properties must meet at least one of the following criteria:

- A. Association with events that have made a significant contribution to the broad patterns of the area's history.
- B. Association with the lives of persons significant in the area's past.
- C. Embodiment of distinctive characteristics of a type, period, or method of construction, or representation of the work of a master, or possession of high artistic values, or representation of a significant distinguishable entity whose components may lack individual distinction.
- D. Has yielded, or may be likely to yield, information important in prehistory or history.

Generally, properties must be 50 years or older to be eligible for the NRHP.

In compliance with Section 106 of the NHPA and associated regulations (36 CFR 800), cultural resources surveys were conducted along the MT 72 corridor to identify resources listed on or eligible for listing on the NRHP. Cultural and historic resources along the MT 72 corridor were inventoried on three occasions. A 1989 report was prepared by MDT to document the project design and alternatives proposed at that time. Another survey was conducted in 2002 by Renewable Technologies, Inc. (RTI) to evaluate resources either located along alignments not considered by the first survey or that had reached the NRHP's 50-year age guideline since 1989. The 2002 survey incorporated the results of the 1989 survey and is the current reference. An addendum to the 2002 survey was also prepared by RTI to document cultural resources along the newly proposed alignments of the Ridgeway North and Ridgeway South Alternatives.

In the Belfry Area, the survey area includes structures that face the proposed alternative routes through town within the first half-block of the project. Buildings more than 30 m (100 ft) from the highway centerline in Belfry were not documented. In the Rural Corridor, the survey was conducted along 25-m (80-ft) transect intervals for a distance of 49 m (160 ft) on either side of the proposed centerline.

In total, 41 sites within the project area were investigated. Twelve were determined eligible for the NRHP, and one site, the Youst Ditch (24CB1817), was not evaluated for NRHP eligibility. The Youst Ditch, which was covered under a Programmatic Agreement (PA) in effect when the survey was conducted but now revoked, is included in the impact analysis without an NRHP eligibility evaluation. No traditional cultural properties, prehistoric sites, or isolated finds were identified during the course of the survey. The 12 NRHP-eligible historic sites and the unevaluated site are presented in Table 3.29. Appendix C provides a complete summary of survey results. The NRHP-eligible sites are also shown on the Environmental Overview maps in Appendix A.

Table 3.29 NRHP-Eligible Cultural Sites along the Belfry-North MT 72 Highway Corridor

Cultural Site	Date	Function	Location	NRHP Status
Belfry Area (S-308 to North Dutch Lane)				
24CB676 Riddle House	Early 1900s	Residence	On Vaill Avenue	Eligible, Criterion C
24CB678 First Presbyterian Church (United Methodist Church)	Early 1900s	Church	On Wisconsin Street near Broadway Avenue	Eligible, Criterion C
24CB707/1144 Clarks Fork "south" bridge	1939	Bridge	North of Bear Creek and south of Dutch Lane	Eligible, Criterion C
24CB1145 Middlesworth Farmhouse	1933	Residential house	South of the Clarks Fork "south" bridge"	Eligible (house only), Criterion C
24CB1146 MW&S Railroad Maintenance Shop	1910	Railroad shop	North of Bear Creek between Railroad Avenue (west side) and the railroad	Eligible, Criterion A
24CB1148 MW&S Railroad Depot Belfry	1905	Railroad depot	North of the town of Belfry, south of Bear Creek, on the east side of Railroad Avenue	Eligible, Criteria A and C
24CB1803 Holland Lumber (aka Webb Coal)	1905	Commercial business	Southwest corner of Broadway Avenue and Montana Street	Eligible, Criteria A and C
24CB1813 Kose Grocery	1907/1910	Commercial business	On Broadway Avenue near State Street	Eligible, Criterion C
24CB1817 Youst Ditch	1890s	Ditch	Crosses MT 72 at north edge of Belfry	Unevaluated
Rural Area (North Dutch Lane to US 310)				
24CB1150 Sand Creek Canal	1893	Ditch	12 km (+/- 7.5 mi) long canal extending north and south of Bridger	Eligible, Criterion C
24CB1152 Golden Ditch	1891-1903	Ditch	14.5 km (+/- 9 mi) long ditch between Belfry and Bridger	Eligible, Criterion C
24CB1154 Dry Creek Canal	1893	Canal	12 km (+/- 7 mi) long between Belfry and Bridger	Eligible, Criterion C
24CB1848 Jennings Homestead	1906	Farmstead	South of Ridgeway Lane and north of Clarks Fork.	Eligible, Criterion C

Sources: RTI 2003 Cultural Resource Inventory (CRI), RTI 2002 CRI, MDT 1989 CRI

3.3.1.2 Impacts

Section 106 of the NHPA requires MDT to identify NRHP-eligible cultural resources within the project area and then to determine the effects of the proposed project on NRHP-listed or -eligible cultural resources. For this project, MDT identified 12 historic properties and one unevaluated historic site within the area of potential effect (APE) for one or more project alternatives.

MDT has a PA for Historic Roads and Bridges (signed in 1989 and amended 1992), which applies to the Clarks Fork "south" bridge and provides standardized mitigation for impacts to historic highway bridges (see Appendix C).

For this project, impacts to cultural sites could occur from various construction activities, including cut-and-fill, site grading, and construction of structures. For each resource within the APE, FHWA and MDT determined whether the Preferred Alternative would have No Effect, No Adverse Effect, or Adverse Effect. SHPO has reviewed and concurred with the determinations for the Preferred Alternative (see Appendix C). If another alternative were selected, further consultation with SHPO would be necessary. Comparisons of impacts for all alternatives are summarized for the Belfry Area in Table 3.30 and the Rural Corridor in Table 3.31. The tables reflect MDT's Determination of Effect for all of the project alternatives.

The Clarks Fork "south" bridge (24CB707/1144) would be adversely affected under both alternatives in the Belfry Area. For the Preferred Alternative (Railroad Alignment), MT 72 would be relocated downstream of the Clarks Fork "south" bridge, and the existing section of MT 72 north of the bridge would be removed. For the Broadway Avenue Alignment, the bridge would be replaced because it is too narrow. For this alternative, the new bridge would be constructed adjacent to the existing Clarks Fork "south" bridge. For both alternatives, the bridge could be left in-place if a new owner could be identified to assume maintenance responsibilities for the bridge. In accordance with the stipulations of the PA for Historic Roads and Bridges, if a new owner could not be found, MDT would remove the bridge to avoid safety and liability concerns.

The Railroad Maintenance Shop (24CB1146) would be affected but not adversely by the Preferred Alternative. Direct impacts to the structure were avoided by extending a modified urban typical section from Belfry through this transition area. To avoid the site, the drainage on the west side of the highway would remain in urban curb and gutter instead of MDT's standard wider rural ditch section. With this narrower right-of-way, the building would be avoided and remain in place unaltered. The characteristics that make the site eligible for the NRHP would be perpetuated, and the setting would remain largely intact. The property is not on the alignment for the Broadway Avenue Alternative and would therefore not be affected by this alternative.

Further consultation with SHPO would be required for the unevaluated Youst Ditch (25CB1817) if the Broadway Avenue Alignment Alternative were selected as the Preferred Alternative. This alternative would require replacement of roadway-related structures at the ditch. While this action is generally considered by SHPO, MDT, and FHWA to have no effect on historic ditches, formal consultation to confirm this no effect determination would be required. The Youst Ditch is not affected by the Preferred Alternative.

The Kose Grocery (24CB1813) and Holland Lumber (Webb Coal) (24CB1803) properties would be affected but not adversely by the Broadway Avenue Alternative. The sidewalk in front of the Kose Grocery would be reconstructed but the structure would not be affected. Likewise, property associated with the Holland Lumber (Webb Coal) site would be impacted, but the structure was avoided in design by introducing a sharper curve with a slower speed. Neither property is on the alignment for the Preferred Alternative and would therefore not be affected under this alternative.

Sand Creek Canal (24CB1150) may be adversely affected by the Ridgeway North and Ridgeway South Alternatives. Under both alternatives, the canal may need to be realigned/rechanneled from its historic alignment to accommodate access to properties. Although not a substantial change because it would affect only a small portion (less than 30 m) of its 12-km (+/- 7.5-mi) length, it would be an Adverse Effect nonetheless. The resource would not be affected by the Preferred Alternative.

Property associated with the Jennings Homestead (24CB1848) would be impacted under the Ridgeway South Alternative. However, none of the site's structures would be impacted. Because the structures are only eligible under NRHP Criterion C for architectural merit, impacts to the

associated property would not affect the historic integrity of the site. The property would not be affected by the Preferred Alternative.

The remaining six NRHP-eligible properties in the project area would not be affected by any of the project alternatives.

Table 3.30 Cultural Resources Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment*
Both Typical Sections			
24CB676 Riddle House	No Effect	No Effect. Site is outside construction and right-of-way limits.	No Effect. Site is outside construction and right-of-way limits.
24CB678 First Presbyterian Church (United Methodist Church)	No Effect	No Effect. Site is outside construction and right-of-way limits.	No Effect. Site is outside construction and right-of-way limits.
24CB707/1144 Clarks Fork "south" bridge	No Effect	Adverse Effect. New alignment bypasses the bridge. Bridge could be left in place if another owner is identified. If new owner is not found, MDT would remove bridge to avoid safety and liability concerns.	Adverse Effect. Bridge is narrow and would be replaced. Bridge could be left in place if another owner is identified. If new owner is not found, MDT would remove bridge to avoid safety and liability concerns.
24CB1145 Middlesworth Farmhouse	No Effect	No Effect. Site is outside construction and right-of-way limits.	No Effect. Site is outside construction and right-of-way limits.
24CB1146 MW&S Railroad Maintenance Shop	No Effect	No Adverse Effect. The presence of the new roadway in front of the structure where no roadway previously existed would alter the setting. However, the building would remain in place and unaltered, and the characteristics that make the site eligible for the NRHP would be unaltered.	No Effect. Site is outside construction and right-of-way limits.
24CB1148 MW&S Railroad Depot Belfry	No Effect	No Effect. Site is outside construction and right-of-way limits.	No Effect. Site is outside construction and right-of-way limits.
24CB1803 Holland Lumber (aka Webb Coal)	No Effect	No Effect. Site is outside construction and right-of-way limits.	No Adverse Effect. Sidewalk would be moved toward site. Access from west could be closed or modified, but access from east would remain open. North side parking would be retained. No structures would be impacted.

*Formal consultation with SHPO would be required if this alternative were selected as the Preferred Alternative.

Table 3.30 Cultural Resources Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane) (continued)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment*
Both Typical Sections (continued)			
24CB1813 Kose Grocery	No Effect	No Effect. Site is outside construction and right-of-way limits.	No Adverse Effect. Sidewalk would be reconstructed adjacent to face of building and the storefront overhang would be retained or reconstructed.
24CB1817 Youst Ditch	No Effect	No Effect. Site is outside of construction and right-of-way limits.	No Effect. Roadway structure would be replaced, but structures are commonly considered roadway elements rather than irrigation elements.

*Formal consultation with SHPO would be required if this alternative were selected as the Preferred Alternative.

Table 3.31 Cultural Resources Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North*	Ridgeway South*
Both Typical Sections				
24CB1150 Sand Creek Canal	No Effect	No Effect. Two bridge structures would be replaced, but these structures are considered roadway elements rather than irrigation elements.	Adverse Effect (potential). If canal required rechanneling at +/- RP 20.3, canal would be adversely affected.	Adverse Effect (potential). If canal required rechanneling at +/- RP 20.3, canal would be adversely affected.
24CB1152 Golden Ditch	No Effect	No Effect. Site is outside construction and right-of-way limits.	No Effect. Site is outside construction and right-of-way limits.	No Effect. Site is outside construction and right-of-way limits.
24CB1154 Dry Creek Canal	No Effect	No Effect. One bridge structure and two box culverts would be replaced, but these structures are considered roadway elements rather than irrigation elements.	No Effect. One bridge structure and two box culverts would be replaced, but these structures are considered roadway elements rather than irrigation elements.	No Effect. One bridge structure and two box culverts would be replaced, but these structures are considered roadway elements rather than irrigation elements.

*Formal consultation with SHPO would be required if this alternative were selected as the Preferred Alternative.

Table 3.31 Cultural Resources Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection) (continued)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North*	Ridgeway South*
Both Typical Sections				
24CB1848 Jennings Homestead	No Effect	No Effect. Site is outside construction and right-of-way limits.	No Effect. Site is outside construction and right-of-way limits.	No Effect. Property but not structures would be impacted; however, highway would be closer to historic structures. Because structures are NRHP eligible only under Criterion C (architectural merit), the historic integrity of the site is associated primarily with the physical structures rather than the historic use of the property.

*Formal consultation with SHPO would be required if this alternative were selected as the Preferred Alternative.

3.3.1.3 Mitigation

Adverse effect determinations require MDT to consult with the SHPO, Advisory Council on Historic Preservation, and other interested parties to develop a Memorandum of Agreement (MOA) or PA, which specify mitigation plans or alternatives to mitigate adverse effects.

The Clarks Fork "south" bridge (24CB707/1144) would be adversely affected by the Preferred Alternative in the Belfry Area (the Railroad Alignment Alternative). Removal of this historic bridge would not be required to implement the alternative; however, maintenance costs would not warrant MDT keeping and maintaining the bridge if it is not used for highway traffic. In accordance with the mitigation stipulations in the PA for Historic Roads and Bridges, MDT will use its Adopt a Bridge Program to try to find a new owner willing to take over ownership and maintenance responsibilities for the bridge (Appendix C). If a new owner cannot be identified, MDT would remove the bridge to avoid safety and liability issues.

A modified typical section will be used to avoid the MW&S Railroad Maintenance Shop (24CB1146).

MDT will install an historical marker along the proposed highway alignment between the MW&S Railroad Maintenance Shop (24CB1146) and the MW&S Depot (24CB1148) within the community of Belfry.

3.3.2 Air Quality

3.3.2.1 Affected Environment

To protect the public from health hazards associated with air pollution, the U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for seven criteria pollutants in association with the Clean Air Act (CAA) of 1990. These seven criteria pollutants are carbon monoxide, ozone, nitrogen dioxide, sulfur dioxide, reactive volatile organic compounds, lead, and particulate matter less than 10 microns in diameter (PM₁₀). Areas that do not meet these air quality standards are designated as non-attainment areas and are required to submit plans to Montana Department of Environmental Quality (MDEQ) and EPA to attain these standards. The proposed project is located in an unclassified/attainment area of Montana as defined by standards set by 40 CFR 81.327. Under this classification, the project is not subject to Transportation Conformity requirements of the CAA, and no air quality modeling is required for this project.

3.3.2.2 Impacts

Because this proposed project is located in an unclassified/attainment area the No-Build Alternative and all of the build alternatives would comply with Section 176(c) of the Clean Air Act (53 U.S.C. 7521 (a)) as amended and would not require detailed assessment of potential exceedances of federal standards.

All alternatives are expected to achieve peak hour LOS of "B" or "A" in the design year (see Section 3.1.1, Traffic). This high level of service is associated with non-congested driving conditions with little to no delay or vehicle idling time. Similarly, average annual daily traffic (AADT) volumes are expected to remain relatively low even through the design year. These forecasts of both AADT and LOS represent conditions that would not cause degradation of regional or local air quality in violation of CAA standards. Air quality during construction is discussed in Section 3.4, Construction Impacts.

3.3.2.3 Mitigation

No permanent mitigation is required or proposed. Air quality during construction is discussed in Section 3.4, Construction Impacts.

3.3.3 Noise

3.3.3.1 Affected Environment

Noise is defined as unwanted or excessive sound and has been identified by the federal government as an undesirable by-product that can be annoying; interfere with sleep, work, or recreation; and in extremes cause physical and psychological damage. Sound is quantified by a unit of measure called a decibel (dB). For highway traffic noise, high- and low-pitched sounds are adjusted or weighted to approximate the way that an average person hears sounds. The adjusted sounds are called "A-weighted levels" (dBA). The A-weighted decibel scale begins at zero, which represents the faintest sound that can be heard by humans with very good hearing. The loudness of sounds (that is, how loud they seem to humans) varies from person to person, so there is no precise definition of loudness.

Highway noise is never constant because noise levels change with the number, type, and speed of the vehicles that produce the noise. Therefore, although noise levels are measured in dBA, they are reported in the average noise level energy over one hour ($L_{eq}(h)$). $L_{eq}(h)$ represents a constant, average sound level, and FHWA uses the $L_{eq}(h)$ as the acceptable noise descriptor used on highway transportation projects

The level of highway traffic noise depends on: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the types of vehicles in the flow of traffic (FHWA, 1992). Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater numbers of trucks. As a person moves away from a highway, traffic noise levels are buffered by distance, terrain, vegetation, and natural and manmade obstacles.

FHWA regulations (23 CFR 772) require the following during the planning and design of a highway project: (1) identification of traffic noise impacts, (2) examination of potential mitigation measures, (3) the incorporation of reasonable and feasible noise mitigation measures into the highway project, and (4) coordination with local officials to provide helpful information on compatible land use planning and control. The regulations contain noise abatement criteria (NAC), which represent the guidelines on the upper limit of acceptable highway traffic noise for different types of land uses and human activities, which are categorized in five activity categories A through E. There are no Category A areas in the project area. (Table 3.32).

Table 3.32 Noise Abatement Criteria

Activity Category	Acceptable Levels ($L_{eq}(h)$)	Description of Activity Category
A	57 (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 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

-- No standard (no receptor)

Source: Federal Register, Volume 47, No. 131, July 8, 1982, Rules and Regulations

FHWA regulations do not require that the NAC be met in every instance. Rather, they require that every reasonable and feasible effort be made to provide noise mitigation when the criteria are approached or exceeded. Compliance with the noise regulations is a prerequisite for granting Federally-funded highway construction or reconstruction projects.

The traffic noise study for the Belfry-North project was conducted by Bionomics Environmental, Inc. according to FHWA regulations in 23 C.F.R. Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, and MDT's *Traffic Noise Analysis and Abatement: Policy and Procedure Manual* (June 2001). The study evaluated potential noise impacts at noise-sensitive

receptor locations (e.g., residences, groups of residences, mobile homes, apartments, nursing homes, churches, hotels, parks, and campgrounds) due to vehicles traveling on Highway MT 72 within the project limits. The field-testing for the Belfry-North noise study was performed on September 3 and 4, 2002, along the existing No-Build alignment during morning and evening rush-hour traffic, with the representative sampling performed at high traffic flows.

Transects were modeled at 10 meter increments from the road centerline to determine the distance at which predicted traffic noise levels approached or exceeded the NAC. The results of this model showed that noise levels at receptors beyond 30 meters (98 ft) from the road centerline would not approach the NAC or increase substantially (i.e. 13 dBA or more). Therefore, receptors further than 30 meters (98 ft) from the road centerline were not considered. The approximate receptor locations are shown on Figures 1 through 3 in Appendix D and include single-family residences, churches, schools, and commercial properties. For this noise study, traffic noise level impacts were evaluated for the existing conditions (i.e. no changes to the existing highway in 2002), No-Build Alternative (i.e., no changes to the existing highway in 2026), and the proposed build alternatives (i.e., Broadway Avenue Alternative, Railroad Alignment Alternative, Modified Existing Alignment Alternative, Ridgeway North Alternative, and Ridgeway South Alternative in 2026).

For the noise analysis, FHWA's Traffic Noise Model (TNM) Version 2.1 computer program was used to predict the existing and future noise levels at the receptors due to traffic on the existing MT 72 roadway. The traffic volumes in the corridor and the noise levels for each receptor in the corridor are identified in Appendix D. Currently, no receptors in the corridor have a predicted noise level that meets the NAC criteria for the present year (2002) if no changes are made to the existing highway.

3.3.3.2 Impacts

According to the Federal Aid Policy Guide, *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (23 CFR 772), the proposed project is classified as a Type I Project, which is defined as any project that has the potential to increase noise levels at adjacent receivers. For Type I projects, all viable alternatives under consideration must be analyzed for traffic noise impacts.

Therefore, a detailed noise analysis for all alternatives was undertaken for this study. The methodology and results of the noise analysis are documented in the Belfry-North STPP 72-1(10), Traffic Noise Impact Assessment Report, which is on file with MDT.

According to MDT policy, traffic noise impacts for activities in Category B (residences, mobile homes, apartments, nursing homes, churches, hotels, parks, and campgrounds) occur in two situations:

1. If predicted $Leq(h)$ traffic noise levels "approach or exceed" the 67 dBA in the project design year (2026) for the build alternatives, or
2. If the predicted $Leq(h)$ noise levels in the design year for the build alternatives "substantially exceed" the noise levels in the present year (2002) of the project for the No-Build Alternative.

MDT defines "approach" as 1 dBA less than the NAC of 67 dBA for category B uses, and "substantially exceed" as 13 dBA. Therefore, the traffic noise impact criteria is 66 dBA or greater in the design year of a project, or 13 dBA or greater than the present year noise levels.

To identify potential noise impacts, traffic noise levels at receptor locations were modeled for each alternative in the rural corridor and the Belfry area. Tables summarizing predicted noise levels at these receptors are shown in Appendix D and summarized in Tables 3.33 and 3.34 for the design year. Properties that would be relocated or acquired because they are in the proposed right-of-way are not included in these tables.

For the Belfry Area, the No-Build Alternative would not result in any impacts to noise sensitive receptors. For the Railroad Alignment Alternative, the receptors would be in an area of transitional speed as motorists accelerate from the urban to the rural corridor or vice versa. The noise impacts of this alignment alternative were assessed based on 100 kph (62 mph) traffic speeds, which had the greatest impacts of the scenarios modeled. Two receptors may be impacted under the Railroad Alignment alternative. The MW&S RR Depot and the Toogood residence meet the substantial increase of 13 dBA criterion with this alternative. For the Broadway Avenue Alternative, four receptors may be impacted. MW&S RR Depot, Gasser Trust, Cichosz residence, and Roberts residence meet the substantial increase of 13 dBA. For both build alternatives, due to the change in traffic patterns, the noise levels in 2026 at the Belfry School and St. John’s Church would decrease over existing conditions.

In the Rural Corridor, the No-Build Alternative would not result in any impacts to noise sensitive receptors. For the Modified Existing Alignment one receptor, the Hergenrider Residence, located on the west side of MT 72 south of Silver Tip Creek, would be impacted. The Hergenrider residence would approach the NAC (66 dBA) in 2026 under the Modified Existing Alignment. Noise impacts were not modeled at the MT 72/US 310 intersection for the Modified Existing Alignment as no receptors were within the 30-meter impact area. Under the Ridgeway North Alternative, three additional residences (Peterson residence, Richards residence, and Meinhardt residence) along Ridgeway Lane will experience a substantial increase (13 dBA) in noise level due to this alternative. The Peterson residence will also be impacted based on approaching the NAC (66 dBA). The Ridgeway South Alignment will impact the same four receptors as the Ridgeway North Alternative. Impacts to the Peterson residence will increase by 3 dBA as compared with the Ridgeway North Alignment while impacts to the Richards and Meinhardt residences will decrease by 4 dBA and 2 dBA, respectively.

Table 3.33 Noise Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)*

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Ave. Alignment
9.6 m (32 ft) Typical Section	No Impacts	2 Impacted Receptors (MW&S RR Depot and Toogood Residence)	4 Impacted Receptors (MW&S RR Depot, Gasser Trust, Cichosz residence, and Roberts residence)
12 m (40 ft) Typical Section	No Impacts	2 Impacted Receptors (MW&S RR Depot and Toogood Residence)	4 Impacted Receptors (MW&S RR Depot, Gasser Trust, Cichosz residence, and Roberts residence)

*Three additional receptors, which may be noise impacted under the Railroad Alignment and Broadway Avenue Alternatives, are not included in the impacts because they would be relocated/acquired due to right-of-way requirements.

Table 3.34 Noise Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6 m (32 ft) Typical Section	No Impacts	1 Impacted Receptor (Hergenrider residence)	4 Impacted Receptors (Hergenrider, Peterson, Richards, and Meinhardt residences)	4 Impacted Receptors (Hergenrider, Peterson, Richards, and Meinhardt residences)
12 m (40 ft) Typical Section	No Impacts	1 Impacted Receptor (Hergenrider residence)	4 Impacted Receptors (Hergenrider, Peterson, Richards, and Meinhardt residences)	4 Impacted Receptors (Hergenrider, Peterson, Richards, and Meinhardt residences)

3.3.3.3 Mitigation

When traffic noise impacts are predicted, possible abatement measures for the mitigation of highway traffic noise need to be considered, and the measures need to be assessed to determine if they are reasonable and feasible. Possible abatement measures include modifying the proposed build alternative designs; construction of noise barriers or berms; and traffic management measures, such as reducing the speed limit on the highway or restricting the access of certain vehicle types. Barriers typically provide the highest level of noise reduction of these mitigation measures.

According to 23 CFR 772.11 and MDT's *Traffic Noise Analysis and Abatement: Policy and Procedure Manual*, any abatement measure used to reduce the traffic noise at a receptor must first be considered reasonable and feasible. The Noise Abatement Checklist included in MDT's Policy helps determine if an abatement measure would be considered reasonable and feasible. At receptors where traffic noise impacts for MT 72 are predicted, noise abatement measures were evaluated.

To determine if a mitigation measure is feasible, it must meet two criteria:

1. The measure must provide a minimum 6-dBA reduction in noise levels at residences located closest to the highway, and
2. The measure must not represent a safety hazard to vehicles traveling on the highway or to the residents of the homes.

To determine if a mitigation measure is reasonable involves more subjective factors, including:

- The comparison of the noise levels associated with the No-Build Alternative to those associated with the build alternatives
- The cost of the abatement per residence
- The timing of development
- The opinion and acceptance of impacted residents regarding the noise abatement measure.

The following potential abatement measures were assessed to determine if they would be reasonable and feasible. These noise mitigation measures are administrative and do not affect fair market value determination of properties under the condemnation statutes and procedures.

Traffic Management. Restricting certain vehicle types, like heavy trucks, from MT 72, limiting the time of day that certain vehicles may use the highway, and reducing the speed limit on MT 72 are not feasible mitigation measures for this project. MT 72 is an important regional arterial highway in Montana, and is considered a primary highway. It serves the agricultural industry in the area and links tourism and commercial traffic regionally between the State of Wyoming, Yellowstone National Park, Red Lodge, and Billings, Montana. Prohibition or time use restrictions of certain types of vehicles would be contrary to the purpose and benefit of this project as well as the function of this route. Therefore, traffic management is not a feasible noise abatement measure.

Barriers and Berms. Construction of barriers or berms is not a feasible mitigation measure for this project. A barrier is most effective when it is continuous and solid, and it blocks the direct line-of-sight between the roadway and a receptor. MDT defines a benefited residence as a residence located in the row of homes closest to the highway (i.e., first row homes) that will experience a minimum 6-dBA reduction in traffic noise levels. No receptors in the project area would qualify as a benefited residence as none would receive a 6 dBA noise reduction due to the construction of a barrier or berm. This is due to the presence of driveways at the receptors that would necessitate gaps in the barriers and render them ineffective. MDT uses a cost effectiveness index (CEI) to determine if a barrier is reasonable. The CEI is a guideline for determining the reasonableness of constructing barriers, which incorporates the number of residences that would be benefited by the barrier, the total noise reduction provided by the barrier, and the total cost of barrier materials and construction. The receptors in the rural area of the corridor are dispersed and would require barriers of excessive length, which would render them economically unreasonable. Therefore, the construction of barriers and berms are not feasible or reasonable noise abatement measures.

Design Modifications. Shifting the horizontal alignment of the proposed MT 72 build alternatives is not a reasonable abatement measure. For all impacted receptors, shifting the alignment is not reasonable because it would result in impacts to other receptors. Alterations to the vertical alignment of the build alternatives would interfere with good design standards and would not have any noticeable effect (i.e. 6 dBA or greater reduction) on traffic noise at receptor sites. Therefore, design modifications are not feasible noise abatement measures.

Based on this analysis, no feasible or reasonable mitigation was identified, and no noise mitigation is proposed.

3.3.4 Water Resources/Quality

3.3.4.1 Affected Environment

Surface Water

Section 303(d) of the Federal Clean Water Act and related regulations requires states to assess the condition of their waters to determine where water quality is impaired (does not fully meet standards) or threatened (is likely to violate standards in the near future). The result of this review is the 303(d) list, which must be submitted to the EPA every other year. Section 303(d) also requires states to prioritize and target water bodies on their list for development of water

quality improvement strategies (i.e. total maximum daily loads or TMDLs), and to develop such strategies for impaired and threatened waters.

Three water bodies in the project area are listed in the Section 303(d) 2002 and/or 1996 reports. These include the Clarks Fork, Bear Creek, and Silver Tip Creek. The Clarks Fork flows north into the Yellowstone River approximately 32 km (+/- 20 mi) north of the project area near the town of Laurel, Montana. Silver Tip Creek and Bear Creek flow east toward the Clarks Fork and under MT 72.

In 1997, the Montana Legislature amended the state water quality law to require that impairment determinations be supported by "sufficient credible data" to ensure that determinations are justified. Although listed as impaired in 1996, two of the three water bodies (Bear Creek and Silver Tip Creek) have not been reassessed under this criterion and therefore are not listed on the "official" 2002 list (or the draft 2004 list). The following provides the 1996 list's identification of probable impaired uses, causes, and sources for Bear Creek and Silver Tip Creek and the 2002 data for Clarks Fork.

- **Clarks Fork.** Probable Impaired Uses: aquatic life support; cold water fishery-trout; drinking water supply; recreation; swimmable. Probable Causes: flow alteration; metals; nutrients; salinity/total dissolved solids (TDS)/chlorides; siltation; suspended solids, thermal modifications. Probable Sources: agriculture; irrigated crop production; natural sources; petroleum activities; resource extraction; range land; stream bank modification/destabilization; subsurface mining.
- **Bear Creek.** Probable Impaired Uses: aquatic life support; cold water fishery-trout; drinking water supply. Probable Causes: flow alteration; metals; other habitat alteration; other inorganics; siltation; suspended solids. Probable sources: Agriculture; highway/road/bridge construction; irrigated crop production; natural sources; resource extraction; range land; streambank modification/destabilization; subsurface mining.
- **Silver Tip Creek.** Probable Impaired Uses: aquatic life support; cold water fishery-trout; drinking water supply. Probable Causes: flow alteration; nutrients; other habitat alterations; salinity/TDS/chlorides; suspended solids; thermal modifications. Probable Sources: agriculture; irrigated crop production; petroleum activities; resource extraction.

Other water bodies in the project area include Dry Creek, Sand Creek, and Golden Ditch, which flow east toward the Clarks Fork. Other unnamed drainages generally flow to the east. Stormwater drainage in the town of Belfry generally flows north to Bear Creek or east to an unnamed ditch. This water then drains into the Clarks Fork or to agricultural land to the east.

Because of its size, Belfry is not required to have a storm water management plan (Personal Communication with Greg McGann, Carbon County Planning Office. May 13, 2002). Storm water drains into roadside ditches within Belfry and along MT 72.

The predominately agricultural area also contains a number of irrigation features. Agricultural ditches, culverts, and other conveyance structures are present adjacent to the highway in many areas.

There are currently six bridge crossings in the project area. These crossings are described in detail in Section 3.3.11, Water Body Modifications.

Groundwater

Detailed geotechnical investigations have not been conducted yet for this project, and therefore information on groundwater is somewhat limited. Soil borings taken at the Silver Tip and Clarks Fork indicate that groundwater is present at between 3.4 and 3.7 m (11 and 12 ft). Groundwater at other locations is likely at similar depths.

According to well data obtained from the Ground Water Information Center (GWIC), Montana Bureau of Mines and Geology, there are more than 1,700 wells located within the project vicinity. Three quarters of these wells are between 0 and 30.2 m (0 and 99 ft) deep. There appears to be a concentration of wells near at least three areas within the project corridor:

- The farm just west of project start at RP 10.3,
- North and south of RP 13, and
- South of the intersection of MT 72 and S-308.

Public Water Supply

There are two public water supply sources in the study area. Both sources are located in Belfry, a community of less than 250 people. One well is 23.8 m (78 ft) deep and located several blocks north and west of the project start point. The other is 68.6 m (225 ft) deep and is located near the intersection of MT 72 and Wisconsin Street in Belfry. There are no sole-source aquifers located near the project site. The closest sole source aquifer is the Eastern Snake River Plain Aquifer located in southeastern Idaho more than 81 km (130 mi) southwest of the project site.

3.3.4.2 Impacts

There are no impacts for the No-Build Alternative.

For all of the build alternatives, there would be no impacts to groundwater or public water supply wells. Other groundwater wells could be impacted if discovered during final design or construction, but at this stage, no wells are known to be impacted by the build alternatives.

Reconstruction of MT 72, which would include replacement of bridges and culverts, would result in impacts to the river, creeks and canals in the corridor under all of the build alternatives. In-stream work would be required for the replacement and/or construction of new structures. Bridge replacement can change water flows, sediment transport rates, sediment composition, and subsequent changes in pollutant loads, thermal fluctuations, and erosion. Surface water quality impacts would be minor as grass ditches remove much of the pollutant load found in highway runoff, and rural roadways generate a relatively small load of pollutants. Proper design of bridge piers and abutments and adherence to BMPs to avoid erosion and flow impacts during construction can further reduce potential for water quality impacts.

Permanent impacts to surface water quality could also result from increased impervious surface cover in the watershed. Although the watershed is sparsely developed and impervious surface cover is not a major concern for water quality, there would be some increase in runoff and pollution loads resulting from all of the alternatives. However, given the context of low development in the project area and the ability of unlined ditches to remove or filter most of the pollutant load from rural highways, water quality impacts from increases to impervious surfaces would be minor under all of the alternatives.

In the Belfry Area, impacts could be greater with the Railroad Alignment Alternative because this alternative would require new crossings for both the Clarks Fork and Bear Creek. Although the

current Railroad Avenue is unpaved, the total impervious surface would be less than the Broadway Avenue Alternative because calculations assumed that part of the existing MT 72 would be eliminated and changed to other land uses. The Broadway Avenue Alignment impacts (from bridge replacements) would occur in areas of previous disturbance, and impervious surface increase would result from widening the existing paved surface. For the 303(d) impaired water bodies, there would be one new or replaced structure over the Clarks Fork and one new or reconstructed structure over Bear Creek as part of both of the alternatives in the Belfry Area. The existing Bear Creek structure on S-308 would not be affected by any of the build alternatives. The affected structures would be wider, which will slightly increase impervious surface area. Road and bridge construction is considered to be a probable cause of impaired use for Bear Creek but not for Clarks Fork. Because the alternatives result in only minor changes from the existing conditions, both alternatives would have little or no effect on the impaired uses of these streams.

In the Rural Corridor, the Modified Existing Alignment would result in the greatest increase in impervious surface. While contributing less to impervious surface increase, the Ridgeway North and Ridgeway South Alternatives would require more extensive work at Sand Creek Canal, which could increase erosion potential. The two 303(d) impaired water bodies in the Rural Corridor include Clarks Fork and Silver Tip Creek. According to the listings, road and bridge construction are not considered probable causes of impairment, and new construction is not expected to affect the impaired uses of aquatic habitat, drinking water, and fisheries.

Water quality impacts by alternative for the Belfry Area and Rural Corridor are detailed in Tables 3.35 and 3.36, respectively. Water resource impacts during construction are discussed in Section 3.4, Construction Impacts. Impacts for riparian habitats, such as sedimentation, turbidity, contamination, and changes in flow, are discussed in Section 3.3.8, Aquatic Species.

Table 3.35 Water Resources Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts.	Construction and removal of structures at Bear Creek, Clarks Fork, and seven drainage or irrigation ditches could increase erosion and interrupt flow. Impervious surfaces would increase 1.7 ha (4.2 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Construction and removal of structures at Bear Creek, Clarks Fork, and six drainage or irrigation ditches could increase erosion and interrupt flow. Impervious surfaces would increase 2.2 ha (5.4 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.
12-m (40-ft) Typical Section	No impacts.	Same structure impacts as 9.6-m (32-ft) typical section. Impervious surfaces would increase 4.0 ha (9.9 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Same structure impacts as 9.6-m (32-ft) typical section. Impervious surfaces would increase 4.4 ha (10.9 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.

Source: DEA BRR February 27, 2004

Table 3.36 Water Resources Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No impacts.	Construction and removal of structures at Clarks Fork, Silver Tip Creek, and Sand Creek Canal could increase erosion and interrupt flow. Impervious surfaces would increase 7.1 ha (17.5 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Construction and removal of structures at Clarks Fork, Silver Tip Creek, and Sand Creek Canal could increase erosion and interrupt flow. Proposed alignment would be much closer to Clarks Fork, which would increase potential for contaminants and sediments to enter the waterway. Impervious surfaces would increase 6.0 ha (14.8 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Same impacts as Ridgeway North, except alignment would be even closer (adjacent) to Clarks Fork. Impervious surfaces would increase 5.7 ha (14.1 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.
12-m (40-ft) Typical Section	No impacts.	Same structure impacts as 9.6-m (32-ft) typical section. Impervious surfaces would increase 18.3 ha (45.2 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Same structure impacts as 9.6-m (32-ft) typical section. Impervious surfaces would increase 16.6 ha (41.0 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.	Same structure impacts as 9.6-m (32-ft) typical section. Impervious surfaces would increase 16.2 ha (40.0 ac), which could contribute to increased runoff, water temperatures, and pollutant loads.

Source: DEA BRR February 27, 2004

3.3.4.3 Mitigation

All alternatives have been designed to minimize water quality impacts. All build alternatives will be in compliance with conditions of the water quality permits, which are intended to minimize impacts to water bodies. Specific mitigation measures will include:

- Adherence to MDT best management practices.
- An erosion control and sediment plan prepared in compliance with the Montana Pollutant Discharge Elimination System regulations.
- Appropriate construction windows, as specified in permits, to protect reproductive cycles of aquatic species.
- Prevention of unnecessary operation of equipment within the channels of any creeks or rivers within the construction area of this project.

- Adherence to the Montana Stream Protection Act Permit (SPA 124) before any bridge work could begin.
- Adherence to the COE 404 Permit process.
- Relocation of any impacted wells in accordance with FHWA's and MDT's standard procedures.

3.3.5 Wetlands

3.3.5.1 Affected Environment

Wetlands described in this EA fall into three categories: jurisdictional wetland areas, non-jurisdictional areas, and non-jurisdictional ditches and canals. The COE makes the final determination on the jurisdiction of wetlands; so prior to final design or any construction, all appropriate regulatory agencies would be contacted to verify wetland delineation to obtain appropriate approvals and permits.

Jurisdictional wetlands are defined by the COE as areas that possess three mandatory parameters described in Section 404 of the Clean Water Act (CWA); hydrophytic vegetation, hydric soils, and wetland hydrology. Non-jurisdictional areas are wetlands not connected to other wetlands or water bodies by surface water or ground water based on the United States Supreme Court ruling of the Solid Waste Agency of Northern Cook County vs. U.S. Army Corps of Engineers (SWANCC Decision), No. 99-1178, January 9, 2001. Non-jurisdictional ditches possess the three parameters described above but are unnatural areas created in non-wetlands with the intent to collect water in ditches and are not subject to the regulatory authority of the CWA. All wetland determinations will need to be field-verified by COE.

Research Methods. Wetland delineations were conducted along the project corridor, from June 26 through July 1 and from October 9 through October 11, 2002, to determine the presence and extent of jurisdictional and non-jurisdictional wetlands in the proposed project area. A total of 108 areas throughout the corridor were assessed based on the presence of the three parameters described above. Of these 108 areas, 10 areas were determined to be jurisdictional wetlands, 3 were non-jurisdictional wetland areas, and 95 were non-jurisdictional ditches and canals. See environmental overview maps in Appendix A for wetland locations. Full descriptions of each jurisdictional and non-jurisdictional wetland are found in the *Belfry-North Biological Resources Report* (July 2004).

Functional Value Assessment. The jurisdictional wetland areas were evaluated for functional value according to the MDT Montana Wetland Assessment Form. There are four functional categories for wetlands:

- Category I wetlands are high quality Natural Heritage Wetlands.
- Category II wetlands are more common than Category I wetlands and provide habitat for sensitive plants or animals, function at very high levels for wildlife/fish habitat, are unique in a given region, or are assigned high ratings for many of the assessed functions and values.
- Category III wetlands are more common, generally less diverse, and often smaller and more isolated than Category I and II wetlands. They can still provide many functions and values, although they may not be assigned high ratings for as many parameters as Category I and II wetlands.
- Category IV wetlands are generally small, isolated, lack vegetative diversity, provide little in the way of wildlife habitat, and often have been disturbed.

All of the wetlands in the project area are Category III wetlands. MT 72 is located adjacent to all of the wetlands, and each wetland has at least one culvert that could bring contaminants into the wetland system. Also, adjacent to many of the wetlands are rural residential and agricultural uses with the potential for introducing fertilizers, pesticides, or stock manure into wetlands.

3.3.5.2 Impacts

Under the No-Build Alternative, there would be no physical reconstruction activities. Therefore, no impacts to wetlands would result.

Direct wetland impacts include the loss of wetland area, which would occur under all of the build alternatives. Direct impacts could result from the grading and filling for a wider roadbed, realignment of the existing centerline, replacement of culverts and bridges, construction of new structures, and all other actions required to improve the highway for this proposed project.

Table 3.37 presents the approximate total direct impacts to jurisdictional wetlands and non-jurisdictional isolated wetland areas, ditches and canals in the Belfry Area segment, and Table 3.38 presents the approximate total direct impacts to jurisdictional wetlands and non-jurisdictional isolated wetland areas, ditches and canals in the Rural Corridor segment. Rather than rounding impact areas to the nearest tenth (x.x) as done with other resource area impacts in this document, wetland impact areas were carried out to the significant digit (up to x.xxx) as necessary to show differences among the alternatives. Therefore, in some cases, wetland impacts are shown as x.xxx ha (x.xxx ac). All impacts are approximate due to the conceptual level of design.

Loss of wetlands would occur under each alternative. In the Railroad Alignment Alternative, direct impacts to jurisdictional wetlands would be slightly greater than the Broadway Alternative in the Belfry Area. In the Rural Corridor, direct impacts to jurisdictional wetlands would be the same for each of the alternatives.

Table 3.37 Approximate Direct Wetlands Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts.	Jurisdictional: 0.17 ha (0.43 ac) Non-jurisdictional isolated areas: 0 Non-jurisdictional ditches and canals: 0.047 ha (0.120 ac)	Jurisdictional: 0.15 ha (0.38 ac) Non-jurisdictional isolated areas: 0 Non-jurisdictional ditches and canals: 0.161 ha (0.398 ac)
12-m (40-ft) Typical Section	No impacts.	Jurisdictional: 0.18 ha (0.44 ac) Non-jurisdictional isolated areas: 0 Non-jurisdictional ditches and canals: 0.052 ha (0.128 ac)	Jurisdictional: 0.16 ha (0.40 ac) Non-jurisdictional isolated areas: 0 Non-jurisdictional ditches and canals: 0.216 ha (0.534 ac)

Table 3.38 Approximate Direct Wetlands Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No impacts.	Jurisdictional: 0.57 ha (1.41 ac) Non-jurisdictional isolated areas: 0.003 ha (0.007 ac) Non-jurisdictional ditches and canals: 0.871 ha (2.152 ac)	Jurisdictional: 0.57 ha (1.41 ac) Non-jurisdictional isolated areas: 0.003 ha (0.008 ac) Non-jurisdictional ditches and canals: 0.937 ha (2.315 ac)	Jurisdictional: 0.57 ha (1.41 ac) Non-jurisdictional isolated areas: 0 Non-jurisdictional ditches and canals: 0.877 ha (2.167 ac)
12-m (40-ft) Typical Section	No impacts.	Jurisdictional: 0.64 ha (1.57 ac) Non-jurisdictional isolated areas: 0.004 ha (0.010 ac) Non-jurisdictional ditches and canals: 0.912 ha (2.254 ac)	Jurisdictional: 0.64 ha (1.57 ac) Non-jurisdictional isolated areas: 0.004 ha (0.008 ac) Non-jurisdictional ditches and canals: 0.998 ha (2.466 ac)	Jurisdictional: 0.64 ha (1.57 ac) Non-jurisdictional isolated areas: 0 Non-jurisdictional ditches and canals: 0.940 ha (2.323 ac)

Indirect impacts to wetlands could include the modification of the wetland functions due to (1) sedimentation, (2) degradation of water quality, (3) increased water temperature, (4) increase in non-native plant species, (5) hydrologic modifications, and (6) growth inducement.

Sedimentation. Sedimentation could occur when areas adjacent to wetlands and other waters of the US are left exposed as a result of cut and fills. This impact would likely be localized and in most cases can easily be avoided. However, any wetlands or other waters of the US located downgradient of these areas would be susceptible to sedimentation. Filling wetlands can increase on-site and off-site flooding. During periods of heavy rainfall, wetlands serve as flood storage areas, where water can dissipate without damage to developed uplands. The indirect effect of the reduction in flood storage areas in the project corridor would be minimal because the proposed project would not significantly contribute to the filling of wetlands in the corridor. Any of the build alternatives would account for a small reduction in flood storage areas.

Water Quality Degradation. The primary source of contaminants from transportation systems is runoff (including metal and inorganic material) from impervious surface area. Because the existing highway would be widened and/or realigned under all of the build alternatives, impervious surface area would increase and could increase the amount of contaminant input into wetlands. However, the wetlands in the project corridor already experience input from transportation systems because they are located adjacent to the existing roadway.

Increased Water Temperature. The increase of impervious surface area and clearing of vegetation, especially riparian vegetation, are the two most significant actions that affect water temperature. Both reduce infiltration and shading and create more solar exposure to runoff, thereby resulting in increased water temperatures in wetlands. Most transportation projects that result in the reduction of vegetated areas and/or increase in impervious surface area contribute to some extent to a temperature increase in receiving waters. Effects to wetlands in the project corridor would be minor because only a minimal amount of riparian habitat would be removed, and

increased surface area would be spread throughout the project corridor and adjacent to an existing roadway.

Non-native Plant Species. Indirect impacts associated with the build alternatives would include the potential short-term establishment of noxious weeds and other invader species in areas of construction disturbance. These noxious vegetation types may become established in disturbed areas until desirable vegetation is established. However, these jurisdictional and non-jurisdictional wetlands are currently adjacent to the existing road and already experience some level of noxious weed invasion. Carbon County is responsible for maintaining the right-of-way in the project area and spraying for noxious weeds usually occurs in the summer months before the plants have gone to seed. Therefore, the project is not anticipated to increase opportunistic edge and non-native species in wetland areas.

Hydrology. Roads commonly affect how water and its various loads move through watersheds. Roads can disrupt natural flows of surface water and groundwater and/or create new routes for the flow of water. The presence of roads bisecting wetlands can disrupt water circulation patterns, and in some cases the movement of organisms, so much that the separated water bodies exhibit different ecological characteristics.

The placement of structures within the Clarks Fork and within the floodplain would slightly degrade the change in peak/base flow indicator. Depending on final design, scour could increase where river flow is rerouted around and past structures. This change to the river channel and resulting scour could increase sediment transport and alter wetland habitat associated with the Clarks Fork. The flood level could increase immediately upstream of the new bridge if flood flow is restricted, and the flood level could decrease immediately downstream of the bridge as a result of placement of the new approach within the floodplain. Alteration of flows from the proposed project would not have a measurable effect on wetlands adjacent to the Clarks Fork.

The majority of the non-jurisdictional ditches and canals in the project corridor are already bisected by the existing roadway and infrastructure. Crossings of these ditches and canals would include appropriate hydraulic conveyance structures to maintain water flow at these crossings. The proposed new roadway in the project corridor would have a minimal effect on hydrologic features of these resources.

Growth Inducement. Development and farming activities could result in substantial impacts to water quality, including urban storm water and wastewater. However, the proposed project is not expected to increase housing development or farming activity (for more discussion on potential growth, refer to Section 3.2.1.2, Impacts on Land Use). Therefore, the proposed project would not result in impacts to wetlands from induced growth.

3.3.5.3 Mitigation

Impacts to specific wetlands in the project area are unavoidable due to the existing alignment of the highway, the locations of the wetlands, and the design considerations. A COE 404 permit would be required and MDT would comply with the conditions of this permit. The wetland replacement ratio and wetland mitigation site would be identified in consultation with the COE during permitting. An "in-lieu fee" program for wetland mitigation is currently under development with MDT and COE. If this program is implemented, it could be a potential mitigation option.

To reduce impacts to wetlands, reconstruction of MT 72 would generally include widening the road using the existing centerline. For example, in the Rural Corridor segment, all alternative alignments remain on the existing centerline to minimize impacts to two wetlands (Wetland C and

Wetland I). In areas where the roadway is realigned away from the existing centerline, efforts were made to avoid wetlands. Holding the grade as low as possible and reducing the fill slopes in areas where practical and where safety would not be compromised, may be used to reduce the wetland impact areas.

The build alternatives were designed to the greatest extent possible to avoid impacts to wetlands. For example:

- In the Belfry Area segment, the Railroad Alternative's alignment is moved to the west to avoid impacts to non-jurisdictional Wetland D.
- In the Rural Corridor segment, all alternative alignments are moved to the east to avoid impacts to Wetland H.
- In the Rural Corridor segment, the alignment is either on the existing centerline (Modified Existing Alignment Alternative) or aligned far enough to the west (Ridgeway North and Ridgeway South Alternatives) to avoid all impacts to Wetland J/K.

Limited possibilities for on-site mitigation exist within the project right-of-way. However, one small area might be suitable at +/- RP 11.9 on both sides of the river beneath the Clarks Fork "south" bridge. At this location, the bridge span is wide enough to allow wetlands between the river and the abutments. Under the Preferred Alternative, the bridge would likely be removed, making more area available for potential mitigation. Off-site mitigation will be required for the remainder of the impact. This will be assessed during the permitting process with the COE.

MDT will incorporate a Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs) into construction projects. A noxious weed program also will be implemented (see Section 3.3.6, Vegetation).

3.3.6 Vegetation

3.3.6.1 Affected Environment

The general landscape in the vicinity of the project in Carbon County consists of rolling plains, prairie, agricultural land, and riparian areas of the Clarks Fork. Varied, alkali buttes and colored sandstone bluffs give way to the open and fertile Clarks Fork valley. Sagebrush covered hills are present, and creeks are lined with cottonwoods, Russian olive, and wood rows.

Montana Species of Special Concern. There is one vegetative species documented in Carbon County that is listed on the Montana state list of species of special concern.

- **Gray's milkvetch** is a plant species listed by the Montana Natural Heritage Program (MTNHP) as a species of special concern with a G4/S2 ranking (globally the species is apparently secure, though it may be quite rare in parts of its range, especially at the periphery/statewide the species is imperiled because of rarity or because of other factors demonstrably making it very vulnerable to extinction throughout its range). There has been no recent documentation of Gray's milkvetch in the project vicinity. No plants were found during site visits in 2002; one visit occurred during the plant's flowering period (June 26 – July 1). Because the majority of the project area has been altered by agricultural practices, including being disturbed by plowing or grazing during the growing season, it does not provide suitable habitat for the Gray's milkvetch.

Noxious Weeds. According to the Carbon County Weed Supervisor, noxious weeds such as Canada thistle, spotted knapweed, hound’s tongue, hoary cress, field bindweed, and Russian knapweed may be found throughout the right-of-way in the project area. All of these, with the exception of Russian knapweed, were observed in the project area during field investigations.

3.3.6.2 Impacts

Under the No-Build Alternative, there would be no physical reconstruction activities. Therefore, no impacts to vegetation would result.

The build alternatives would have no effect on Gray’s milkvetch because the habitat in the corridor is not suitable for this species.

Impacts to vegetation would be minimal under all the project alternatives, and all of the build alternatives would create similar impacts. No species of special concern would be impacted by any of the build alternatives, and increases in noxious weeds would be small, especially in comparison with other sources in the project area, such as agriculture and grazing. Mature trees and landscaping are located near the existing highway in some areas of the corridor, and may be impacted by the proposed right-of-way. Tables 3.39 and 3.40 provide a comparison of impacts by alternative for the Belfry Area and Rural Corridor, respectively.

Table 3.39 Vegetation Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impacts.	Potential increase in noxious weeds because of new alignment and disturbance of area. Small loss of riparian vegetation from replacement of bridges and culverts. Loss of mature trees along Railroad Avenue.	Minimal potential increase in noxious weeds. Small loss of riparian vegetation from replacement of bridges and culverts. Loss of mature trees along Railroad Avenue.
12-m (40-ft) Typical Section	No impacts.	Slightly greater potential increase in noxious weeds and disturbance of riparian vegetation than 9.6-m (32-ft) typical section due to the larger disturbance area from replacement of bridges and culverts. Loss of mature trees along Railroad Avenue.	Slightly greater potential increase in noxious weeds and disturbance of riparian vegetation than 9.6-m (32-ft) typical section due to the larger disturbance area from replacement of bridges and culverts. Loss of mature trees along Railroad Avenue.

Table 3.40 Vegetation Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No impacts.	Minimal potential increase in noxious weeds. Small loss of riparian vegetation from replacement of bridges and culverts. Some mature trees along the corridor may be impacted.	Slightly greater potential increase of noxious weeds than the Modified Existing Alignment Alternative because of the new alignment near Ridgeway Lane. Small loss of riparian vegetation from replacement of bridges and culverts. Some mature trees along the corridor may be impacted.	Same impacts as Ridgeway North
12-m (40-ft) Typical Section	No impacts.	Slightly greater potential increase in noxious weeds and disturbance of riparian vegetation than 9.6-m (32-ft) typical section due to the larger disturbance area from replacement of bridges and culverts. Some mature trees along the corridor may be impacted.	Slightly greater potential increase in noxious weeds and disturbance of riparian vegetation than 9.6-m (32-ft) typical section due to the larger disturbance area from replacement of bridges and culverts. Some mature trees along the corridor may be impacted.	Same impacts as Ridgeway North

3.3.6.3 Mitigation

Clearing and grubbing will be limited to the area necessary for construction of the project. MDT will follow its general BMPs to reduce impacts to vegetation. A noxious weed management program will be developed and implemented by MDT. To reduce the spread of noxious weeds during construction, the construction contractor will comply with relevant permit conditions that may require cleaning equipment prior to leaving or entering the project area to preclude the transfer of seeds into other sites. The contractor will revegetate all disturbed areas with desirable species as soon as practical.

3.3.7 Wildlife and Migratory Birds

3.3.7.1 Affected Environment

Montana Species of Special Concern. There is one terrestrial species of special concern – the white-tailed prairie dog – documented within Carbon County according to the MTNHP correspondence letter of 2002. In addition, the spotted bat, pallid bat, northern leopard frog, sagebrush lizard, milk snake, and mountain plover were included in analyses because research showed that habitat ranges for these species extended into the project area.

- **White-tailed prairie dogs** are listed by the MTNHP as a species of special concern (with G4/S2 ranking, which means that globally the species is secure, but in Montana it is imperiled

because of rarity or because of other factors making it very vulnerable to extinction throughout its range). Potential habitat may be found in the relatively undisturbed areas, but these potential habitat areas are fragmented by farmland and are likely too small to maintain a prairie dog colony. There has been no recent documentation of white-tailed prairie dogs in the project vicinity or area, and no white-tailed prairie dogs were observed during site visits in 2002.

- **Spotted bat** is listed by the MTNHP as a species of special concern (with G4/S1 ranking, which means that globally the species is secure, but in Montana the species is critically impaired because of extreme rarity or because of other factors making it very vulnerable to extinction throughout its range). The project area does not contain suitable habitat, such as high cliffs, for the spotted bat. All bridge crossings were examined underneath during field visits (June 26-July 1 and October 9-11) for bat species or roosts. No spotted bat species or signs of roosting were observed during the field visits.
- **Pallid bat** is listed by the MTNHP as a species of special concern (with G5/S1 ranking, which means that globally the species is demonstrably secure, but in Montana the species is critically impaired because of extreme rarity or because of other factors making it very vulnerable to extinction throughout its range). The project area provides only marginal habitat for the pallid bat, and more suitable habitat exists outside the project area. All bridge crossings were examined underneath during site visits (June 26-July 1 and October 9-11) for bat species or roosts. No pallid bat species or signs of roosting were observed during the field visits.
- **Northern leopard frog** is listed by the MTNHP as a species of special concern (with G5/S3 ranking, which means globally the species is demonstrably secure, but in Montana the species is either very rare and local throughout its range, found locally in a restricted range, or vulnerable to extinction throughout its range). Potential habitat for the northern leopard frog exists in the project vicinity between +/- RP 19.7 to +/- RP 20.2 in the ponded emergent wetland area located approximately 61 m (200 ft) from the eastern edge of pavement. No individuals were observed during field visits in 2002.
- **Sagebrush lizard** is listed by the MTNHP as a species of special concern (with G5/S3 ranking, which means that globally the species is demonstrably secure, but in Montana the species is either very rare and local throughout its range, found locally in a restricted range, or vulnerable to extinction throughout its range). The sagebrush lizard is found primarily in sagebrush areas, but also in open forests and brushlands at elevations above 1,219 m (4,000 ft). The project area is located below 1,219 m (4,000 ft) in fragmented sagebrush habitat. No individuals were observed during field visits in 2002.
- **Milk snake** is listed by the MTNHP as a species of special concern (with G5/S2 ranking, which means that globally the species is demonstrably secure, but in Montana it is imperiled because of rarity or because of other factors making it vulnerable to extinction throughout its range). The milk snake has been reported in sagebrush-grassland habitat, ponderosa pine savannah habitat with sandy soils, rock outcrops and hillsides, badland scarps, and sometimes within city limits. No milk snakes were observed during the field visit, and none have been documented in the project area. However, the project area does provide potentially suitable habitat.
- **Mountain plover** is listed by the MTNHP as a species of special concern (with G2/S2 ranking, which means that globally and in Montana the species is imperiled because of rarity or because of other factors making it vulnerable to extinction throughout its range). The mountain plover inhabits arid short-grass prairie and disturbed prairie, and forage on slopes, ridges and plowed fields. No mountain plovers were observed during site visits, and none have been documented in the project vicinity. However, because mountain plover habitat consists of plowed fields and grazed areas on flat topography, the project area could provide suitable habitat. These types

of areas are located adjacent to the existing road and comprise most of the project area, except for the areas designated as wetlands.

Urban and Rural Wildlife. Urban and rural species such as squirrel, skunk, voles, shrew, mice, raccoons and rats, deer, coyote, bobcat, rabbit, porcupine, badger, raptors, foxes, ground squirrels and other open forest and grassland animals use the project area. Wildlife collisions with vehicles are a source of accidents, particularly in the Rural Corridor where approximately 14 percent of all accidents in the corridor are wildlife-related.

Bat Species. Bat species possibly inhabiting the study area include little brown myotis, western small-footed myotis, spotted bat, pallid bat, and the big brown bat. The spotted bat and pallid bat are described in more detail above under Montana Species of Special Concern. Habitat for the remaining bat species (little brown myotis, western small-footed myotis, and big brown bat) may be found in the riparian areas within the project corridor. All bridge crossings were examined underneath during site visits (June 26-July 1 and October 9-11) for bat species or roosts. No bats or signs of roosting were observed in the 2002 field visits conducted for this project.

Amphibians and Reptiles. Terrestrial amphibians and reptiles known to live in Carbon County include the following species: tiger salamander, Woodhouse's toad, western chorus frog, northern leopard frog, short-horned lizard, sagebrush lizard, painted turtle, racer, gopher snake, and milk snake. The northern leopard frog, sagebrush lizard, and milk snake are listed by the MTNHP as species of special concern and are described in more detail above. Tiger salamander, Woodhouse's toad, western chorus frog, short-horned lizard, painted turtle, racer, and gopher snake are not considered threatened, endangered, sensitive, or a species of concern, but their habitat range extends into the project area, and suitable habitat for these species is present in the project area.

Birds. Mountain plover is listed by the MTNHP as a species of special concern and is described in more detail above under Montana Species of Special Concern. Several bird species are present in the vicinity and were observed during the field visits. These species include American robin, black-capped chickadee, common crow, song sparrow, northern flicker, mourning dove, common poorwill, chimney swift, cliff swallow, black-billed magpie, northern mockingbird, black-headed grosbeak, Canada goose, mallard, northern pintail, turkey vulture, American kestrel, ruffed grouse, killdeer, eastern kingbird, great-blue heron and short-eared owl. While these bird species are not species of special concern at the federal or state level, they are protected by the federal Migratory Bird Treaty Act (MBTA) of 1918. Under this Act, destruction or damage of active or occupied nests and eggs of migratory birds is prohibited.

All bridge crossings were examined underneath for nests. No active or occupied nests were observed at any location during the site visits on June 26 - July 1 and October 9 - 11, 2002. However, decaying remnants of swallow nests were observed under the two crossings of the Clarks Fork, indicating repeated use of these bridge structures for nesting.

BLM lists sage grouse as a sensitive species according to their terms, although there are no documented occurrences of sage grouse or sage grouse leks (displaying and breeding areas) in the project vicinity. There is also no native sagebrush or grassland habitat; therefore, potential sage grouse habitat would not be affected by the project.

3.3.7.2 Impacts

Under the No-Build Alternative, there would be no physical reconstruction activities. Therefore, no impacts to terrestrial resources or species would result.

None of the build alternatives have substantial effects on wildlife. The build alternatives would have no effect on white-tailed prairie dogs, spotted bat, pallid bat, northern leopard frog or sagebrush lizard, all of which are Montana Species of Special Concern. In the corridor, suitable habitat for these species is either not present or, in the case of the northern leopard frog, would not be disturbed, and no individuals were observed during site visits. The project may affect other Montana Species of Special Concern, the milk snake, and mountain plover individuals (should they be present) and/or their habitat, but it is not likely to contribute to a trend toward Federal listing or loss of viability of the species. The project area could provide suitable habitat for these two species. Generally, the alternatives that require more ground disturbance (i.e., the Railroad Alignment Alternative in the Belfry Area and the Ridgeway North and Ridgeway South Alternatives in the Rural Corridor) result in greater disturbance of habitat areas. However, only the riparian areas provide desirable habitat for wildlife. In other areas agricultural activities and fragmentation have reduced habitat value. Impacts by alternative are described in Tables 3.41 and 3.42 for the Belfry Area and Rural Corridor, respectively.

The indirect effects to terrestrial resources from the build alternatives are interrelated and may include: (1) habitat fragmentation and alteration, (2) increased water quality degradation from contaminant input, and (3) an increase in non-native plant species. The indirect effects to terrestrial resources would be relatively similar for any of the build alternatives because all of the alternatives involve constructing structures over waterways with habitat and all of the alternative sites possess similar biological characteristics.

For this project area the effects of habitat fragmentation, water quality degradation, and invasion of non-native plants would be minimal because most of the effects caused by the roadway have already been realized, and the land is not considered prime habitat.

Wildlife collisions with vehicles are frequent in the project area. The relatively flat topography and open fields surrounding the majority of the roadway make it difficult to build infrastructure that would be effective in creating distinct wildlife underpasses or crossings. Improvements under all of the build alternatives are not anticipated to increase wildlife fatalities because speeds would not increase and roadway conditions would improve driver reactions. The wider roadway, and increased visibility from flatter side slopes would provide more reaction time and space to maneuver around the animal. The existing lack of shoulders or adequate clear zones along the corridor currently makes it difficult to safely avoid an animal in the road.

Table 3.41 Wildlife and Migratory Bird Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	<p>Continued motorist / wildlife conflicts due to narrow roadway and steep side slopes.</p> <p>No impacts from habitat disturbance.</p>	<p>Potential decrease in motorist/wildlife collisions because of improved clear zones, flatter side slopes and wider shoulders would improve sight distance and maneuverability to avoid wildlife.</p> <p>No effect to the Montana Species of Special Concern (white-tailed prairie dog, spotted bat, pallid bat, or sagebrush lizard) because of lack of suitable habitat. No effect to the northern leopard frog, a Montana Species of Special Concern, because suitable habitat would not be disturbed.</p> <p>May affect milk snake and mountain plover (should they be present), Montana Species of Special Concern, because the project area does contain suitable habitat for these species, but it is not likely to contribute to a trend toward Federal listing or loss of viability of these species.</p> <p>Potential disturbance of cliff swallow nests during bridge replacements if construction occurred when nests were active.</p> <p>Small potential impacts to other terrestrial species or their habitat, but impacts would not contribute to trends toward Federal listing or loss of viability of species.</p>	<p>Similar to Railroad Alignment except slightly smaller overall impact due to the expansion along an existing roadway (Broadway Avenue and the existing MT 72 alignment).</p>
12-m (40-ft) Typical Section	<p>Same impacts as 9.6-m (32-ft) typical section.</p>	<p>Same impacts as 9.6-m (32-ft) typical section except, slightly greater impacts to non-listed terrestrial species because of greater area of ground disturbance affecting habitat.</p>	<p>Similar to Railroad Alignment except slightly smaller overall impact due to the expansion along an existing roadway (Broadway Avenue and the existing MT 72 alignment).</p>

Table 3.42 Wildlife and Migratory Bird Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	<p>Continued motorist / wildlife conflicts due to narrow roadway and steep side slopes.</p> <p>No impacts from habitat disturbance.</p>	<p>Potential decrease in motorist/wildlife collisions because of improved clear zones and wider shoulders would improve sight distance and maneuverability to avoid wildlife.</p> <p>No effect to the Montana Species of Special Concern (white-tailed prairie dog, spotted bat, pallid bat, or sagebrush lizard) because of lack of suitable habitat. No effect to the northern leopard frog, a Montana Species of Special Concern, because suitable habitat would not be disturbed.</p> <p>May affect milk snake and mountain plover (should they be present), Montana Species of Special Concern, because the project area does contain suitable habitat for these species, but it is not likely to contribute to a trend toward Federal listing or loss of viability of these species.</p> <p>Potential disturbance of cliff swallow nests during bridge replacements if construction occurred when nests were active.</p> <p>Small potential impacts to other terrestrial species and their habitat, but none that would contribute to trends toward Federal listing or loss of viability of species.</p>	<p>Similar to Modified Existing Alignment Alternative except (1) slightly greater impacts to non-listed terrestrial species because of greater area of increased ground disturbance from new alignment (however, most area that would be disturbed by the roadway has been previously disturbed by agricultural practices and is not high quality habitat for wildlife) and (2) Potentially higher incidents of wildlife collisions due to closer proximity of the new roadway to the riparian corridor.</p>	<p>Similar to Ridgeway North</p>
12-m (40-ft) Typical Section	<p>Same impacts as 9.6-m (32-ft) typical section.</p>	<p>Slightly greater impacts due to increased area of ground disturbance affecting habitat.</p>	<p>Slightly greater impacts due to increased area of ground disturbance affecting habitat.</p>	<p>Slightly greater impacts due to increased area of ground disturbance affecting habitat.</p>

3.3.7.3 Mitigation

No mitigation is necessary for terrestrial wildlife. For migratory birds the following mitigation will be implemented:

- To preclude migratory birds (such as cliff swallows) from constructing nests on structures that are to be demolished, MDT will remove all nests from structures on or between the dates of August 16 and April 30. MDT will then cover or enclose all surfaces on the underside of the structures with mesh netting, chicken wire fencing, or other suitable material to prevent birds from establishing new nests. MDT will maintain this covering material until the structures have been removed. The netting, fencing, or other material will have no opening or mesh size greater than 19 mm. If any active nests are reestablished or exist on the structures on or between May 1 and August 15, MDT will not remove the structures or nests until the project manager, in coordination with MDT Environmental Services, provides approval.
- Overhead power lines relocated during construction will be raptor-proofed in accordance with MDT policies.

3.3.8 Aquatic Species

3.3.8.1 Affected Environment

Montana Species of Special Concern. There are two aquatic species of special concern that are documented in Carbon County according to the MTNHP correspondence letter of 2002: the Yellowstone cutthroat trout and burbot.

- **Yellowstone cutthroat trout** is listed by the MTNHP as species of special concern (with G4/S2 ranking, which means that globally the species is secure, but in Montana it is imperiled because of rarity or because of other factors making it very vulnerable to extinction throughout its range). The majority of the Yellowstone cutthroat trout in the project area reach of the Clarks Fork River are resident, native populations. However, some stocked populations may migrate into the project area reach of the Clarks Fork River from the mainstream Yellowstone River near Billings, Montana and from the Clarks Fork River, south of the project area in Wyoming. MFWP stocks Yellowstone cutthroat trout in the mainstream of the Yellowstone River near the mouth of the Clarks Fork River, near Billings and Laurel. A hatchery in Wyoming, south of the project area, raises Yellowstone cutthroat trout to stock the Clarks Fork River and some of these stocked populations may migrate to the reach of the river within the project area. Spawning activity does not occur in the project area.
- **Burbot** is listed by the MTNHP as a species on review (with a G5 ranking, which means that it is demonstrably secure, though it may be quite rare in part of its range, especially at the periphery). According to the MFWP's MFish database, burbot are present in the Clarks Fork in the project area but spawning habitat is not present.

Other Species. The following additional fish species are commonly found in the Clarks Fork and its tributaries in the project area: arctic grayling, brook trout, brown trout, burbot, common carp, emerald shiner, flathead chub, goldeye, longnose dace, longnose sucker, mottled sculpin, mountain sucker, mountain whitefish, rainbow trout, river carpsucker, shorthead redhorse, stonecat, western silvery/plains minnow, white sucker, and Yellowstone cutthroat trout. The stretch of the Clarks Fork located in the project corridor provides mainly rearing habitat for juvenile and adult fish listed above with some spawning areas for Montana game fish such as brown trout, rainbow trout, and mountain whitefish. Spawning periods are October 15 to April 30 for the brown trout and mountain whitefish and April 15 to July 15 for rainbow trout.

Mountain sucker is the only fish species present in Bear Creek and minnow is the only fish species in Silver Tip Creek. These species are not Federally listed, state Species of Special Concern, or Montana game fish species and likely spawn further upstream, in portions of Silver Tip Creek that are outside of the project area. Dry Creek was found to contain brook trout, brown trout, and white sucker. Sand Creek (Canal) was found to have brown trout, longnose dace, rainbow trout, and sucker. Dry Creek and Sand Creek provide only rearing habitat for juvenile and adult fish. There is no spawning habitat in the above mentioned creeks in the project area. Spawning in these drainages occurs at least 1.6-km (1-mi) upstream in areas that are not channelized canals. The remaining agricultural ditches are assumed to have no significant populations of fish species present.

There are no formal fishing access points within the project area. BLM owns a parcel of land along the Clarks Fork within the project corridor that does not currently have access. BLM with MFWP would like to develop this parcel for fishing access in the future.

3.3.8.2 Impacts

Under the No-Build Alternative, there would be no physical reconstruction activities. Therefore, no impacts to aquatic resources or species would result.

None of the alternatives would adversely affect the Yellowstone cutthroat trout or burbot. There are no spawning areas for these species in the project area. While the build alternatives could affect individuals should they be present, project activities are unlikely to contribute to a trend toward Federal listing or loss of viability of either of these species.

Direct impacts to aquatic resources from the build alternatives could include effects to habitat and individuals that may be present during construction, including (1) fish mortality and (2) displacement of individual fish from the project corridor due to sedimentation and turbidity as a result of work in and near water bodies.

In-water work and de-watering during bridge construction could result in fish mortality, especially to juvenile fish should they be present due to the crushing of individual fish by construction equipment. Due to human-related disturbance, fish species would not likely be present in the project area during construction after the initial disturbance, and direct mortality is very unlikely to occur if fish species are present.

Bridge and culvert construction would require work within and immediately adjacent to fish bearing water bodies. These construction activities are likely to increase sediment and turbidity levels in these water bodies during and immediately following construction. Such increases could affect aquatic species, if they are present, within the area downstream of the construction area. Sedimentation and turbidity increases resulting from clearing and grading activities are generally short-term and subside following project completion.

Indirect impacts to fisheries or fish habitat under the build alternatives include effects caused by: (1) contaminants, (2) substrate, (3) increased water temperature, (4) loss of riparian vegetation, and (5) change in peak/base flows.

Contaminants. The primary source of contaminants from transportation systems is runoff from impervious surface area. Heavy metals are the most commonly cited constituent associated with roadway runoff, particularly cadmium, copper, lead, and zinc. As noted in the water resources section, contamination is expected to have only minimal effect on water quality. Therefore, the indirect effect to fisheries is also expected to be small.

Substrate. Sediment released during construction can fill voids in downstream gravel thereby reducing its suitability for spawning and availability and abundance of benthic macro invertebrates. Most fish species do not spawn in the area of new construction or structure replacements. However, MFWP game fish species (brown trout, rainbow trout and mountain whitefish) may spawn in the project areas at the two bridge crossings of the Clarks Fork (+/- RPs 11.9 and 14.4) and may be affected by bridge construction under all of the build alternatives.

Increased Water Temperature. The increase of impervious surface area and clearing of vegetation, especially riparian vegetation, are the two most prominent actions that affect water temperature in aquatic environments. Clearing of vegetation reduces infiltration and shading and creates more solar exposure to runoff, thereby resulting in increased water temperatures in receiving water bodies. Most transportation projects that result in the reduction of vegetation areas and/or an increase in impervious surface area contribute to some extent to a temperature increase in receiving waters. This effect to fisheries habitat would likely be minor and localized.

Riparian Vegetation. Riparian shrub and tree habitat could be permanently removed from the banks of the Clarks Fork, Bear Creek, Silver Tip Creek, Dry Creek Canal, and Sand Creek Canal, reducing the potential for shading and the introduction of organic matter and large pieces of wood, which create important habitat complexity into these water bodies. This effect to fisheries habitat would likely be minor and localized.

Change in Peak/Base Flow. The placement of piers/columns within the Clarks Fork and bridge abutments and associated roadway within the floodplain would slightly degrade the change in peak/base flow indicator. Because structures are currently present in the Clarks Fork, and no net addition of structures is proposed, alteration of flows is not expected to be substantial or have a measurable effect on fisheries.

Impacts to other aquatic resources would be relatively similar for each of the build alternatives because all involve replacing bridges and culverts and increasing the amount of paved area along the project route. Differences among the amount of increase of paved areas would be negligible in terms of impacts to aquatic resources. Loss of riparian vegetation associated with aquatic resources during construction may occur at the crossings of the Bear Creek, Clarks Fork, Silver Tip Creek, Dry Creek Canal, and Sand Creek Canal and would affect those species that may be present as presented in the Affected Environment section above and described in more detail in the *Biological Resources Report* (DEA 2004). Again, impacts would be similar among build alternatives, and none of these water bodies provides significant habitat so impacts would be negligible for aquatic species.

Fishing access could be improved under the Railroad Alignment Alternative because this alignment would create an opportunity for BLM and MFWP to access BLM's parcel on the Clarks Fork. Fishing access would not change under any of the other alternatives.

Short-term impacts associated with construction are addressed in the Construction Impacts section.

3.3.8.3 Mitigation

Although impacts are expected to be minor, a number of mitigation measures will be implemented to ensure protection of aquatic species during project implementation.

- A Montana Stream Protection Act Permit 124 (SPA 124) will be required and may identify mitigation measures that would be incorporated into the project.

- Final design for culvert and bridge crossings has not been determined. The proper replacement structures will be determined by means of engineering analysis to address the required hydraulic functions at the crossings.
- The proposed project will be designed to minimize impacts to fisheries wherever practicable.
- All structures at stream and river crossings that are identified as having fisheries will be designed for fish passage.
- MDT will incorporate a SWPPP and BMPs into construction projects.
- Sediment control during and following construction will be implemented. Measures to prevent sediment loading into the waterways may be needed should soil and debris run-off occur from construction equipment and from exposed, disturbed areas adjacent to the waterways during construction. In-water work will be held to a minimum in the Clarks Fork and any of its tributaries.
- MDT will consult with the BLM and MFWP about fishing access on BLM property at the new bridge over the Clarks Fork.

3.3.9 Threatened and Endangered Species

3.3.9.1 Affected Environment

According to correspondence from USFWS, there are four species protected under the Endangered Species Act potentially occurring in the project corridor: bald eagle (threatened), black-footed ferret (endangered), gray wolf (non-essential experimental), and black-tailed prairie dog (candidate) (see Appendix G). At the time of original correspondence, the mountain plover was a proposed threatened species. However, through a process of final review and comment, the USFWS withdrew the proposal to list mountain plover on the basis of more current information. Therefore, the mountain plover is not discussed as a protected species under the Endangered Species Act in this document. Mountain plover are discussed under Montana Species of Special Concern in Section 3.3.7.

Bald eagle foraging activity may occur on the Clarks Fork in the project area, and foraging, transient bald eagles have been documented along the river in the spring and fall in the project area. No nests are documented within 32 km (+/- 20 mi) of the project area, and no documented roosts or perch sites are present in the project area. Wintering bald eagles have not been recorded in the project area, and none were observed in field visits in 2002.

Black-footed ferrets have not been historically documented in the project area or vicinity, and no colonies were found during field visits. In addition, the project area does not contain suitable habitat because neither prairie dogs nor contiguous grasslands are present in the project area to support a ferret population.

Gray wolves have not been documented in Carbon County and were not observed during the field survey. The nearest documented pack is greater than 64 km (+/- 40 mi) from the project area. Further, the sagebrush and wheatgrass plains habitat in the project area is not suitable habitat for gray wolves.

Black-tailed Prairie Dogs have not been documented in the project area, and none were observed during the site visit. The nearest documented colony consists of black and white-tailed prairie dogs and is located in Carbon County, approximately 9.7-km (6-mi) southeast of the project and near US 310. The prairie dog colonies observed in Montana occupied an area of at least 3.2 ha

(8 ac). Agricultural land and residential development have limited the availability of suitable habitat in the project area. While potential habitat may be found in the relatively undisturbed areas, the areas are fragmented by farmland and are likely too small to maintain a prairie dog colony.

3.3.9.2 Impacts

Under the No-Build Alternative, there would be no physical reconstruction activities. Therefore, no impacts to threatened and endangered species would result.

The build alternatives are not likely to adversely affect bald eagles. Direct impacts to bald eagles from the build alternatives could include impacts to suitable perching, roosting, or nesting habitat from the removal of riparian habitat. Bald eagles could also be indirectly impacted through impacts to potential prey resources. No perching, roosting, nesting, or wintering site locations have been documented in the project area. Impacts to bald eagle prey would be relatively similar for any of the build alternatives because each involves replacing bridges and culverts and impacting comparable amounts and quality of riparian habitat. However, the loss of riparian habitat would be minimal compared to the availability of similar habitat that would remain along the Clarks Fork and in surrounding areas.

The build alternatives will have no effect on the black-footed ferret, gray wolf, and black-tailed prairie dog because there is no suitable habitat in the project area for these species. USFWS has concurred with the assessment of impacts to endangered species. The USFWS concurrence letter, dated September 27, 2004, is included in Appendix G.

3.3.9.3 Mitigation

Overhead power lines relocated during construction will be raptor-proofed in accordance with MDT policies.

3.3.10 Floodplains

3.3.10.1 Affected Environment

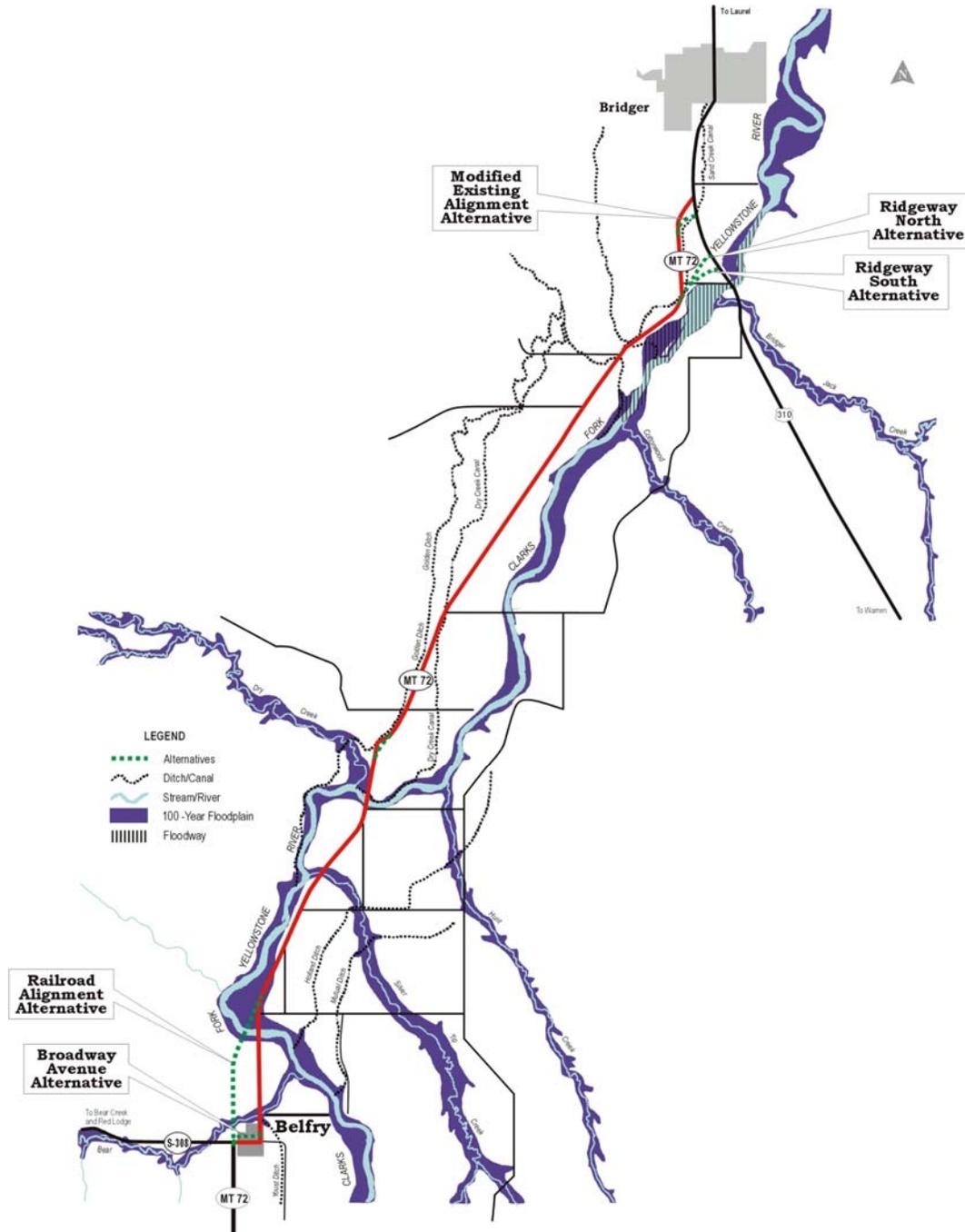
EO 11988, *Floodplain Management*, requires federal agencies to avoid direct or indirect support of floodplain development whenever a practicable alternative exists. EO 11988 and 23 CFR 650 Part A require an evaluation of project alternatives to determine the extent of any encroachment into the base floodplain. The base flood (100-year flood) is the regulatory standard used by federal agencies and most states to administer floodplain management programs. A "floodplain" is defined as lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, with a 1 percent or greater chance of flooding in a given year. As described in FHWA's floodplain regulation (23 CFR 650 Part A), floodplains provide natural and beneficial values serving as areas for fish, wildlife, plants, open space, natural flood moderation, water quality maintenance, and groundwater recharge.

Within the study area, the Federal Emergency Management Agency (FEMA) has delineated the 100-year floodplain for the Clarks Fork, Bear Creek, Silver Tip Creek, Dry Creek, and Youst Ditch. As illustrated in the Environmental Overview Maps in Appendix A, the existing MT 72 alignment is in close proximity to (within 4.8 km (+/- 3 mi)) or within the 100-year floodplain of the Clarks Fork for the entire project area. The 100-year floodplains for Bear Creek, Silver Tip Creek, Dry Creek,

and Youst Ditch are also within the project area in specific locations. (Reference Figure 3.2 and Appendix A for floodplain mapping)

Within the Belfry Area, the existing alignment of the roadway has a transverse encroachment of Bear Creek on S-308 and one transverse encroachment of Bear Creek/Youst Ditch on MT 72. For the Clarks Fork floodplain, existing MT 72 has a longitudinal encroachment that also includes a transverse crossing of the Clarks Fork River. This longitudinal encroachment continues into the Rural Corridor section. In the Rural Corridor, existing MT 72 also has a transverse encroachment of Silver Tip Creek floodplain (RP 13.6). Also in the Rural Corridor there is a transverse encroachment of the Clarks Fork/Dry Creek floodplain (RP 14.4).

Figure 3.2 Floodplains



Source: Flood Insurance Rate Map, Carbon County, Montana, 1981
FEMA Digital 03 FIRM Data, FIS mapping for Carbon County, Montana

3.3.10.2 Impacts

The Flood Insurance Rate Maps (FIRM) from FEMA were used to identify impacts to 100-year floodplains within the study area. None of the project alternatives are in a designated floodway. The No-Build Alternative is the same as the existing condition. In the Belfry Area, the Railroad

Alignment Alternative (Preferred Alternative) results in a new transverse crossing (RP 11.8) of approximately 550 m (1,800 ft) of the Clarks Fork River and floodplain and merges into the existing longitudinal encroachment in the Clarks Fork floodplain. There is also one new transverse encroachment at Bear Creek due to this realignment of MT 72. Within the floodplains, the Broadway Avenue Alternative is on the existing alignment of MT 72 and therefore additional encroachments are limited to the increased shoulder width and side slope. Therefore the 12.0-m (40-ft) typical section would have an additional 2.4-m (8-ft) in width in the encroachment areas compared to the 9.6-m (32-ft) typical section.

In the Rural Corridor, the build alternatives are similar to the No-Build Alternative because they are on the same alignment through the Clarks Fork, Silver Tip, and Dry Creek floodplains. For the Rural Corridor, the additional encroachments are limited to the increased shoulder width and side slope. Therefore the 12.0-m (40-ft) typical section would have an additional 2.4-m (8-ft) in width in the encroachment areas compared to the 9.6-m (32-ft) typical section.

The encroachment of the Preferred Alternative would not affect the carrying capacity of the rivers and would not increase the flood risk. Natural and beneficial floodplain values, such as the natural moderation of floods and the maintenance of groundwater, would not be impacted by the Preferred Alternative. This proposed project is not anticipated to encourage additional development in the floodplain. Avoiding, minimizing impacts to, and replacing wetlands (see Section 3.3.5) and revegetating (see Section 3.3.6) in the floodplain areas would minimize impacts. Other natural and beneficial values of floodplains include providing fish habitat. As discussed, mitigation measures will be undertaken for aquatic species (see Section 3.3.8) and water body modifications (see Section 3.3.11) that would minimize impacts to fisheries habitat.

The Preferred Alternative addresses MT 72 corridor safety issues by widening the existing road and realigning a section of the highway away from the sharp curve in town and the school. In the Rural Corridor, the addition of shoulders and flattening side slopes will increase the width of existing encroachments. Since these are safety improvements that are needed to an existing facility that is crossing several floodplains, there is no practicable alternative to being in the floodplain in these locations.

The floodplains that MT 72 crosses are designated as Zone A flooding areas, which denotes that they are affected by the 100-year flood. In accordance with Montana statutes, the Base Flood Elevation (BFE) increase is limited to 0.15 m (0.5 ft). A location hydraulic study has been completed for the proposed project, and water surface profiles have been generated for the proposed structures. Structures would be designed to ensure that the increase in water surface elevation from the base flood elevation is less than 0.15 m (0.5 ft). The proposed project will be in compliance with Executive Order 11988, Floodplain Management, which requires federal agencies to avoid direct or indirect support of floodplain development where there is a practicable alternative.

3.3.10.3 Mitigation

For the floodplain encroachments, a Floodplain Development Permit will be required from the Carbon County Floodplain Administrator. To minimize impacts, design of this project will be in compliance with Federal-Aid Highway Program Manual (FHPM) 6-7-3-2 "Location and Hydraulic Design of Encroachments on Flood Plains" (also referenced as 23 CFR 650 A) and Executive Order 11988, Floodplain Management.

3.3.11 Water Body Modifications

3.3.11.1 Affected Environment

There are presently 19 water crossings within the project limits. These crossings include four river crossings (two for the Clarks Fork, one at Bear Creek, and one at Silver Tip Creek), four canals, and 11 ditches or drainages. Some of these crossings include associated wetlands. Details on the existing structures and water bodies are included below. The wetland determinations noted here are subject to COE review.

Bridges

- Clarks Fork "south" bridge (RP 11.9). MT 72 crosses the Clarks Fork approximately 1.6 km (+/- 1 mi) northeast of Belfry. The highway crosses the river with an existing 3-span steel girder bridge 75.9 m (249 ft) long and 7.3 m (24 ft) wide. There are two sets of piers in Clarks Fork. The river is a water of the U.S., and the adjacent riparian areas are Category III jurisdictional wetlands.
- Silver Tip Creek bridge (RP 13.6). MT 72 crosses Silver Tip Creek approximately 4.8 km (+/- 3 mi) northeast of Belfry. The highway crosses the river with an existing 3-span timber stringer bridge 17.98 m (59 ft) long and 7.4 m (24.2 ft) wide. There are two sets of piers in Silver Tip Creek. The creek is a water of the U.S., and the adjacent riparian wetlands are Category III jurisdiction wetlands. This crossing is used as a stockpass.
- Clarks Fork "north" bridge (RP 14.4). MT 72 crosses Clarks Fork approximately 6.4 km (+/- 4 mi) northeast of Belfry. The highway crosses the river with an existing 4-span steel girder bridge 80.8 m (265 ft) long and 6.4 m (21.1 ft) wide. There are three sets of piers in Clarks Fork. The river is a water of the U.S. and wetlands associated with this section of the river are Category III jurisdictional wetlands.
- Dry Creek Canal bridge (RP 14.5). MT 72 crosses Dry Creek Canal approximately 6.4 km (+/- 4 mi) northeast of Belfry. The highway crosses the river with an existing 1-span concrete slab bridge 6.93 m (22.7 ft) long and 7.9 m (26.0 ft) wide. There are no piers in Dry Creek Canal. The wetlands associated with this section of the canal are Category III jurisdictional wetlands.
- Sand Creek Canal bridge (RP 19.9). MT 72 crosses Sand Creek Canal approximately 4.8 km (+/- 3 mi) south of Bridger. The highway crosses the river with an existing 1-span timber stringer bridge 5.2 m (17 ft) long and 7.7 m (25.4 ft) wide. There are no piers in the Sand Creek Canal.
- Sand Creek Canal bridge (RP 20.4). MT 72 crosses Sand Creek Canal approximately 3.2 km (+/- 2 mi) south of Bridger. The highway crosses the river with an existing 1-span timber stringer bridge 4.9 m (16 ft) long and 8.1 m (26.6 ft) wide. There are no piers in the Sand Creek Canal.

Culverts

- Bear Creek (on S-308). This culvert is not within the project limits. Bear Creek crosses under S-308, west of the S-308 and MT 72 intersection. Water is conveyed under the highway with an existing box culvert. The wetlands associated with this creek are Category III jurisdictional wetlands.
- Youst Ditch (RP 10.9). MT 72 (Wisconsin Street) crosses Youst Ditch at the northeastern end of Belfry. The ditch is conveyed from east to west under the roadway by two existing 75-cm (30-in) corrugated metal pipes (CMPs). The wetlands associated with this ditch are Category III jurisdictional wetlands.

- Bear Creek (RP 11.0). MT 72 crosses Bear Creek at the northern edge of Belfry. The creek is conveyed under MT 72 by an existing 3.1-m x 3.1-m (10-ft x 10-ft) box culvert augmented by a parallel 135-cm (54-in) CMP set at a slightly higher elevation. The creek flows through the culvert from west to east through a thickly wooded area. The wetlands associated with this creek are Category III jurisdictional wetlands.
- Unnamed Drainage (RP 13.2). MT 72 crosses a natural runoff and groundwater seepage approximately 4 km (+/- 2.5 mi) northeast of Belfry. The drainage is conveyed under MT 72 by an existing 60-cm (24-in) CMP westward toward the nearby Clarks Fork. The wetlands associated with this drainage are Category III jurisdictional wetlands.
- Unnamed Drainage (RP 14.7). MT 72 crosses a natural runoff drainage approximately 6.4-km (+/- 4-mi) northeast of Belfry. The drainage is conveyed under MT 72 by an existing corrugated metal culvert of undetermined size southward toward the Clarks Fork. The wetlands associated with this drainage are non-jurisdictional.
- Kuchiniski Ditch (RP 15.5). MT 72 crosses this ditch near the intersection with South Dry Creek Road. The ditch flows under MT 72 through an existing CMP of undetermined size. The CMP passes through an existing concrete canal structure that formerly conveyed Dry Creek Canal flow. The headgate for the Kuchiniski Ditch is located on Golden Ditch, on the west side of the South Dry Creek Road and MT 72 intersection.
- Dry Creek Canal (RP 16.5). MT 72 crosses Dry Creek Canal again 8.9 km (+/- 5.5 mi) northeast of Belfry. The canal crosses under the highway at an acute angle through an existing 2.7-m x 1.2-m (9-ft x 4-ft) concrete box culvert (CBC).
- Dry Creek Canal (RP 16.6). After passing through the existing structure at +/- RP 16.5, Dry Creek Canal parallels MT 72 along the west side of the highway. It then makes a 90-degree bend to the left and passes under the old railroad grade through a CBC. The gravel railroad bed is still present in this area.
- Unnamed Drainage (RP 18.1). This drainage conveys natural runoff and irrigation waste from Dry Creek Canal and Golden Ditch under MT 72 through an existing 2.7-m x 1.8-m (9-ft x 6-ft) CBC with wingwalls. This culvert is reportedly used as a stockpass in the winter. The wetlands associated with this drainage are Category III jurisdictional wetlands.
- Irrigation Waste Ditch (RP 19.1). This ditch carries irrigation return flows under MT 72 through an existing 90-cm (36-in) CMP. The wetlands associated with this drainage are non-jurisdictional wetlands.
- Irrigation Waste Ditch (RP 19.1). This ditch is in close proximity to MT 72 and carries irrigation return flows under the old railroad grade through an existing 120-cm (48-in) CMP. A headwall constructed of river rock is in poor condition and a drain tile connected to the culvert has been installed across the west edge of the Karl Graham property.
- Irrigation Waste Ditch (RP 19.4). This ditch serves as a natural drainage of approximately 9.5 sq. km (3.7 sq. mi) and carries the remaining flow of Dry Creek Canal and Golden Ditch toward the Clarks Fork. The wetlands associated with this drainage are non-jurisdictional wetlands.
- Unnamed Drainage (RP 19.7). This ditch serves a natural drainage of approximately 2.10 sq. km (0.81 sq. mi). The flow is conveyed from the basin west and north of the highway toward the Clarks Fork under MT 72 through two existing 120-mm (48-in) CMP culverts. The culverts are 33 percent filled with sediment, which greatly reduces their capacity. The wetlands associated with this drainage are non-jurisdictional wetlands.

3.3.11.2 Impacts

There are four existing crossings in the Belfry Area and 14 existing crossings in the Rural Corridor. These crossings would remain unchanged in the No-build Alternative. For the No-Build Alternative, no in-stream work would be required, so no disturbance of existing conditions would occur. The structures would also not change, and there would be no opportunity to reduce flooding potential with larger diameter culverts or to minimize in-stream piers with longer bridges.

For the Belfry Area, the Railroad Alignment Alternative (Preferred Alternative) would require one additional new crossing at Bear Creek, and the existing Clarks Fork "south" bridge would be replaced at a new location downstream. For the Broadway Avenue Alignment, the number and the location of crossings would be the same as the No-Build Alternative.

For all the Rural Corridor build alternatives, the number (14) and locations of crossings would remain the same as the No-Build Alternative.

The impacts are similar among the build alternatives because the number of structures replaced and/or constructed is similar (one new crossing of Bear Creek is required for the Railroad Alignment Alternative). In-stream work can affect hydrology, flooding potential, erosion, sedimentation, and aquatic habitats. Types of modifications that may occur as a result of this project include impoundment; channel alterations from realignment, deepening, or erosion; and clearing of riparian vegetation. Although final design for water crossings has not been determined, new structures would be designed to minimize disturbance to stream hydrology, banks and channel reshaping, and unnecessary clearing of vegetation. The number and placement of new piers would be designed to minimize impacts to the stream channel wherever practicable. Because there will be the same total number of water crossings as existing conditions under any of the alternatives and new crossings will be designed to minimize permanent disturbance, long-term impacts to water bodies would be similar to or perhaps better than existing conditions. Benefits of new structures could include reduced flooding hazards and fewer in-water piers.

3.3.11.3 Mitigation

All work will be performed in accordance with state and federal guidelines regarding water quality and permit conditions. These include the applicable regulations under the Federal Clean Water Act of 1972, as amended (i.e., 404 Permit) and specific permit requirements from the Montana SPA 124 Permit; Floodplain and Roadway Management Act, Section 402/MPDES permit; any other laws or regulations that may apply to the project; and the utilization of the current BMPs. Structures will be designed to minimize disruption of stream hydrology or permanent alterations of stream banks. Clearing of riparian areas will be done in accordance with mitigation measures described in Section 3.3.8, Aquatic Resources and Section 3.3.4, Water Resources. Mitigation for construction activities is described in Section 3.4.

3.3.12 Hazardous Materials

3.3.12.1 Affected Environment

An Initial Site Assessment (ISA) and visual review of the MT 72 project corridor conducted in 2003 determined the right-of-way and immediate area of the project corridor does not include any national or state Superfund sites, licensed landfills, abandoned mine reclamation sites, or point source discharge locations. Within the project area, there are sites with potential soil and groundwater contamination from fuel spills, storage tanks, and railroad operations; potentially

hazardous sites associated with demolition of structures associated with abandoned and active commercial operations; and removal of bridges constructed with environmentally hazardous materials.

Fuel Spill Sites. According to Darrel Krum, Director, Carbon County Disaster and Emergency Services Department, there have been a number of truck accidents along the MT 72 corridor that have resulted in hazardous materials spills. A detailed list is not available regarding specific locations of spills, but Mr. Krum has volunteered to help identify known spill locations before construction begins.

Storage Tank Sites. Four leaking underground storage tank (LUST) sites are present within the project corridor. These include:

- Black's Service Station LUST #0502954 is located on the south side of Broadway Avenue in the center of Belfry. MDEQ files indicate that there were two reported releases: one in 1988 and one in 1994. Contamination extends to the groundwater, reported to be at a depth of 35 to 40 feet, and additional monitoring is being proposed to define the extent of the soil vapor contaminants.
- The MDT Bridger Section LUST #512750 is located away from the existing right-of-way on the east side of US 310. The release date is December 1992, and the file is closed.
- Junction Exxon site #0500432 is located in the northwest corner of the junction of MT 72 and S-308. The site was originally investigated in 1992 and determined to have soil contamination. Since 1992, the owner of the site performed an investigation, removed all USTs, and remediated the site to approximately 20 to 35 feet below grade. Subsequent testing revealed no contamination at the site from 0 to 15 feet below grade.
- The Horse Trader Cafe (Country House Cafe) LUST #507552 site is located on the east side of MT 72 about 500 feet south of the Junction of MT 72 and S-308. The release date is October 1996. The commercial gas operation has since been closed, the LUSTs have been removed, and MDEQ has closed the file for this site.

In addition to these LUSTs, the project area includes the Krum Tank Farm site, which formerly consisted of 10 ASTs and was closed in 1992 when all of the tanks were removed from the site. There is no record of releases at the site and no visible evidence of petroleum contamination on the reclaimed surface.

Potential Contamination Associated with Railroad Operations. The MW&S Railroad grade parallels the proposed Railroad Alignment Alternative. Historic railroad operations commonly have contaminated soils associated with loading and unloading operations. There is no visible indication of contamination associated with railroad operations.

Other Sites. Several active and abandoned sites in the project area present potential hazardous material concerns. These include:

- Belfry Sewage Lagoon located along Railroad Avenue adjacent to the proposed right-of-way for the Railroad Alignment Alternative. This site was constructed below grade, and there is no evidence of surface contamination.
- MW&S Railroad Maintenance Shop is located north of Belfry along Railroad Avenue. The building has lead-based paint and potential asbestos containing materials. In addition, a 1991 sampling of soils within the immediate vicinity of the shop indicated soils were "somewhat

enriched with lead; had areas of petroleum staining and contamination; and had some pesticide residues.”

- The Belfry School bus barn may contain petroleum-contaminated soils, although there was no visible evidence of contamination at either location.

Bridges. Within the project corridor there are three timber, two steel structure, and one concrete slab bridges. Timber bridges are often constructed with treated timber, and steel bridges may be painted with paint containing lead.

3.3.12.2 Impacts

Impacts to hazardous materials sites have been determined qualitatively on the basis of the location of these sites in relation to the area of ground disturbance or building demolition required for each alternative. If excavation were required near a known hazardous materials site, additional soil testing would be required to identify the extent of potential contamination. Contaminated sites would be remediated in accordance with MDEQ and EPA regulations and MDT standard procedures, which would require an approved plan before ground disturbance or demolition occurred.

Potential impacts from hazardous sites in the corridor vary greatly among the alternatives in the Belfry Area, as detailed in Table 3.43. In the Rural Corridor, the impacts would be similar among the alternatives, as detailed in Table 3.44.

Table 3.43 Hazardous Materials Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No change.	<p>Potential impact from disturbance of lead contaminated and potentially arsenic contaminated soils surrounding the MW&S Railroad Maintenance Shop.</p> <p>Potential impacts from tanker truck fuel spills at unknown locations throughout the rural portion of the corridor.</p> <p>Potential impacts from soil contamination from historical railroad operations.</p> <p>Potential impacts to small amount of land owned by Belfry at sewage lagoon: 0.2 ha (0.5 ac).</p> <p>Potential impacts from removal of bridges that may be painted with lead-containing paints or constructed with treated timbers.</p>	<p>Potential impact from disturbance of potentially contaminated soils near Black’s Service Station LUST.</p> <p>Potential impacts from tanker truck fuel spills at unspecified locations throughout the rural portion of the corridor.</p> <p>Potential impacts from disturbance of soils at Belfry School bus facility.</p> <p>Potential impacts from removal of bridges that may be painted with lead-containing paints or constructed with treated timbers.</p>
12-m (40-ft) Typical Section	No change.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

Table 3.44 Hazardous Materials Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No change.	Potential impacts from tanker truck fuel spills at unknown locations throughout the Rural Corridor. Potential impacts from removal of bridges that may be painted with lead-containing paints or constructed with treated timbers.	Same impacts as Modified Existing Alignment Alternative	Same impacts as Modified Existing Alignment Alternative
12-m (40-ft) Typical Section	No change.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

3.3.12.3 Mitigation

For the Belfry Area, the Preferred Alternative would include disturbance of three areas of potential concern for soil contamination: the MW&S Railroad Maintenance Shop, the railroad right-of-way, and former fuel spills. It is recommended additional investigation and soil testing occur to identify potential contamination associated with these locations. If contaminated soils are encountered, excavation and disposal would be handled in compliance with applicable federal, state, and local regulations. Because investigations would be conducted to determine the extent and characteristics of any contamination before construction began, potential impacts to soil or groundwater sources would be minimized.

For the Rural Corridor, former fuel spills are the only identified source of potential soil or groundwater contamination. Locations of recent fuel spills should be identified by the Carbon County Disaster and Emergency Response Coordinator, and these locations should be tested to determine if remediation is required. As with the sites in the Belfry Area, contaminated soils would be excavated and disposed in accordance with applicable regulations.

Within the corridor, bridges will be tested as applicable to determine if they have treated timbers or lead-containing paint. Removal and disposal of bridges with treated timbers or lead-containing paint will be undertaken in accordance with applicable regulations and procedures.

3.3.13 Visual Resources

3.3.13.1 Affected Environment

The proposed MT 72 project corridor lies between the Crow Indian Reservation and the foothills of the Beartooth Range in the Clarks Fork Valley. MT 72 serves the agricultural industry in the area and links tourism and commercial traffic regionally between the State of Wyoming, Yellowstone National Park, Red Lodge, and Billings, Montana. The agricultural industry surrounds the corridor and is characterized by grazing livestock, irrigated crops, rural farmhouses, barns, and silos.

The project corridor begins in the small rural town of Belfry and traverses an expansive agricultural valley to the north before connecting with US 310 just south of Bridger. Irrigated agriculture and riparian woodlands dominate the landscape of this broad river valley. The level to gently rolling surfaces of the bottomlands are framed by steep bluffs to the west and distant hilltops to the east. The most prominent mountain views exist at the southern end of the project area looking west toward the Beartooth Mountains.

The existing highway roughly parallels the Clarks Fork within the study area making several crossings of the Clarks Fork and its tributaries. Foreground views in the corridor consist of flat to gently sloping bottomlands, which support agricultural and riparian vegetation cover. Middleground views feature steep bluffs with vegetation ranging from grassland to ponderosa pine woodland. Background views are limited to views of the Beartooth Mountains and foothills.

3.3.13.2 Impacts

There are no impacts in the No-Build Alternative because there are no changes to the corridor landscape.

Widening and improving the alignment of MT 72 would enhance the highway's appearance and functionality throughout the project corridor. Since most of the proposed improvements are either on or parallel to the existing alignment, the visual conditions would remain similar to the existing conditions. In a few specific locations in the corridor there would be minor visual impacts. In the Belfry Area, in town for both build alternatives, the visual quality would be enhanced by the implementation of sidewalks and curb and gutter. In areas of realignment, such as the Railroad Alignment in the Belfry Area segment and the northern terminus area of the Ridgeway Lane Alternatives in the Rural Corridor segment, there are minor adverse visual impacts. However, these areas are limited in size and would not adversely impact the overall aesthetic values in the corridor. Tables 3.45 and 3.46 provide comparisons of visual impacts by alternative for the Belfry Area and Rural Corridor, respectively.

Table 3.45 Visual Resources Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No change.	Roadway improvements in town, including addition of sidewalks and curbs, would improve the visual quality of the town. In the rural portion, would create new roadway in agricultural area along Railroad Avenue, which may create a different visual impact for residents on the northwestern side of town. Impact would be minor because the agricultural landscape does not represent a significant visual resource, and the railroad alignment is already visible within the landscape.	Same impacts as Railroad Alignment Alternative in town. No change for the rural portion of the Belfry Area.
12-m (40-ft) Typical Section	No change.	Same impacts as 9.6-m (32-ft) typical section	Same impacts as 9.6-m (32-ft) typical section

Table 3.46 Visual Resources Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No change.	No change.	For most of corridor there would be no change. At the northern terminus the new alignment would create visual impact to agricultural area currently served by a local road and not a highway. Impact would be minor because the agricultural area is already served by roads and does not represent a significant visual resource.	Same impacts as Ridgeway North.
12-m (40-ft) Typical Section	No change.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

3.3.14 Section 4(f) and Section 6(f)

3.3.14.1 Section 4(f)

Section 4(f) of the 1966 Department of Transportation Act, which is codified at 49 U.S.C. § 303, and FHWA regulations found at 23 C.F.R. § 771.135, prohibits FHWA from approving the use of land from a significant publicly owned public park, recreation area, or wildlife or waterfowl refuge, or any significant historic site, unless a determination is made that there is no feasible and prudent alternative to the use of land from the property and the action includes all possible planning to minimize harm to the property.

In the Belfry Area, the realigned portion of MT 72 in the Railroad Alignment Alternative passes through an approximately 2.6-ha (6.4-acre) BLM parcel along the Clarks Fork. This parcel is not considered a Section 4(f) resource.

A small school-owned parcel across the street from the Belfry K-12 School provides parking for school staff and visitors and a picnic area. The picnic area includes a swing set, a picnic table, and a picnic table under a shelter. This site is occasionally used by people traveling on MT 72. The Belfry School District superintendent was consulted on this site, and he responded that the picnic area was not a significant park or recreation area. Therefore, this picnic area did not meet the definition of a Section 4(f) resource and Section 4(f) was not applicable (see Appendix E correspondence with Jed Landsman-Yankin, Superintendent, Belfry Schools). FHWA concurs with this finding (see Appendix E correspondence from FHWA). There are no publicly owned lands used for recreation in the Rural Corridor.

In the Belfry Area, there are seven NRHP-eligible historic structures and one historic bridge that meet the definition of a 4(f) resource. These include 24CB1148 (MW&S Railroad Depot), 24CB1146 (MW&S Railroad Maintenance Shop – See Appendix E; MDT letter to FHWA dated March 3, 2004), 24CB1145 (Middlesworth Farmhouse), 24CB678 (First Presbyterian Church), 24CB1803 (Holland Lumber), 24CB1813 (Kose Grocery), 24CB676 (Riddle House), and 24CB707/1144 (Clarks Fork

“south” bridge). In addition to these NRHP-eligible sites, there is one historic site that was not evaluated for NRHP-eligibility. In the Rural Corridor, there are three NRHP-eligible canals (24CB1152, Golden Ditch; 24CB1154, Dry Creek Canal; and 24CB1150, Sand Creek Canal) and one NRHP-eligible homestead (24CB1848, Francis and Emma Jennings Homestead) present in the project area.

There are no wildlife or waterfowl refuges within the corridor.

3.3.14.2 Section 6(f)

Section 6(f) concerns sites and or facilities acquired or improved with allocations under that part of the Land & Water Conservation Fund Act, **16 U.S.C. 460L** et seq. or LWCF. Resources that have been purchased using LWCF cannot be converted to highway uses without the approval of the Department of Interior’s National Park Service (NPS). Section 6(f) directs the NPS to assure that replacement lands of equal value, location, and usefulness are provided to mitigate conversions of these lands for highway use.

No Section 6(f) lands have been identified in the project area by MFWP, which administers this program in Montana. (See Appendix G; MFWP letter dated October 10, 2003.)

3.3.14.3 Impacts

There are no impacts to Section 4(f) resources in the No-Build Alternative.

Both build alternatives result in a Section 4(f) impact of the NRHP-eligible Clarks Fork Bridge (24CB707/24CB1144). Under the Preferred Alternative, the Railroad Alignment Alternative, a new bridge would be constructed approximately 237 m (778 feet) north of the existing bridge and would replace the function of the existing bridge. Removal of this historic bridge would not be required; however, it would not be prudent for MDT to keep and maintain the bridge, given the costs and safety considerations. The MDT will use its Adopt a Bridge program to attempt to find a new owner willing to assume ownership and maintenance responsibilities for the bridge. If a new owner cannot be found, there would be no prudent alternative because MDT would no longer maintain the bridge due to cost and, therefore, MDT would remove the bridge to avoid safety and liability issues. This bridge removal is evaluated as a Section 4(f) impact in a Programmatic Section 4(f) (see Appendix F). Under the Broadway Avenue Alternative, the bridge would also be replaced because it is narrow. The new bridge would be constructed adjacent to the existing bridge, but as would be the case under the Preferred Alternative, the old bridge would be removed if a new owner for the bridge could not be found.

For the Preferred Alternative (Railroad Alignment Alternative) in the Belfry Area, direct physical impacts to the NRHP-eligible MW&S Railroad Maintenance Shop (24CB1146) were avoided through design modifications. SHPO has concurred with a determination of No Adverse Effect to this property (see Appendix C). FHWA has determined that there is no “use” of this site as defined in 23 CFR 771.135, and therefore, this is not a Section 4(f) impact (see Appendix E).

The Preferred Alternative (Railroad Alignment Alternative) in the Belfry Area would not result in a Section 4(f) use or impact to any other historic properties. Under the Broadway Avenue Alternative, there would also be potential impacts to two NRHP-eligible sites: Holland Lumber (24CB1803) and Kose Grocery (24CB1813). In both cases, the NRHP-eligible structures would not be impacted, only the access or sidewalks at the site; therefore, there would be no use of these sites as defined by 23 CFR 771.135. The Youst Ditch (24CB1817) would also be impacted by the Broadway Avenue Alternative because MT 72 structures over Youst Ditch would be replaced.

Although consultation with SHPO was not conducted for this ditch because it is not affected by the Preferred Alternative, in the past SHPO, MDT, and FHWA have agreed that the roadway drainage structures are not important to historic canal integrity and are considered roadway elements rather than irrigation elements. However, if the roadway is widened, more of the canal would be incorporated into the roadway, resulting in a Section 4(f) use of this resource as defined in 23 CFR 771.135. If the Railroad Alignment is not selected as the Preferred Alternative, the Broadway Avenue Alternative would be re-examined to formally evaluate the NRHP-eligibility of Youst Ditch and determination of effect for these resources with SHPO. Also, as warranted, a Section 4(f) evaluation would be prepared at that time.

There are no impacts to the NRHP-eligible Presbyterian Church (aka United Methodist Church) (24CB678), MW&S Railroad Depot (24CB1148), Middlesworth Farmhouse (24CB1145), or Riddle House (24CB676) under either of the build alternatives in the Belfry Area.

In the Rural Corridor, the Preferred Alternative (the Modified Existing Alignment) does not have an adverse effect on any NRHP-eligible historic resources. The historic Golden Ditch (24CB1152) is not impacted under any alternatives.

The historic Dry Creek Canal (24CB1154) and Sand Creek Canal (24CB1150) would have structures replaced in all build alternatives. These structures are considered part of the roadway rather than the canal. However, with the widening of the roadway, more of the canals would be incorporated into the roadway, resulting in a Section 4(f) use of these resources as defined by 23 CFR 771.135. The Ridgeway South Alternative and the Ridgeway North Alternative may require the realignment of part of the NRHP-eligible Sand Creek Canal (24CB1150) to provide access to a property. This realignment may result in an adverse effect as well as more use of this resource as defined in 23 CFR 771.135, and therefore, may result in a greater Section 4(f) impact. For the Ridgeway South Alternative, another NRHP-eligible property Jennings Homestead (24CB1848) has historic structures that are close to the proposed alignment. There would be no Section 4(f) use because the historic structures are not impacted, and the alignment would not result in a use of the historic resource. If the Modified Existing Alignment Alternative is not selected as the Preferred Alternative, the SHPO would be consulted to obtain a concurrence on the determination of effect of the Ridgeway Lane Alternatives for these properties. A Section 4(f) evaluation(s) would be prepared at that time if warranted for these resources. The Section 4(f) impact to these canals for the Preferred Alternative is evaluated in a Programmatic Section 4(f) (see Appendix F).

Because there are no Section 6(f) resources in the corridor that were acquired or improved with LWCF funds, there are no Section 6(f) impacts for any alternative.

Table 3.47 Section 4(f) Resource Summary Impacts by Alternative, Belfry Area (S-308 to North Dutch Lane)

	No-Build	Belfry Area: Railroad Alignment (Preferred Alternative)	Belfry Area: Broadway Avenue Alignment
9.6-m (32-ft) Typical Section	No impact	NRHP-eligible Clarks Fork "south" bridge is bypassed by new bridge: if new owner cannot be identified, bridge would be removed resulting in a Section 4(f) use (see Appendix F, Programmatic Section 4(f) Evaluations)	NRHP-eligible Clarks Fork "south" bridge, a Section 4(f) resource, would be replaced because it is narrow. If a new owner cannot be identified, the bridge would be removed resulting in a Section 4(f) use. Youst Ditch is a potential NRHP-eligible site and therefore a potential Section 4(f) resource. If the roadway is widened in this location, more of the canal could be incorporated into the roadway, resulting in a Section 4(f) use.
12-m (40-ft) Typical Section	No impact	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

Table 3.48 Section 4(f) Resource Impacts by Alternative, Rural Corridor (North Dutch Lane to US 310 Intersection)

	No-Build	Modified Existing Alignment (Preferred Alternative)	Ridgeway North	Ridgeway South
9.6-m (32-ft) Typical Section	No impact.	Section 4(f) use of NRHP-eligible Sand Creek Canal and Dry Creek Canal because more of canals would be incorporated into roadway. (See Appendix F, Programmatic Section 4(f) Evaluations)	Same as Modified Existing Alignment; in addition, potentially greater impact to NRHP-eligible Sand Creek Canal (24CB1150) because canal also may be relocated to provide property access.	Same as Modified Existing Alignment; in addition, potentially greater impact to NRHP-eligible Sand Creek Canal (24CB1150) because canal also may be relocated to provide property access.
12-m (40-ft) Typical Section	No impact.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.	Same impacts as 9.6-m (32-ft) typical section.

3.3.14.4 Mitigation

Refer to Appendix F for Programmatic Section 4(f) Evaluations and mitigation of Clarks Fork Bridge (24CB707/24CB1144), Dry Creek Canal (24CB1154), and Sand Creek Canal (24CB1150).

3.4 Construction Impacts

The following discussion addresses potential temporary construction impacts as a result of the build alternatives and identifies mitigation measures to avoid, reduce or eliminate adverse impacts. Construction activities would include bridge replacement and demolition, excavation and grading, utility relocations, construction of retaining walls, sidewalks and paving. Final construction methods would be addressed during development of the final construction plans. The sequencing of construction packages and construction time frame would also be addressed during development of final design plans. Mitigation measures would be incorporated into final construction plans and may include phasing or sequencing of construction to further minimize impacts to residents and the traveling public.

3.4.1 No-Build Alternative

There would be no construction impacts associated with the No-Build Alternative.

3.4.2 Impacts Common to Build Alternatives

New roadway construction and reconstruction of existing pavement present the potential for increased dust, increased noise, increased water runoff and sedimentation caused by erosion and removal of vegetation, and visual impacts. The build alternatives also present the potential for exposure to or accidental spill of hazardous materials, such as oil and gasoline, from construction vehicles. In addition, construction associated with widening of existing roadways present the potential for increased travel delays during construction, traffic congestion, temporary restricted access to residences and businesses, and visual intrusions to motorists and residents.

3.4.3 Transportation

3.4.3.1 Access

Access to properties along the corridor may be impacted by particular construction activities. Temporary access would be provided for the properties, but these accesses may be less convenient for motorists. In some cases, individual driveways that currently have direct access to MT 72 would be impacted.

Mitigation. Mitigation for construction impacts will include early notification and coordination with adjacent property owners, on a property-by-property basis, of construction activities in order to address potential construction impacts to property access.

3.4.3.2 Traffic

Construction delays would likely create short-term impacts to local and regional traffic circulation within existing roadway areas (e.g. Broadway Avenue and the existing MT 72 alignment in the Rural Corridor) due to temporary lane closures, delays, short-term travel on unpaved surfaces and reduced travel speeds. Traffic diversions and construction equipment and activities close to the travel lanes would also affect speeds and traffic operations within the construction zone.

For the Belfry Area, construction of the Broadway Avenue Alternative would cause disruptions to business access and parking for business located on Broadway Avenue and could create increased traffic on other streets in town. Disruptions could also affect emergency response within the town of Belfry, particularly the Fire Department, which is located within the town. (Other emergency

response teams are located in nearby communities and not within Belfry. These units would also experience delays responding to emergencies in Belfry.) For the Railroad Alignment Alternative, impacts to traffic operations in Belfry would be minor as construction would primarily occur away from a traveled roadway.

In the Rural Corridor, the Ridgeway North and South Alternatives would disrupt traffic on Ridgeway Lane but would have a minimal impact on the existing US 310 intersection. Construction of the Modified Existing Alignment Alternative would disrupt traffic at the US 310 intersection.

Mitigation. A construction traffic control plan will be developed to include construction phasing devised to maintain two lanes of traffic wherever possible, and uninterrupted side road access along the corridor to the greatest extent practicable. Existing bridges will be kept in place to maintain traffic flow while new bridges were being constructed. MDT will coordinate with emergency service providers and schools to solicit input into the construction traffic control plan and to provide ongoing information during construction.

3.4.3.3 Pedestrians and Bicyclists

Under the Broadway Avenue Alternative, pedestrians and bicyclists in Belfry might experience short-term impacts traveling on Broadway Avenue. However, impacts due to construction would not be vastly different than the current condition since there are no sidewalks or stable riding surfaces. There would be fewer impacts to pedestrians or bicycles for the Railroad Alignment Alternative because construction would occur in areas with fewer pedestrians and bicyclists. In the rural corridor, the current condition provides no facilities for pedestrians or bicycles, so construction would not create any impacts. Impacts from the alternatives in the rural area would be minimal because there is little pedestrian or bicycle traffic on this portion of the corridor.

Mitigation. Mitigation for construction impacts in Belfry will include maintenance of walkways and pavement to the extent practicable and providing additional pedestrian signage during construction.

3.4.4 Socioeconomics

3.4.4.1 Land Use

Construction easements for grading, irrigation relocations, fencing relocations, access road improvements, temporary access, or temporary construction staging would be needed from property owners along the corridor. While the property owners would retain ownership of these areas, their use of these areas during construction would be restricted by particular construction activities. Upon completion of the roadway project, the property owners would have unrestricted use of these areas again.

Mitigation. Mitigation for construction impacts will include early notification of property owners, on a property-by-property basis, of construction activities in order to address potential construction impacts. Easements would be obtained according to 49 CFR, Part 24, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended to provide just compensation for and rehabilitation of temporary construction easements.

3.4.4.2 Farmlands

Temporary construction disturbance includes farmland that would experience temporary modification but would be returned to preconstruction conditions after construction of the project. These types of disturbances are temporary in nature and therefore would not permanently convert farmland to other uses.

3.4.4.3 Farm Operations

Farm operations could be temporarily impacted by construction. Impacts would likely include disruptions to farm parcel accesses from road closures, detours, and presence of construction equipment; conflicts with construction equipment and farm equipment traveling through the corridor; disruptions to land uses because of temporary construction easements; temporary disruption of irrigation systems; and temporary disruptions to livestock underpasses.

Mitigation. Mitigation will include early coordination with farmers to address potential impacts during roadway reconstruction and scheduling of construction, where feasible, to minimize disruption to farming activities.

3.4.4.4 Irrigation

During reconstruction of the highway irrigation facilities may be relocated or temporarily impacted during construction.

Mitigation. Mitigation will include early coordination with irrigation ditch companies and owners to address potential impacts to irrigation activities during roadway reconstruction and irrigation ditch relocations. Reasonable measures will be taken to avoid disruption of irrigation activities during construction, such as scheduling interruptions to a facility when it is not being used.

3.4.4.5 Social Conditions

Emergency Service access could be impacted by street closures in Belfry during construction (see Section 3.4.3.2, Traffic).

Mitigation. Coordination with emergency services will be undertaken prior to street closures.

3.4.4.6 Economic Conditions

Construction of any of the build alternatives would result in temporary economic benefits to the Belfry Area and surrounding Carbon County through creation of construction jobs and income for construction workers, including on-site laborers, specialists, engineers, and managers. Some of these jobs would be local jobs, and others would be imported from other communities. Construction would also create indirect jobs in industries that supply highway construction, manufacturers with materials and off-site construction industry jobs such as administrative, clerical and managerial workers. Supply industry jobs include those supported in stone and clay mining and quarrying, petroleum refining, lumber, concrete and cement products, and miscellaneous professional services. Construction would induce new temporary job creation within the general economy. Induced jobs are jobs supported throughout the economy when highway construction industry employees spend their wages. Expenditures by these workers on various goods and services stimulate demand for additional employees in many industries, resulting in jobs being supported throughout the general economy. However, these effects would be temporary during

construction (approximately two years) and would not be expected to permanently affect employment, income, or taxes in the project area.

3.4.4.7 Right-of-Way and Relocations

Construction easements for grading, temporary access, or temporary construction staging would be needed from property owners along the corridor. While the property owners would retain ownership of these areas, their use of these areas during construction would be restricted by particular construction activities. Upon completion of the roadway project, the property owners would have unrestricted use of these areas again.

During construction, utility lines may need to be relocated.

Mitigation. Mitigation for construction impacts will include early notification of property owners, on a property-by-property basis, of construction activities in order to address potential construction impacts. Easements would be obtained according to 49 CFR, Part 24, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended to provide just compensation for and rehabilitation of temporary construction easements, and according to 23 U.S.C. 317 for appropriation of public lands for highway right-of-way use. Temporary Use Permits, if needed, would be authorized under 43 C.F.R. 2800.

Utility companies will be contacted to coordinate construction activities to avoid or minimize disruption to service. Right-of-way for utility lines would be obtained prior to construction and may include additional buffers within utility rights-of-way to allow for flexibility in the placement of utilities.

3.4.5 Environmental

3.4.5.1 Cultural Resources

Impacts to cultural resources during construction would include visual impacts to historic resources from the temporary presence of construction equipment, noise, and fugitive dust (dust in the air). Additionally, access to historic properties might be affected during the construction period from roadway closures, detours, or construction easements. These impacts would be temporary.

It is also possible that previously unidentified archaeological resources could be discovered during construction.

Mitigation. If cultural material was unexpectedly encountered during ground-disturbing activities in the corridor, construction will cease immediately, and the Montana SHPO and a qualified archaeologist will be consulted to evaluate the significance of the cultural artifacts.

3.4.5.2 Air Quality

Air quality related to construction would be limited to short-term increases in fugitive dust (dust in the air) and mobile source emissions.

Fugitive dust is airborne particulate matter that cannot reasonably be captured through a control device. Trucks and other earth-moving vehicles operating around the construction sites would generate construction-related fugitive dust. The dust would be due primarily to particulate matter re-suspended by vehicle movement over paved and unpaved roads and other surfaces, dirt tracked

onto paved surfaces from unpaved areas at access points, and material blown from uncovered haul trucks.

Generally, the distance that particulate matter drift from their source depends on their size, emission height, and wind speed. Small particles (30 to 100 microns) can travel several hundred feet before settling to the ground, depending on wind speed. Most fugitive dust, however, is made up of relatively large particles (i.e., particles greater than 100 microns on diameter). These particles are responsible for the reduced visibility often associated with highway construction. Given their relatively large size, these particles tend to settle within 6 to 9 m (20 to 30 ft) of their source.

Carbon monoxide (CO) is the principal pollutant of concern when considering localized air quality impacts of motor vehicles. Because CO emissions from motor vehicles increase with decreasing vehicle speed, disruption of traffic during construction is likely to result in short-term, elevated CO concentrations.

Mitigation. Contractors will be required to adhere to all state and local regulations and to employ BMPs to minimize fugitive dust and mobile source emissions. Measures to reduce fugitive dust from construction may include minimizing exposed erodible earth area to the extent practicable; stabilizing exposed earth with grass, mulch, pavement or other cover as soon as possible; and applying water or stabilizing agents to the working and haulage areas. To minimize the amount of additional vehicle emissions, a construction traffic control plan will be developed to limit disruption to corridor traffic.

3.4.5.3 Noise

FHWA Technical Advisory T6160.2 contains requirements for the evaluation of highway construction noise. If there is a possibility that construction noise will be a sensitive and contentious issue, MDT must comply with the above mentioned noise directive. While the impact of highway construction noise does not appear to be substantial in this case, consideration was given to construction noise during project development. The public did not raise construction noise as an issue at public meetings or in comment letters.

Mitigation. At or near residences, construction hours will be limited to daylight hours to avoid noise impacts at night. Contractors will adhere to local ordinances and BMPs to minimize noise impacts during construction. Advance notice of construction will be provided to area businesses and residences to minimize impacts on community activities.

3.4.5.4 Water Resources/Quality

Disturbed areas created during construction can create land and water erosion and impact water quality. Spilled fuels or other hazardous materials may also cause impacts to water quality during construction. Stormwater runoff presents the potential for violations of water quality standards within the project area. In-stream work, which will be required for bridge and culvert replacements, can contribute to sedimentation and introduction of pollutants.

Mitigation. MDT will prepare an SWPPP, including the identification of BMPs to control erosion and stormwater runoff. Measures to prevent sediment loading into the waterways may be needed should soil and debris run-off occur from construction equipment and from exposed, disturbed areas adjacent to the waterways during construction. In-water work will be held to a minimum in the Clarks Fork and any of its tributaries.

3.4.5.5 Wetlands

Temporary impacts to wetlands can occur due to physical disturbance from constructing the highway, providing temporary traffic detours, or runoff from construction equipment. Issues are similar to other water quality concerns with sedimentation, erosion, and introduction of pollutants.

Mitigation. A COE 404 permit will be required. MDT will comply with the conditions of the permit. MDT will incorporate a SWPPP and BMPs into construction projects. Temporary impacts to wetlands will be restored in accordance with MDT standard specifications or permit conditions.

3.4.5.6 Vegetation

Short-term construction impacts would occur along the highway, including temporary habitat and vegetation loss. These temporary impacts would vary by species type, depending on their recovery rates. The ultimate recovery of vegetation depends on the management of the area after construction. Other temporary direct impacts include the modification of vegetation communities from fuel spills and soil compaction as a result of construction access and activities.

Mitigation. MDT will re-establish a permanent desirable vegetation community over all landform surface areas disturbed by construction.

3.4.5.7 Wildlife

Noise produced by construction equipment on the proposed project would occur with varying intensity and duration during the phases of construction. However, because of the different phases of construction, no single location would experience a long-term period of construction noise.

Terrestrial wildlife and migratory bird populations found in these areas are likely to be accustomed to periodic noise intrusions, due to highway traffic, agricultural equipment, and noise from local residents, but some brief displacement of wildlife and migratory bird populations may occur during construction regardless of the alternative chosen. Noise from construction may displace terrestrial wildlife temporarily, but they would likely return after construction is completed. Therefore, the construction impacts on wildlife would be minimal.

The introduction of chemicals or runoff from construction activities could impact species, such as amphibians, that rely on water bodies.

If Cliff swallows are nesting under bridges during construction, they could be impacted during bridge removal.

Mitigation. Overhead power lines relocated during construction will be raptor-proofed in accordance with MDT policies. Cliff swallow nests will be removed prior to the start of the nesting season and efforts will be undertaken to ensure that new nests are not established prior to removal of bridge structures. BMPs will be incorporated into construction projects to minimize water quality impacts.

3.4.5.8 Aquatic Species

Short-term impacts may occur during the bridge replacement/construction phase of this project due to in-stream work. Temporary construction impacts may include displacement of individuals

from human-related disturbance. Increased sedimentation and removal of vegetation during construction may temporarily degrade riparian area habitats. However, fish would likely return after construction is complete.

In water work and de-watering during bridge construction could result in fish mortality, especially to juvenile fish should they be present. Loss of riparian vegetation during construction may occur at the crossings of the Clarks Fork, Silver Tip Creek, and Dry Creek. Some of these areas adjacent to the creeks and rivers are also designated as wetlands. The COE would evaluate impacts to the riparian wetland areas during the 404 permitting process to determine the mitigation measures necessary to compensate for the loss of vegetation.

Mitigation. BMPs and a SWPPP will be incorporated into construction projects. Compliance with water quality permits, and SPA 124 and 404 permit conditions will be followed during construction.

3.4.5.9 Threatened and Endangered Species

Bald eagles. No nesting bald eagles were found in the corridor. Since foraging/transient eagles have been documented in the project area, human-related disturbance, including visual and noise disturbance, during construction may displace foraging bald eagles should they be present.

Mitigation. Overhead power lines relocated during construction will be raptor-proofed in accordance with MDT policies. Although no nesting locations were noted in analyses for this EA and USFWS has not reported any nesting locations in the project corridor, close to the start of construction, a biologist will verify that there are no nests. If nests are found in the project corridor, MDT will consult with USFWS and MFWP prior to the start of any construction activities.

3.4.5.10 Floodplains

Temporary construction disturbance includes areas of floodplain that would experience temporary modification of functions due to soil loss, construction runoff, or temporary impacts to wetlands but would be returned to their preconstruction condition after construction of the project. These types of disturbances are temporary in nature and therefore would not permanently alter the natural and beneficial values of floodplain areas in the project corridor.

Mitigation. BMPs consistent with state and local regulations will be implemented during the construction phase. MDT will prepare a SWPPP including the identification of BMPs to control erosion and stormwater runoff.

3.4.5.11 Water Body Modifications

The area at each bridge impacted by construction activities is anticipated to be larger than the estimated area of the proposed bridge. There would be temporary impacts to water bodies such as soil loss, wetland impacts, and sedimentation from erosion. The areas impacted during construction would be returned to their preconstruction conditions after construction. These types of disturbances are temporary in nature and therefore would not permanently alter the natural condition of the water body.

Mitigation. BMPs consistent with state and local regulations will be implemented during the construction phase. MDT will prepare a SWPPP including the identification of BMPs to control erosion and stormwater runoff. SPA 124 and 404 permit conditions will be followed during construction. Construction areas will be returned to preconstruction conditions after construction.

3.4.5.12 Hazardous Materials

Construction staging areas could disturb contaminated soils near to but not within the final alignment. Generally, ground disturbance from staging activities is shallow and would not be expected to have substantial effects on hazardous materials sites. Disturbance of hazardous sites during construction is governed by local and state regulations, as described in Section 3.3.12, Hazardous Materials, which protect people and the environment from exposures to hazardous materials.

3.4.5.13 Visual Resources

Construction activities resulting in temporary impacts such as vegetation removal and the presence of construction equipment, stockpiles of materials, and dust emissions often create a conspicuous impact to the surrounding environment. Some impacts will be unavoidable, although they will only occur during the construction period.

Mitigation. Mitigation measures for vegetation and air quality will reduce the visual impacts from construction.

3.5 Cumulative Impacts

Cumulative effects are those impacts that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Generally, significant cumulative impacts result when (1) resources are vulnerable to cumulative effects (e.g., wetlands), (2) the same type of impact is occurring from multiple projects (e.g., multiple road construction projects), (3) effects have been historically significant for a resource (e.g., a non-attainment area for air quality), or (4) other analyses have identified cumulative effects as a concern in the project area. Examples of actions that were analyzed for cumulative effects include road construction, development, and agricultural practices.

Traffic. Roadway and development projects are actions that can lead to an increase in traffic or change in traffic patterns. Several future MDT projects have been identified and are listed in Table 3.49. As shown in Table 3.50, no county or private roadway or development projects have been identified for the reasonably foreseeable future. The projects listed in Table 3.49 consist primarily of bridge replacements, resurfacing, and minor reconstruction to improve the existing roadways to current MDT standards. These projects are not likely to result in any cumulative increases in traffic or changes in traffic patterns (for more discussion on potential growth impacts, refer to Section 3.2.1.2, Impacts on Land Use). With the roadway improvements for the Wyoming Line to Belfry and the Belfry-North project, the traveling public would benefit from an improved corridor for the entire length of MT 72 from the state line to US 310.

Table 3.49 MDT Planned Projects in Belfry Area (2003 – 2005 Major Projects)

Project Name	MDT No.	Control No.	Project Description
Bridger South	NH 4-1(19)13F and NH 4-1(16)13F	3179	Right-of-way phase, incidental construction phase, and reconstruction and structure improvements on national highway.
Clarks Fork South of Belfry, Highway 72	BR 9005(24)	3920	Bridge replacement, structure and approaches.
2000-Safety Improvements- 8 km Northwest of Red Lodge	STPHS 78-1(7)5	4720	Right-of-way phase for reconstruction and incidental construction phase.
Red Lodge Northwest	STPP 78-1(8)0	4890	Right-of-way phase for reconstruction and incidental construction phase.
Wyoming Line to Belfry, Highway 72	STPP 72-1(8)0 and STPP 72-1(7)0	4065	Incidental construction phase. Widen and resurface primary roadway.
Bear Cr. – Bear Creek	BR 9005(26)	4839	Preliminary design phase Bridge replacement with pipe
Clarks Fork - Fromberg	BR 9005(25)	4243	Construction phase, bridge replacement
Junction MT 78 – SW	SFCS 419-1(11)0	5183	Construction phase chip seal
Rockvale-Laurel ¹	NH 4-1(21)42	4070	Environmental documentation phase, reconstruction for increased capacity

¹ Rockvale-Laurel is currently undergoing environmental documentation and does not have funding allocated for design or construction. It is therefore not listed in the STIP, and information on this project was obtained from MDT.

Source: 2003 Montana State Transportation Improvement Program.

Table 3.50 Planned Projects in Belfry Area (2003 – 2005)

Project Name or Location	Project Description
Carbon County, Montana	No planned county projects.
Red Lodge, Bridger or Belfry towns	No planned municipal projects.
Beartooth Valley Ranch, located northeast of Yellowstone National Park, in Carbon County, Montana.	This proposed development would be located southwest of Belfry, west of MT 72. The closest cluster of homes near Belfry would be approximately 12.8 km (8.0 mi) southwest. Carbon County Planning states the size of each parcel would be at least 20 acres, and 425 parcels are planned. Carbon County Planning says the construction start date for the development is unknown, as it has many challenges to overcome in legal descriptions, physical access and lack of potable water and therefore the project is uncertain.

Source: February 3, 2004 communication with Carbon County Planning Department, MT.

Wetlands and Water Quality. Past, present, and foreseeable future rural development, agricultural operations, such as plowing, irrigating and cultivating the land, and transportation projects, individually and collectively, have or may contribute to cumulative effects on wetland

losses in the project corridor. The MDT transportation projects shown in Table 3.49 are scheduled to occur in the next three years near the Belfry-North project area and in the same Clarks Fork watershed. Some wetlands in the Clarks Fork watershed would most likely be directly affected by these projects. However, MDT policy is to avoid and minimize impacts to wetlands, and if wetlands are impacted as a result of an individual highway project, MDT would mitigate for jurisdictional and non-jurisdictional wetlands. MDT attempts to mitigate wetland impacts within the same watershed as where the impacts occurred. Thus, each individual transportation project would mitigate for its own impacts, and cumulative effects of the highway projects would not be significant.

Wetlands and water bodies are also impacted by contaminants and sediment from runoff. Agricultural practices result in a major source of contaminants and sediment. Development and transportation projects, as well, can contribute to degradation of water quality in wetlands and water bodies. There is no additional development proposed for the area and the mitigation measures proposed for transportation construction projects would result in minimal water quality impacts compared to agricultural practices. The incremental impacts of transportation projects when added to the impacts from rural development and agricultural practices do not result in significant cumulative impacts on water quality.

Aquatic Species. The cumulative water quality impacts resulting from rural development, agricultural practices and transportation projects are discussed above. Water quality impacts could affect aquatic species and their habitat. For the Belfry-North project, impacts to water quality would be minimized through mitigation measures discussed in Sections 3.3.4 and 3.3.8. Therefore, when the Belfry-North project's impacts to aquatic species are combined with agricultural and development impacts, these cumulative impacts on aquatic species are not significant.

Wildlife. Wildlife may be displaced for several years in the Clarks Fork watershed area from construction noise, loss of habitat, habitat fragmentation and alteration, and mortality from ongoing MDT projects. However, these projects generally occur adjacent to an existing roadway and more suitable habitat usually exists in the areas outside the highway right-of-way. Agricultural practices would continue year-round in the project area, involving plowing and cultivating the land using farming equipment loud enough to displace general wildlife species. The proposed project accounts for a negligible incremental contribution to the cumulative effects when added to the past, present, and foreseeable future rural development, agricultural operations, and transportation project construction in the project vicinity. These impacts are not likely to result in significant cumulative impacts.

4.0 Permits

The permits listed below may be required for the preferred alternative and must be obtained prior to any construction:

- Section 402/Montana Pollutant Discharge Elimination System (MPDES) authorization from MDEQ Permitting and Compliance Division. The MPDES permit requires a storm water pollution prevention plan (SWPPP) that includes a temporary erosion and sediment control plan. The erosion and sediment control plan identifies BMPs, as well as site-specific measures to minimize erosion and prevent eroded sediment from leaving the work zone.
- Clean Water Act Section 404 permit from the US Army Corps of Engineers for any activities that may result in the discharge or placement of dredged or fill materials in waters of the US, including wetlands.
- 124 Stream Protection Act Permit from the MFWP-Fisheries Division. The SPA permit is required for projects that may affect the bed or banks of any stream in Montana.
- Short-Term Water Quality Standard for Turbidity related to construction activity (318 Authorization) from the MDEQ-Water Quality Bureau for any activities that may cause unavoidable violations of state surface water quality standards for turbidity, total dissolved solids or temperature.
- Montana Floodplain and Floodway Management Act (Floodplain Development Permit) from Carbon County.

In addition to the permits listed above, the following compliance is required.

- Excavation, management, and disposal of contaminated soils would need to be done in accordance with the Resource Conservation and Recovery Act (RCRA) guidelines for waste management.
- Compliance with mitigation stipulations of the Programmatic Agreement for Historic Roads and Bridges in Montana.
- BLM Letter of Consent in accordance with 23 U.S.C. 317; and SF-299 application for any Temporary Use Permit areas needed to fulfill the requirements of 43 C.F.R. 2800.

5.0 Distribution List

5.1 Federal Agencies

U.S. Army-Corps of Engineers

Helena Regulatory Office
10 West 15th Street, Suite 2200
Helena, MT 59626-0014
Allan Steinle, Montana Program Manager

U.S. Environmental Protection Agency

Region VIII, Montana Office
10 West 15th Street, Suite 3200
Helena, MT 59626-0096
John F. Wardell, Director

U.S. Fish and Wildlife Service

Montana Field Office
100 North Park Avenue, Suite 320
Helena, MT 59601
Mark Wilson, Field Supervisor

U.S. Department of the Interior - Bureau of Land Management

Billings Field Office
5001 Southgate Drive, P.O. Box 36800
Billings, MT 59107
Marty Ott, State Director
Sandra S. Brooks, Field Manager

U.S.D.A. Natural Resources Conservation Service

Federal Building, Room 443
10 East Babcock Street
Bozeman, MT 59715
Dave White, State Conservationist

U.S.D.A. – Natural Resources Conservation Service

Joliet Field Office
P.O. Box 510
Joliet, MT 59041-0229
Will Alexander, District Conservationist
Penny Landon, Administrator

5.2 Tribal Consultation

Crow Tribe of Montana

Crow Tribal Council
P.O. Box 159
Crow Agency, MT 59022
Carl Venne, Chairman

5.3 State Agencies

Montana Department of Environmental Quality

Lee Metcalf Building
1520 East Sixth Ave., P.O. Box 200901
Helena, MT 59620-0901
Jan Sensibaugh, Director

Montana Fish, Wildlife & Parks

2300 Lake Elmo Drive
Billings, MT 59105
Harvey Nyberg, Regional Supervisor

Montana Department of Natural Resources and Conservation

Airport Industrial Park
1371 Rimtop Drive
Billings, MT 59105-1978
Keith Kerbel, Regional Manager

Montana Natural Heritage Program

Montana State Library
1515 East Sixth Avenue
Helena, MT 59620
Sue Crispin, Director

Montana Environmental Quality Council

Legislative Environmental Policy Office
P.O. Box 201704
Helena, MT 59620-1704
Todd Everts, Legislative Environmental Analyst

5.4 Local Agencies

Belfry K-12 Schools: Districts 34 and 3

200 Wisconsin Street
Belfry, MT 59008
Jed Landsman-Yankin, Superintendent

Carbon County Planning Office and Health Department

17 W. Eleventh
Red Lodge, MT 59068
Greg McGann, Director of Planning

Bridger K-12 Schools: District 2

P.O. Box 467
Bridger, MT 59014-0467
Janet Erickson, Principal

County Extension Agent

Carbon County Extension Office
P.O. Box Drawer F
Joliet, MT 59041

Town of Bridger

201 S. B Street
Bridger, MT 59014
William Asbury, Mayor

Carbon County Commissioners Office

17 W. Eleventh
Red Lodge, MT 59068
Albert Brown, Commissioner

5.5 Other Organizations

American Farmland Trust

P.O. Box 1417
Fort Collins, CO 80522
Benjamin Way, Director

6.0 Comments and Coordination

The procedures for implementing NEPA and preparing an Environmental Assessment emphasize cooperative consultation among agencies as well as the early and continued involvement of people who may be either interested in or affected by the project. This chapter documents the specific elements of the public and agency involvement.

6.1 Agency Coordination

The following agencies were contacted via letter at the beginning of the study process and were asked to provide information and identify issues pertaining to the proposed project (see Appendix G, Agency Coordination).

6.1.1 Agencies with Jurisdiction and/or Permitting Authority

These agencies were consulted regarding their specific areas of interest and authority pertaining to the proposed project.

- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S.D.A. Natural Resources Conservation Service
- U.S.D.O.I Bureau of Land Management
- Crow Tribe of Montana
- Montana Department of Environmental Quality
- Montana Department of Natural Resources and Conservation
- Montana Fish, Wildlife & Parks

6.1.2 Cooperating Agencies

Of the agencies listed above, eight were asked to be cooperating agencies. Cooperating agencies are those that assist in the review process of the Environmental Assessment. These agencies help to determine and review the issues that need to be addressed during the environmental documentation process and how to mitigate impacts to environmental resources that result from the project. The following agencies, along with Belfry K-12 Schools: Districts 34 and 3, are those that agreed to be the cooperating agencies for this project.

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- U.S.D.O.I Bureau of Land Management
- Montana Department of Environmental Quality
- Montana Fish, Wildlife & Parks
- Belfry K-12 Schools: Districts 34 and 3

Refer to Appendix G for letters from these agencies.

6.1.3 Other Agencies and Groups

In addition to agencies with jurisdiction and/or permitting authority, the following agencies and groups were contacted to gather information and comments about the project. See Chapter 5.0, Distribution List, for addresses of agencies.

- Montana Natural Heritage Program
- Bridger K-12 Schools, District 2
- Town of Bridger
- Carbon County Planning Office and Health Department
- County Extension Agent
- Carbon County Commissioners Office
- American Farmland Trust
- Youst Ditch Company
- Sand Creek Canal Company
- Golden Ditch Company
- Dry Creek Canal Company
- Holland Ditch Company
- Mutual Ditch Company
- Rock Creek – Clear Creek Ditch Company

6.2 Public Involvement

Three public meetings and two public workshops were held for this project. The public meetings attracted a broader, corridor-wide audience and the public workshops focused on the issues that were specific to residents at the northern end of the project corridor. The workshops were referred to as North End Workshops.

6.2.1 Public Meetings in Belfry

All three public meetings were held at the Belfry School in an open house format and a presentation. Residents from along the entire project corridor attended, particularly Belfry area residents and Bridger area residents at the north end of the corridor. An average of 32 people attended each public meeting.

6.2.1.1 Public Meeting #1 – June 18, 2002

The agenda for this meeting included reintroducing the project to the public, reviewing alternatives from the previous project studies, and discussing current issues and concerns with the Belfry area and the rural corridor. The public gave new ideas for preliminary alternatives to improve the safety of MT 72. Attendance: 37.

6.2.1.2 Public Meeting #2 – September 26, 2002

The agenda for this meeting included review of the set of preliminary alternatives that were suggested at the June 18th public meeting. Some of these alternatives were eliminated with a prescreening process and the public suggested several new alternatives or variations for the Belfry Area study. Attendance: 33.

6.2.1.3 Public Meeting #3 – December 5, 2002

The agenda for this meeting included further evaluation and a second screening of the four Belfry-area preliminary alternatives carried forward from the September 26th public meeting. The project team also presented the preliminary alternatives suggested at the North End Workshop to improve safety at Lynn's Corner and the US 310 intersection. Attendance: 27.

6.2.2 North End Workshops

Both North End workshops were held at the Bridger Café meeting room. Residents from north of the town of Belfry and near the town of Bridger attended to focus on issues particular to the northern end of the project corridor. An average of 20 people attended each North End Workshop.

6.2.2.1 North End Workshop #1 – September 27, 2002

The agenda for this morning workshop focused on discussion of issues related to the US 310 intersection with MT 72 and issues with the conditions of MT 72 in the Lynn's Corner area. Preliminary alternatives were suggested, which included requests for MDT to consider designing roadway improvements that included 8-foot shoulders on the highway. Concepts for the Ridgeway Lane alternatives were suggested at this workshop. Individual meetings with residents and business owners occurred at the workshop and comments were solicited from the public. Attendance: 18.

6.2.2.2 North End Workshop #2 – December 5, 2002

The agenda for this morning workshop included a preliminary screening for the alternatives suggested to improve the MT 72/US 310 intersection, including the Modified Existing Alignment for MT 72/US 310, and the Ridgeway Lane alternatives. Again, the public requested consideration for 8-foot shoulders. Individual meetings with residents occurred at the workshop as well. Attendance: 22.

6.2.3 Summary of Issues Expressed at Public Meetings and Workshops

6.2.3.1 MT 72 Issues in Rural Area of Corridor

Safety Concerns

- County Road access – sight distance is problem.
- Webber Lane – can't see either direction.
- Safer for farm equipment if new road / wider road.
- Community use is agricultural – so should not be a fast road.
- People driving too fast and pass as first driver is turning left.
- Accidents (occur) because overlay narrowed the road and created a lip. Vehicle tires catch edge of lip.
- Fix Lynn's Corner.
- Improve curve at Ridgeway Lane.
- Consider a roadway with wider shoulders.
- Side slopes are too steep.
- Road is higher in some places and it doesn't need to be this high.
- Bridges are narrow.
- Area near compressor is dangerous. Would be difficult to fix.
- Consider 8-foot shoulders (as from Fromberg to Bridger).
- Bridger to Rockvale – Consider this width (a wider typical section with 8-foot shoulders).
- Wildlife/Vehicle conflicts.
- Frequent accidents at US 310 intersection.
- Farm equipment uses MT 72. Drivers are not watching for farm equipment.
- Trucks travel in the middle of the road because it is too narrow.

Impact Concerns

- Farmland, farming, and ranching operations impacts – resulting in economic impacts.
- Irrigation impacts major concern.
- Dry land ground would be less expensive for right-of-way. Ditches would be expensive to relocate.

- Maintain culverts under MT 72 for livestock to cross through.
- Amount of right-of-way and compensation process is a concern.
- MW & S RR bed in some cases has been used for farming. Is this owned by MDT?
- Gas lines and utility lines would need to be moved.
- Replacement of fencing.
- MT 72 alignment would impact proposed development plans.
- Widening may impact trees that provide privacy for residences.
- Fishing access to Clarks Fork
- Wildlife cross at Silver Tip Creek, at Morris property, and at north bluffs area.
- Protect pictograph areas which are located at the north bluff area.

Other

- Where would fiber optic project go?
- Concern that project will be further delayed when improvements are needed now.

6.2.3.2 MT 72 Issues in Belfry, and S-308 Intersection Issues

- Concern about pedestrian safety at school; consider installing flashing lights at school.
- Speed limit (posted – maximum limit) is higher than you can drive around the curves.
- Too many accidents.
- Walking to school on highway not safe.
- Speeding traffic in front of school is a concern.
- Pollution from trucks at S-308 intersection and corner at school in Belfry is a concern.
- Don't want to listen to truck noise, so put in caution light (at S-308) to slow down traffic.
- The intersection of MT 72 and S-308 is off-set.
- Traffic control needed at S-308 intersection.

6.2.3.3 MT 72 Issues at US 310 Intersection

- There is no transition from US 310 to MT 72.
- Warning signage is not good.
- People do not understand US 310 and MT 72 intersection; some go north on one-way south leg.
- Maintenance issue in winter.
- US 310 northbound to MT 72 difficult movement.
- People pull off into intersection to check map at this location, so better signing is needed.
- Hard to see entrance in bad weather; need light.
- At stop, back-up queues into curve which is dangerous.

- People think that the one-lane northbound and the one-lane southbound is actually a two-lane northbound with a right and left-turn lane. This is dangerous because people traveling northbound are often in the wrong lane.
- MT 72 is shaded at north bluff area – is icy in winter.
- Make MT 72 as wide as US 310.
- Turning into businesses and residential area is hazardous.

6.3 Other Public Involvement and Information Techniques

6.3.1 Local Officials Briefings

Meetings were held with Carbon County Commissioners on June 18, 2002, September 26, 2002 and December 5, 2002 to obtain input on the project and to provide the commissioners with an update on the project status and information from the public meetings.

6.3.2 Newsletters

Five newsletters have been published and distributed. The first three newsletters were published prior to each public meeting and sent to approximately 200 people each time. The public meeting dates were June 18, September 26 and December 5, 2002. Extra newsletters were provided to the post office for additional circulation. The fourth newsletter was published and distributed in the Spring of 2003. The fifth newsletter was published in December 2004 and announced the Public Hearing scheduled for January 26, 2005.

6.3.3 Media

Press releases announcing each public meeting were sent to *Carbon County News* in Red Lodge, *Laurel Outlook* in Laurel, and the *Billings Gazette* in Billings. In addition, an advertisement was prepared to announce the first public meeting and placed in the papers listed above.

6.4 Future Public Involvement and Information Activities

The following activities will be undertaken:

- Publish sixth newsletter:
 1. Summarizing the Public Hearing
- Determine if there is a Finding of No Significant Impact (FONSI)
- Finalize EA and make it available

6.5 Opportunities for Review of and Comment on Environmental Assessment

Copies of this Environmental Assessment are available for public review at the following locations:

Bridger Town Hall

201 S. B Street
Bridger, MT 59014
406-662-3677
Town Clerk

Belfry Post Office

115 Vaill Ave.
Belfry, MT 59008
406-664-3305
Audrey

Belfry K-12 Schools, Districts 34 and 3

200 Wisconsin Street
Belfry, MT 59008
Jed Landsman-Yankin, Superintendent

Carbon County Planning Office and Health Department

17 W. Eleventh
Red Lodge, MT 59068
Greg McGann, Director of Planning

Carbon County Commissioners

17 W. Eleventh
Red Lodge, MT 59068
John Prinkki, Chairman

Horse Trader Cafe

Junction Hwy S-308 and MT 72
Belfry, MT 59008
406-664-9395
Carol

Montana Department of Transportation

Maintenance Facility
US 310 (1 mile south of Bridger)
Bridger, MT 59014
Eli Damjanovich

Montana Department of Transportation:

This document is also available in pdf format on the MDT website at:

www.mdt.state.mt.us/environmental/eis-ea/

Comments on the EA can be sent to:

Tom S. Martin, P.E.
Consultant Design
Montana Department of Transportation
P.O. Box 201001
Helena, MT 59620-1001

Or you may contact Mr. Martin at 406-444-9252 or via email at www.mdt.state.mt.us/environmental/eis-ea/

The deadline for public comments is February 28, 2005.

7.0 List of Preparers

The following is a list of the project team that participated in the environmental documentation process for the Belfry-North EA.

Name and Title	EA Responsibility	Education and Certification	Experience
Federal Highway Administration			
Alan Woodmansey, PE <i>Operations Engineer</i>	Lead Agency	M.S. Engineering Management B.S. Environmental Engineering	9 years experience in transportation engineering.
Montana Department of Transportation			
Jean Riley, P.E. <i>Engineering Section Supervisor</i>	EA Reviewer	B.S. Civil Engineering	Over 6 years experience in environmental in coal mining, 11.5 years with DEQ in environmental compliance and regulatory requirements. Over 4 years with MDT in project management and environmental.
Tom Martin, P.E. <i>Consultant Design Engineer</i>	EA Reviewer	B.S. Civil Engineering	10 years experience in design and project management of transportation facilities.
Karl M. Helvik, P.E. <i>Consultant Project Engineer</i>	Interim Project Manager	B.S. Agricultural Engineering	Over 24 years experience in highway and transportation design, project management, and environmental compliance.
Mike DaSoglio, P.E. <i>Consultant Project Engineer</i>	Current Project Manager EA Reviewer	B.S. Construction Engineering	13 years experience in highway and transportation hydraulic design.
Bruce Barrett, P.E. <i>District Administrator Billings District</i>	Public Involvement EA Reviewer		37 years with MDT, with experience in construction, equipment, and maintenance.
Gary Neville, P.E. <i>District Engineer Billings District</i>	EA Reviewer	A.S. Civil Engineering Technology	Over 20 years experience in transportation in the engineering, management and construction field with 5 years in the private consulting and construction sector and 17 years with MDT.

Name and Title	EA Responsibility	Education and Certification	Experience
Montana Department of Transportation (continued)			
Dave Hill <i>Manager of Environmental Services</i>	EA Reviewer	B.S. Wildlife Biology	14 years experience working in variety of professions related to environment, including water quality permitting and compliance, project management, biological impact analysis and mitigation, and environmental analysis and review. Over 5 years with MDT.
Jon Axline <i>Historian</i>	Cultural Resources	M.A. Western American History	16 years experience in historical and cultural resources development.
David Evans and Associates, Inc.			
Debra Perkins-Smith, AICP <i>Vice President, Environmental Manager</i>	Project Management, Public Involvement, Alternatives Development and Evaluation, Project Documentation	Master of Urban and Regional Planning B.A. Government	Over 23 years experience in transportation, environmental planning and public involvement programs.
Joseph Hart, P.E. <i>Vice President, Transportation Manager</i>	Alternatives Development, Traffic Engineering	M.S. Civil Engineering B.S. Civil Engineering	Over 25 years experience in traffic engineering, transportation planning, transit systems analysis, alternatives assessment and environmental studies.
Steve Long, P.E. <i>Senior Associate, Senior Transportation Engineer</i>	Project Management, Public Involvement, Roadway Design, Alternatives Development	B.S. Civil Engineering	Over 18 years experience in all phases of a project from environmental compliance and planning through preparing final construction documents and providing construction management.
Kip Coulter, P.E. <i>Vice President, Senior Transportation Engineer</i>	Bridge Design	B.S. Civil Engineering	30 years of experience in transportation and structural engineering.
Inga Note, P.E. <i>Design Engineer</i>	Traffic Engineering	M.S. Civil Engineering B.S. Civil Engineering	Six years of experience in transportation engineering, with a strong background in traffic operations. Her primary expertise is in traffic analysis including signal optimization and impact analyses.

Name and Title	EA Responsibility	Education and Certification	Experience
David Evans and Associates, Inc. (continued)			
Larry Olson, P.E. <i>Civil Engineer, Project Manager</i>	Surveying and Drainage Design	M.S. Civil Engineering B.S. Agricultural Engineering	Over 25 years experience in a variety of projects in both the public and private sector in the design and construction management of roads, streets, wastewater treatment facilities, water systems, sewer systems, and detailed stormwater management systems.
Ken McHenry, P.E. <i>Civil Engineer</i>	Civil and Roadway Engineering	A.S. Civil Engineering B.S. Civil Engineering	Over 11 years of experience in design and transportation engineering in both the public and private sectors. Responsible for all aspects of the design process, from the initial planning stage through the construction management stage.
Doug Busko, P.E. <i>Civil Engineer</i>	Drainage Engineering	M.S. Civil Engineering B.S. Civil Engineering	10 years of experience as a project manager and designer of a wide range of civil engineering projects including roadways, water systems, sanitary sewer systems, stormwater conveyance and treatment facilities, and commercial and residential developments.
Rich Waltrip, P.L.S. <i>Professional Land Surveyor</i>	Land Surveyor	B.S. Geology	Extensive experience in both fieldwork and in a supervisory role in regard to topographic surveying, boundary surveying, right-of-way surveying and construction staking.
Jane Boand, AICP <i>Senior Associate, Senior Planner</i>	Technical Review	M.S. Regional Planning B.S. Natural Resource Planning	Over 23 years of experience in managing and coordinating special studies for NEPA documentation and transportation planning projects.

Name and Title	EA Responsibility	Education and Certification	Experience
David Evans and Associates, Inc. (continued)			
Mandy Whorton <i>Senior Environmental Planner</i>	Cultural Resources, Environmental Justice, Hazardous Materials Documentation, Document Preparation	Master of Natural Resource Management B.A. Political Science	Over 10 years experience in NEPA documentation and natural and cultural resource management
Martha Wiley <i>Senior Environmental Planner</i>	Biological Resources, Wetlands	M.A. Geography B.A. Geography	Over 23 years experience with environmental planning, federal and state environmental regulations in Montana, Idaho, Washington and California.
Saundra Dowling, AICP <i>Environmental and Transportation Planner</i>	EA Task Manager, Project Administrator, Public Involvement, Alternatives Development and Evaluation, Document Preparation	Master of Urban and Regional Planning B.A. Journalism	Over 10 years of experience in providing planning, communication, public involvement and documentation services for a variety of public projects.
Sue Platte <i>Biologist</i>	Biological Resources, Wetlands	B.S. Biology Wetland Delineator Certification	Over 6 years of experience as a biologist. Management of wildlife surveys projects, wetland delineation, and impact assessment projects.
Jacqueline Halvorson <i>Planner</i>	Water Resources	Master of Urban and Regional Planning Pending 2003 B.A. Urban Planning Minor in Cultural Anthropology and Physical Geography	Over 6 years experience in long-range planning, including environmental analysis, land use analysis, planning law and legislation, public participation techniques, the Growth Management Act, historic preservation, and Tribal planning
Laura Meyer <i>Environmental Planner</i>	Natural Resource Documentation	Master of Urban and Regional Planning B.A. Geography	Over 5 years of experience in impact analysis and documentation for multidisciplinary transportation, land use, and environmental projects.
Richard Garcia <i>Environmental Planner</i>	GIS Analysis, Farmlands Documentation, Mapping	B.A. Geography	More than 5 years experience in Geographic Information Systems (GIS) analysis and environmental planning.

Name and Title	EA Responsibility	Education and Certification	Experience
David Evans and Associates, Inc. (continued)			
Chad Ricklefs <i>Planner</i>	Natural Resource Documentation and Socioeconomics	Master of Urban and Regional Planning B.A. Political Science and Environmental Conservation	2 years experience in environmental and urban planning, including public involvement programs.
Engineering, Inc.			
Peter Knapp, PLS <i>Surveying Manager</i>	Land Surveying	B.S. Forestry	Licensed Land Surveyor for 17 years in Montana.
Bionomics			
David Aspitarte <i>Principal</i>	Noise Analysis	B.S. Bacteriology and Public Health	20 years experience in the environmental field.
Terracon			
Dan Nebel <i>Office Manager and Engineering Geologist</i>	Hazardous Materials	B.S. Geology	29 years of experience in geologic, geotechnical, hydrogeologic, water resource and environmental projects.
John Pool, P.E. <i>Senior Geotechnical Engineer</i>	Geotechnical and Materials	M.S. Civil Engineering B.S. Civil Engineering	27 years geotechnical engineering experience in shallow and deep foundations, earthwork and pavement design.
Renewable Technologies, Inc.			
Mitzi Rossillon <i>Senior Archaeologist</i>	Cultural, Historic, Preservation, Archaeology	M.A. Anthropology (emphasis in Archaeology)	25 years experience in cultural resource management field.
Ayers Associates			
Lyle Zevenbergen, Ph.D., P.E. <i>Manager of River Engineering</i>	Technical Review	Doctorate, Earth Sciences M.S. Civil Engineering B.S. Civil Engineering	20 years experience in hydraulic engineering with specific expertise in computer modeling of hydraulics, hydrology, scour analysis, drainage design, erosion control, and sediment transport.
Scott Hogan, P.E. <i>Project Manager, Hydraulic Engineering</i>	Bridge Hydraulic Design	M.S. Hydraulic Engineering B.S. Civil Engineering	Over 12 years experience in hydraulic analysis and design, specializing in bridge hydraulics, flood control, and channel stabilization.

8.0 List of Sources / Documents

Transportation

David Evans and Associates, Inc., August 7, 2002. *Belfry-North Preliminary Traffic Engineering Report*.

Montana Department of Transportation. Crash report. Data compiled by David Evans and Associates, Inc.

Land Uses

Draft Carbon County Growth Policy, January 2002

Land Stewardship, NRIS.state.mt.us/mapper/reportsASP/stewardship.asp, 2002.

NorthWestern Energy, 40 E. Broadway Avenue, Butte, MT 59701, 1-888-467-2669

www.rad.dli.state.mt.us/county/carbon/descrip.asp

Farmlands

County Profiles; NaCo – Agricultural Data

David Evans and Associates, Inc., November 2003. GIS Analysis.

www.nris.state.mt.us/mapper/ReportsASP/stewardship.asp

NRCS Soil Survey Geographic (SSURGO) Database

Irrigation

David Evans and Associates, Inc., November 11, 2003. *Location Hydraulics Study Report*.

Social Conditions

Draft Carbon County Growth Policy, January 2002

<http://www.digital-neighbors.com/city/mt/belfry522h.htm>

<http://www.findhospitaljobs.com/facilitydetail.asp?ID=6204>

http://www.geocities.com/belfryfire_ems/

http://rad.dli.state.mt.us/county/carbon/default.asp?data+es_202

U.S. Census Bureau, Population, Housing Units, Area and Density: 2000. Geographic Area: Montana-Place (town of Belfry)

www.factfinder.census.gov/home/en/datanotes/expsf1u.htm

www.naco.org/counties/county.cfm?id=30009

www.nris.state.mt.us/gis/legislat/dist01/d23.html

www.nris.state.mt.us/mapper/ReportsASP/stewardship.asp

www.psw.n.gov

www.visitmt.com/categories/city.asp?SiteID=1&CityID=19

Economic Conditions

Carbon County 1996 Implant Model Tear Data

Census and Economic Information Center

County Profiles; NaCo – Agricultural Data

Draft Carbon County Growth Policy, January 2002

<http://216.239.33.100/search?q=cache:yqajEUOcygAC:www.dphhs.state.mt.us/hpsd/pubheal/healthplan/pdf/profpdf/carbon.pdf+911%2BCarbon+County,+MT&hl=en&ie=UTF-8>

<http://www.northwesternenergy.com/services/economic.htm>

Montana Department of Labor and Industry, Montana Employment and Labor Force Trends, First Quarter 2003 (available at www.dli.state.mt.us)

Montana Department of Transportation Highway Map

National Mining Association

National Scenic Byways Program

Red Lodge Chamber of Commerce

Research and Analysis Bureau, Montana [Department of Labor and Industry's Workforce Services Division](http://www.dli.state.mt.us), in partnership with Bureau of Labor Statistics. <http://rad.dli.state.mt.us>. 2000.

U.S. Census Bureau Economic Census

www.ceic.commerce.state.mt.us/economic/BEA/beaData/ca05_009.txt

www.nris.state.mt.us/mapper/ReportsASP/stewardship.asp

<http://www.findhospitaljobs.com/facilitydetail.asp?ID=6204>

Environmental Justice

Research and Analysis Bureau, Montana [Department of Labor and Industry's Workforce Services Division](http://www.dli.state.mt.us), in partnership with Bureau of Labor Statistics. <http://rad.dli.state.mt.us>. 2000.

U.S. Census Bureau Economic Census

U.S. Census Bureau, Population, Housing Units, Area and Density: 2000. Geographic Area: Montana-Place (town of Belfry)

Right-of-Way and Relocation of Utilities

David Evans and Associates, Inc., November 11, 2003. *Belfry-North Location Hydraulics Study Report*.

David Evans and Associates, Inc., March 2, 2004. *Belfry-North Ownership Study and Narrative Right-of-Way Report*.

David Evans and Associates, Inc., August 7, 2002. *Belfry-North Preliminary Traffic Engineering Report*.

David Evans and Associates, Inc., March 2, 2004. *Belfry-North Relocation Conceptual Study*.

State of Montana Cadastral Mapping Project Website

Cultural and Historic Resources

Montana Department of Highways, February 1989. *Cultural Resource Inventory of the Belfry-North Highway Improvement Project*

Renewable Technologies, Inc., February 3, 2003. *2002 Cultural Resource Inventory, Belfry-North Highway Reconstruction Project, Carbon County, Montana.*

Renewable Technologies, Inc., September 11, 2003. *2003 Cultural Resource Inventory, Belfry-North Highway Reconstruction Project, Ridgeway Lane Alternatives.*

Parks and Recreational Facilities/Public Lands

1983 BLM Resource Management Plan / Final EIS, Billings Resource Area

Telephone contact with Bureau of Land Management, Billings Field Office, Mr. Tom Carroll, December 10, 2002.

Air Quality

Terracon, Inc., September 5, 2003. *Initial Site Assessment, Belfry-North, F 72-1(10)10, CN 1016.*
www.deq.state.mt.us/ppa/rpp/air_nonattainment.asp

Noise

Bionomics Environmental, Inc., January 15, 2004. *Final Traffic Noise Impact Assessment Report.*

Federal Register, Volume 47, No. 131, July 8, 1982, Rules and Regulations.

Water Resources/Quality

David Evans and Associates, Inc., July 2004. *Belfry-North Biological Resources Report.*

David Evans and Associates, Inc., November 11, 2003. *Location Hydraulics Study Report.*

Personal Communication with Greg McGann, Carbon County Planning Office. May 13, 2002.

Wetlands

David Evans and Associates, Inc., July 2004. *Belfry-North Biological Resources Report.*

Vegetation

David Evans and Associates, Inc., July 2004. *Belfry-North Biological Resources Report.*

Wildlife

David Evans and Associates, Inc., July 2004. *Belfry-North Biological Resources Report.*

Threatened and Endangered Species

David Evans and Associates, Inc., July 2004. *Belfry-North Biological Resources Report.*

Floodplains

David Evans and Associates, Inc., July 2004. *Belfry-North Biological Resources Report.*

David Evans and Associates, Inc., November 11, 2003. Final *Location Hydraulics Study Report*. (MDT Activity 170)

USGS Water Resources Investigations Report 92-4048, *Analysis of the Magnitude and Frequency of Floods and the Peak-Flow Gaging Network in Montana*

FEMA Firm Mapping, Digital Q3 FIRM Data, FIS mapping for Carbon County, Montana

FIRM, 1981, Carbon County, Montana

Hazardous Materials

Terracon, Inc., September 5, 2003. *Initial Site Assessment, Belfry-North, F 72-1(10)10, CN 1016*.

GWIC Database

Visual Resources

Site Visit September 26, 2002.

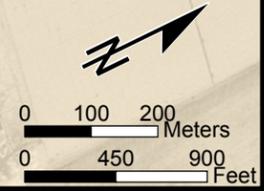
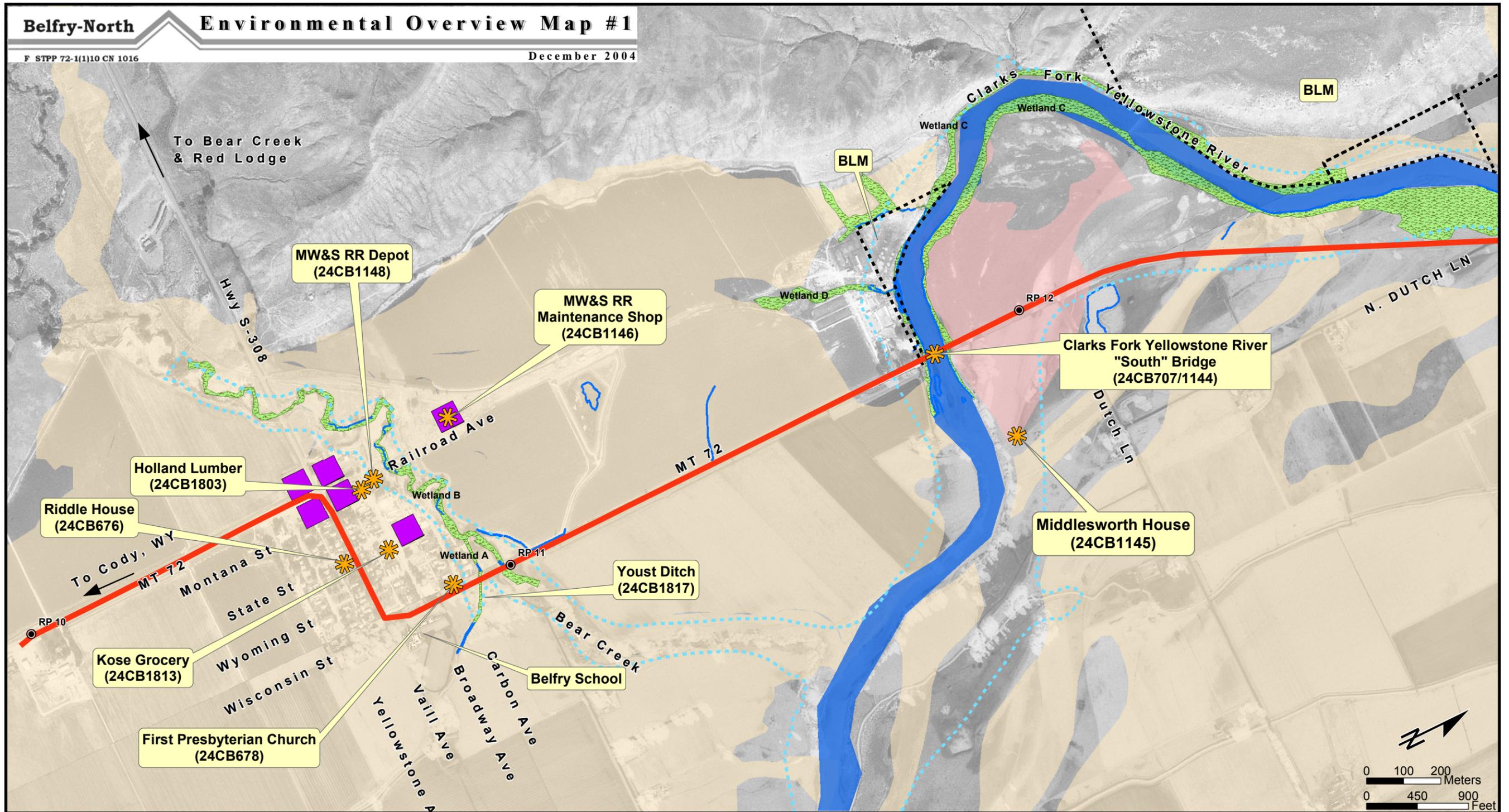
Cumulative Impacts

2003 Montana State Transportation Improvement Program.

Communication with Carbon County Planning Department, MT. February 3, 2004.

9.0 Appendices

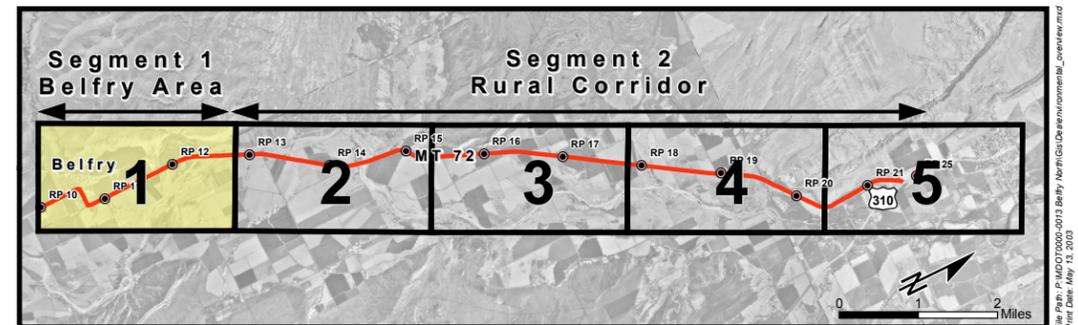
Appendix A - Environmental Overview Maps



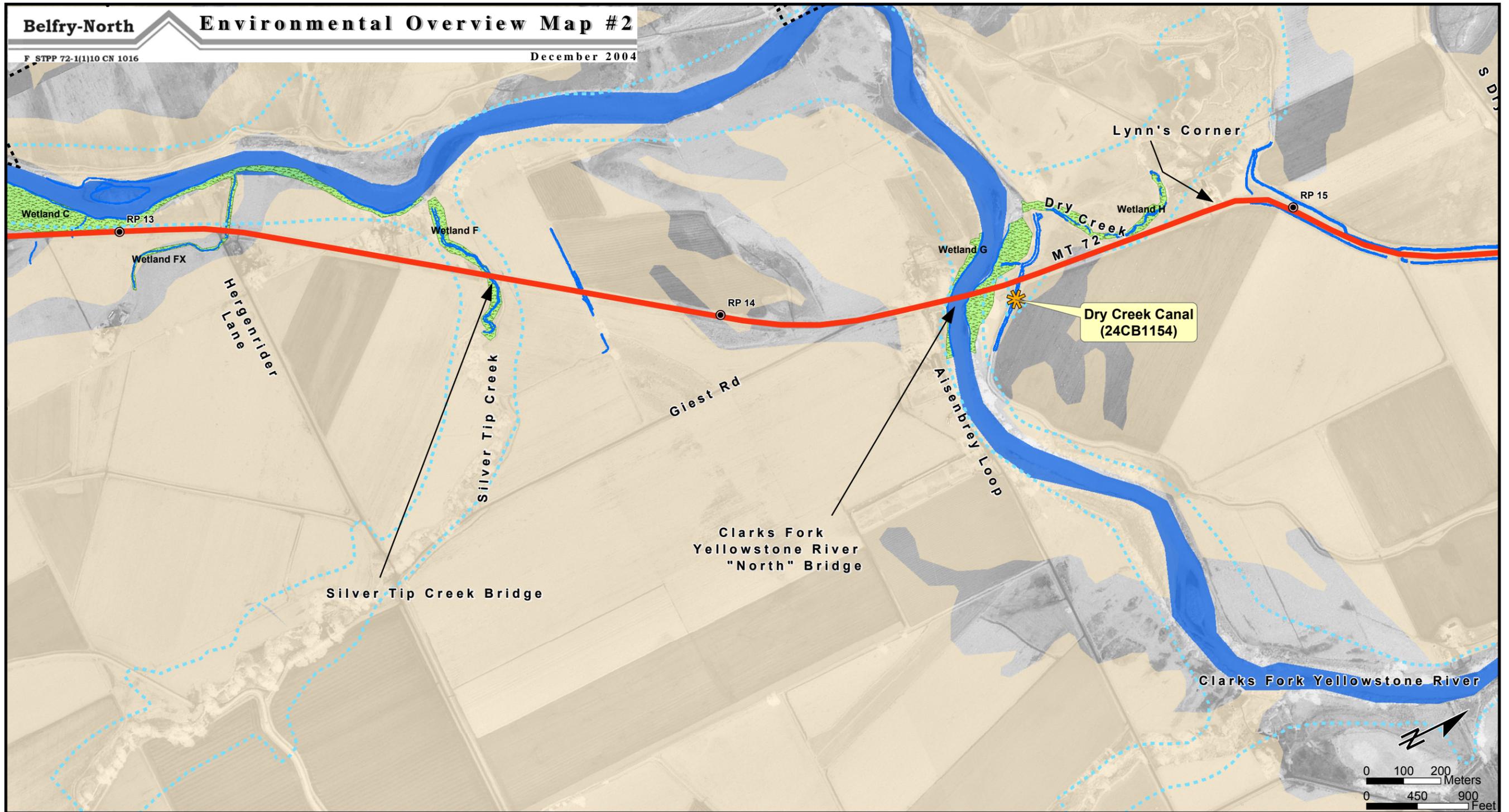
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- ~ Ditches
- Clarks Fork Yellowstone River
- Jurisdictional Wetlands
- 100-Year Floodplain
- Hydric Soils
- Hazmat Area of Concern
- Farmland of Statewide Importance
- Prime Farmland if Irrigated

Map Location:



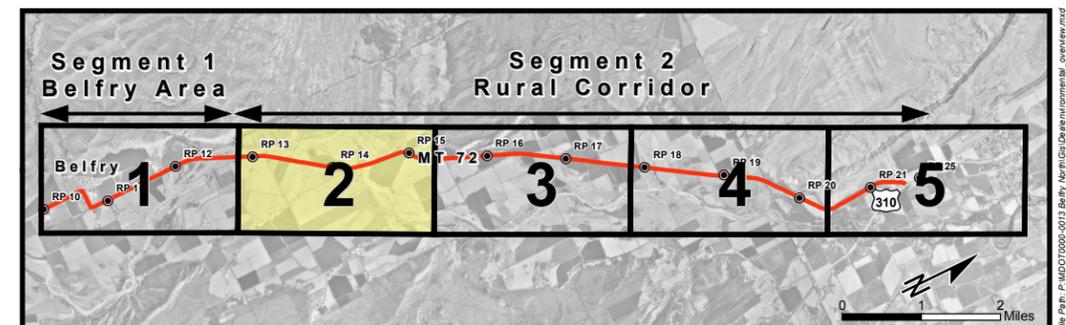
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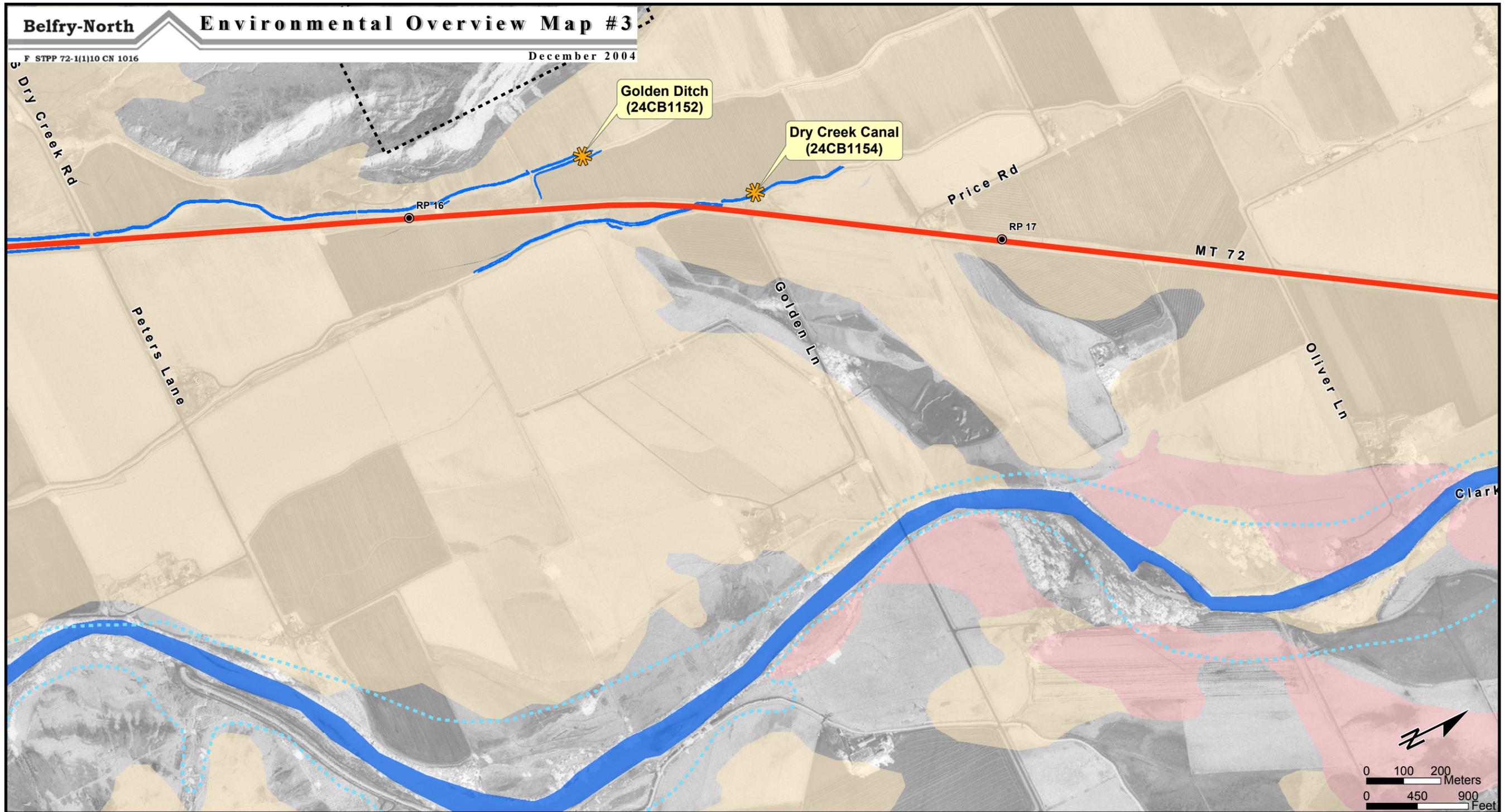
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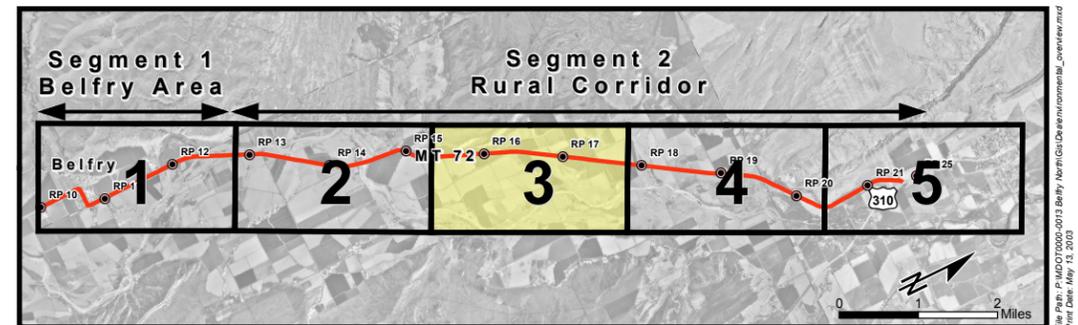
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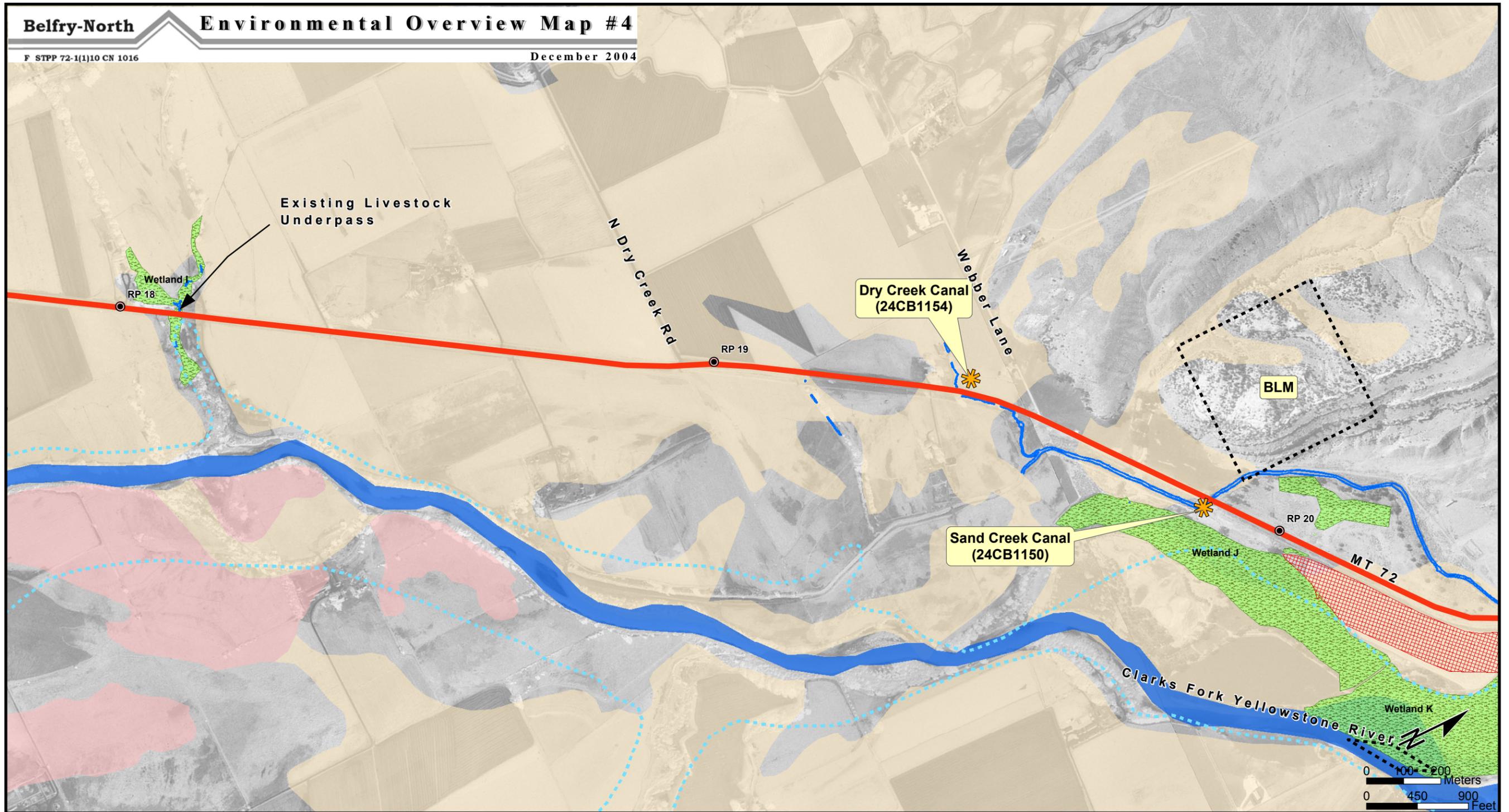


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- 100-Year Floodplain
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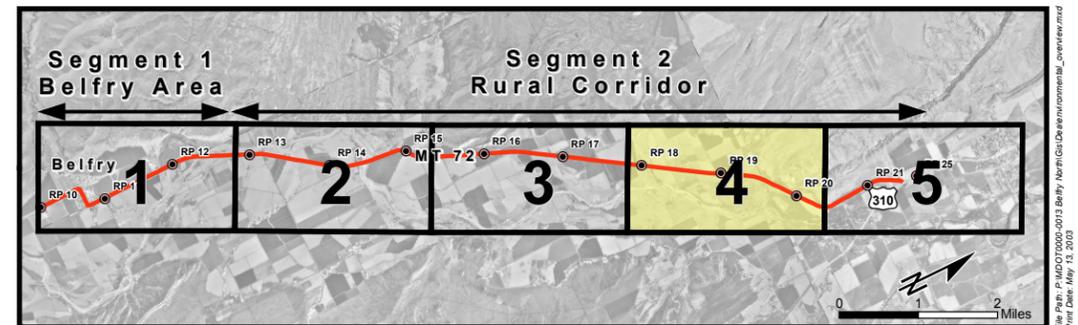


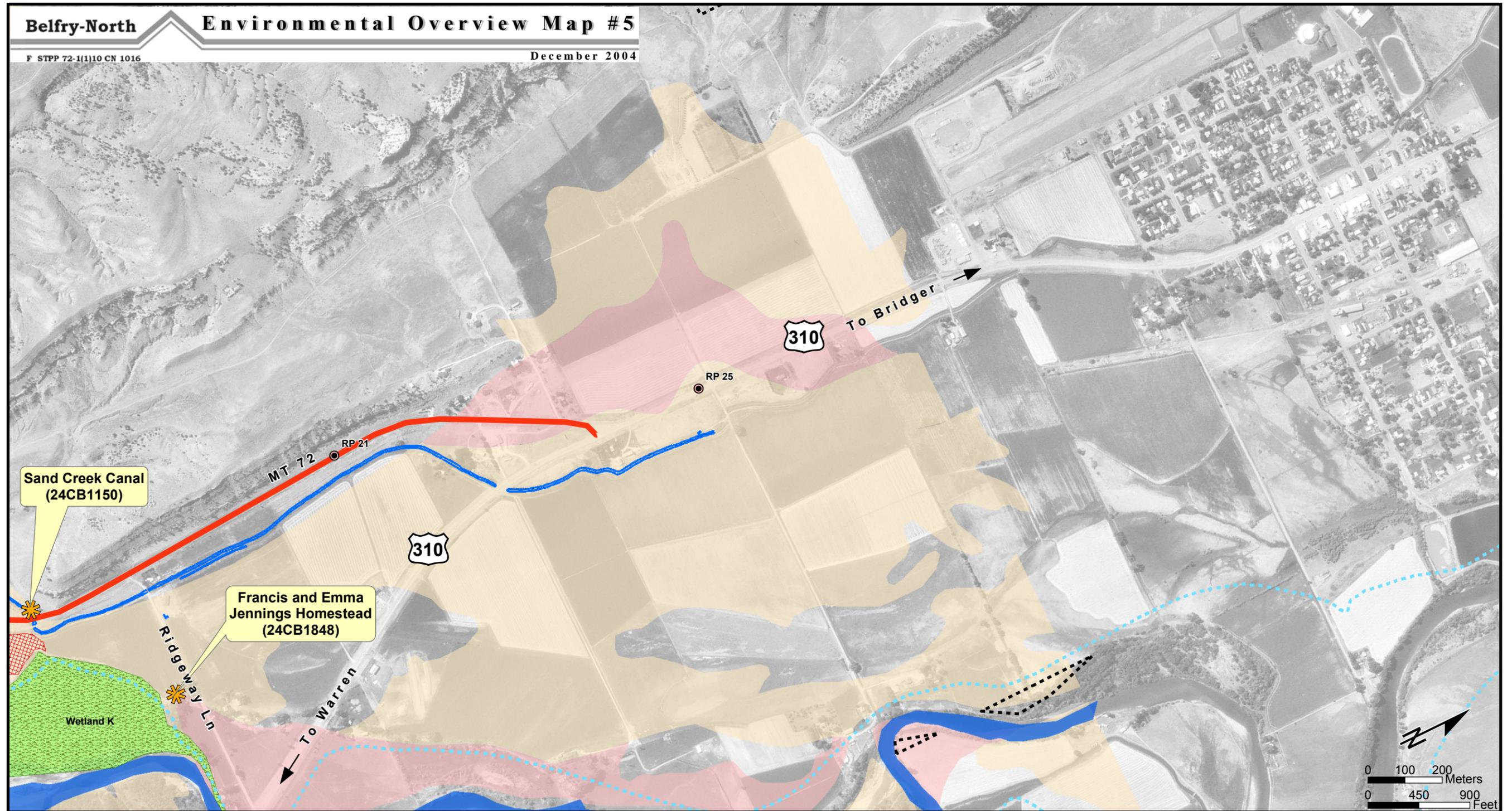


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- MT 72 Existing Centerline
- ★ National Register of Historic Places Eligible
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- 100-Year Floodplain
- Hydric Soils
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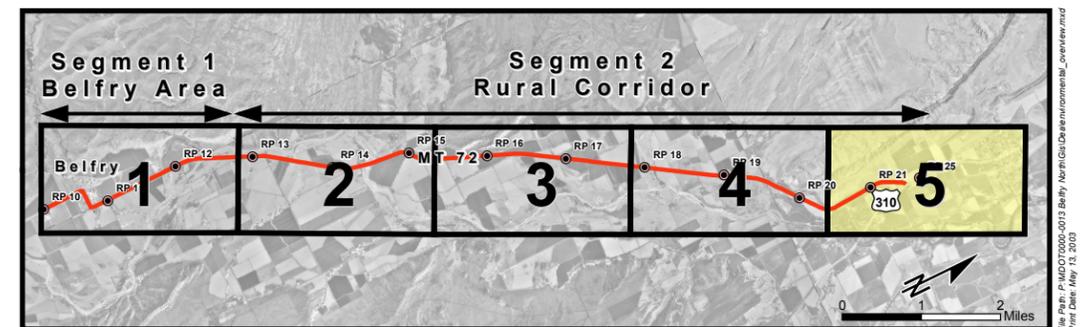




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- Jurisdictional Wetlands
- 100-Year Floodplain
- Hydric Soils
- Hazmat Area of Concern
- Farmland of Statewide Importance
- Prime Farmland if Irrigated

Map Location:



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Appendix B - Farmland Conversion Impact Rating



DAVID EVANS
AND ASSOCIATES INC.

May 6, 2004

Mr. Ray McPhail
US Department of Agriculture - Natural Resources and Conservation Service
Joliet Field Office
606 West Front Avenue
Joliet, MT 59041

**SUBJECT: BELFRY NORTH EA
F STPP 72-1(1) 10 CN 1016 Control no. 1016
Updated USDA NRCS-CPA-106 Farmland Conversion Impact Rating Forms**

Dear Mr. McPhail:

Please find the enclosed revised USDA NRCS CPA-106 Farmland Conversion Impact Rating forms for Corridor Type Projects prepared for the above referenced project. David Evans and Associates, Inc., project consultant, is managing the project for the Montana Department of Transportation

NRCS Parts II and IV on the enclosed USDA NRCS CPA-106 Farmland Conversion Impact Rating forms were revised per your direction with the information you provided by phone on May 5, 2004. As you requested, the following changes were made to your original determinations, dated December 11, 2003:

- Part IV A – Represents total acreage of Prime and Unique Farmland as defined in FPPA for Carbon County (taken from Part II #7).
- Part IV B – Represents total acreage of Statewide and Local Important Farmland as defined in FPPA for Carbon County (taken from Part II #7).
- Part IV C – Is the percentage of farmland in county or local government to be converted by the project (Part III C/Part II #6).
- Part IV D – Is the percentage of farmland in Government jurisdiction with the same or higher relative value (Part II #6 – Part IV C).

Parts I, III, VI, and VII on these updated forms were completed by David Evans and Associates. The information for these sections did not change from the December 11, 2003 forms.

This letter will serve as project documentation of your revisions to the CPA 106 forms for this project. These changes have been completed as indicated on the attached forms. Please contact me at (720) 946-0969 if you have any questions.

Natural Resource and Conservation Service

May 6, 2003

Page 2 of 3

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.



Richard J. Garcia

GIS Analyst/Planner

Copies: Tom Martin, MDT
Debra Perkins-Smith, DEA
File

Attachments/Enclosures: Revised NRCS-CPA-106 Farmland Conversion Impact Rating for Corridor Type
Projects

File Name P:\MDOT0000-0013 Belfry North\ADMIN\Transmittals\nrcs_CPA-106_coverletter_may2004.doc

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request 11/18/03	4. Sheet 1 of <u>3</u> Form #1
1. Name of Project Belfry North EA		5. Federal Agency Involved FHWA (MDT)	
2. Type of Project Transportation/Highway Corridor		6. County and State Carbon County, MT	

PART II (To be completed by NRCS)		1. Date Request Received by NRCS 12/11/03	2. Person Completing Form A. Ray McPhail
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form.) YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated 85,780	Average Farm Size 160
5. Major Crop(s) Sugar beets, malt barley, beans, hay	6. Farmable Land in Government Jurisdiction Acres: 160,837 15 %	7. Amount of Farmland As Defined in FPPA Acres: 221,152 21 %	
8. Name Of Land Evaluation System Used NA	9. Name of Local Site Assessment System NA	10. Date Land Evaluation Returned by NRCS 5/5/04	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment Belfry Area (32ft and 40ft)			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	25	16	26	16
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0	0	0	0
C. Total Acres In Corridor	25	16	26	16

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	39,596	39,596	39,596	39,596
B. Total Acres Statewide And Local Important Farmland	181,556	181,556	181,556	181,556
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0 (41%)	0 (41%)	0 (41%)	0 (41%)
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	14	14	14	14

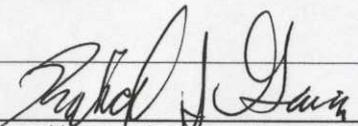
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)	54	54	54	54
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PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))	Maximum Points				
1. Area in Nonurban Use	15	15	15	15	15
2. Perimeter in Nonurban Use	10	6	4	6	4
3. Percent Of Corridor Being Farmed	20	18	14	18	14
4. Protection Provided By State And Local Government	20	0	0	0	0
5. Size of Present Farm Unit Compared To Average	10	5	5	5	5
6. Creation Of Nonfarmable Farmland	25	0	0	0	0
7. Availability Of Farm Support Services	5	4	4	4	4
8. On-Farm Investments	20	5	3	5	3
9. Effects Of Conversion On Farm Support Services	25	1	0	1	0
10. Compatibility With Existing Agricultural Use	10	1	0	1	0
TOTAL CORRIDOR ASSESSMENT POINTS	160	55	45	55	45

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	54	54	54	54
Total Corridor Assessment (From Part VI above or a local site assessment)	160	55	45	55	45
TOTAL POINTS (Total of above 2 lines)	260	109	99	109	99

1. Corridor Selected: See 5	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
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5. Reason For Selection:
The Railroad Alignment Alternative - Corridor A and C has been selected as the preferred alignment because it relocates the highway away from the Belfry school to the west side of town providing improved safety. A preferred typical section (32-ft vs. 40-ft) has not been identified at this time.

Signature of Person Completing this Part:  DATE **5-5-04**

NOTE: Complete a form for each segment with more than one Alternate Corridor

Belfry North EA - Belfry Area Segment Farmland Conversion

Question 1: How much land is in non-urban use within a 1.0 mile radius from where the project is intended?

Site	Alternative	Non-Urban Area (ac)	Area within a 1 mile radius of the project area (ac)	% of Area that is Non-Urban Land
A	Railroad 32-ft	5,133.02	5,275.70	97.30%
B	Broadway 32-ft	5,133.02	5,275.70	97.30%
C	Railroad 40-ft	5,133.02	5,275.70	97.30%
D	Broadway 40-ft	5,133.02	5,275.70	97.30%

Question 2: How much of the perimeter of the site borders on land in non-urban use?

Site	Alternative	Total Perimeter (ft)	Perimeter Bordering Non-Urban Land (ft)	% of Perimeter Bordering Non-Urban Land
A	Railroad 32-ft	36,188.50	24,800.75	68.53%
B	Broadway 32-ft	45,755.73	20,783.10	45.42%
C	Railroad 40-ft	36,332.90	24,843.30	68.38%
D	Broadway 40-ft	45,770.81	20,791.00	45.42%

Question 3: How much of the site has been farmed more than 5 of the last 10 years?

Site	Alternative	Total Area (ac)	Farmed Area (ac)	% of the site farmed
A	Railroad 32-ft	24.74	21.45	86.70%
B	Broadway 32-ft	15.90	11.32	71.19%
C	Railroad 40-ft	25.72	22.26	86.55%
D	Broadway 40-ft	16.02	11.35	70.85%

Question 4: Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site	Alternative	Yes/No
A	Railroad 32-ft	No
B	Broadway 32-ft	No
C	Railroad 40-ft	No
D	Broadway 40-ft	No

Question 5: Is the farm unit(s) containing the site as large as the average-size farming unit in the county?

Site	Alternative	average size farm in county (ac)	median impacted farm size (ac)	% of the average size farm in the county
A	Railroad 32-ft	1,181.00	851.06	72.06%
B	Broadway 32-ft	1,181.00	851.06	72.06%
C	Railroad 40-ft	1,181.00	851.06	72.06%
D	Broadway 40-ft	1,181.00	851.06	72.06%

Question 6: How much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Site	Alternative	total area	non-farmable area	% of the total area that becomes non-farmable
A	Railroad 32-ft	24.74	0	0.00%
B	Broadway 32-ft	15.90	0	0.00%
C	Railroad 40-ft	25.72	0	0.00%
D	Broadway 40-ft	16.02	0	0.00%

Question 8: Does the site have farm investments?

Site	Alternative	total area	area of farm investments	% of the site that has farm investments
A	Railroad 32-ft	24.74	7.08	28.62%
B	Broadway 32-ft	15.90	2.71	17.04%
C	Railroad 40-ft	25.72	7.27	28.27%
D	Broadway 40-ft	16.02	2.71	16.92%

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request	4. Sheet 1 of <u>3</u> Form # <u>2</u>
1. Name of Project Belfry North EA		5. Federal Agency Involved FHWA (MDT)	
2. Type of Project Transportation/Highway Corridor		6. County and State Carbon County, MT	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 12/11/03	2. Person Completing Form A. Ray McPhail
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form.) YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated Average Farm Size 85,780 160	
5. Major Crop(s) Sugar beets, malt barley, beans, hay	6. Farmable Land in Government Jurisdiction Acres: 160,837 15 %		7. Amount of Farmland As Defined in FPPA Acres: 221,152 21 %
8. Name Of Land Evaluation System Used NA	9. Name of Local Site Assessment System NA	10. Date Land Evaluation Returned by NRCS 5/5/04	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment <u>Rural Corridor 32-ft</u>			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	87	92	96	
B. Total Acres To Be Converted Indirectly, Or To Receive Services	8	9	8	
C. Total Acres In Corridor	95	101	104	0

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	39,596	39,596	39,596	
B. Total Acres Statewide And Local Important Farmland	181,556	181,556	181,556	
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0 (<1%)	0 (<1%)	0 (<1%)	
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	14	14	14	
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)				
	54	54	54	

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))	Maximum Points				
1. Area in Nonurban Use	15	15	15	15	
2. Perimeter in Nonurban Use	10	6	7	7	
3. Percent Of Corridor Being Farmed	20	18	19	20	
4. Protection Provided By State And Local Government	20	0	0	0	
5. Size of Present Farm Unit Compared To Average	10	0	0	0	
6. Creation Of Nonfarmable Farmland	25	2	3	2	
7. Availability Of Farm Support Services	5	4	4	4	
8. On-Farm Investments	20	3	5	7	
9. Effects Of Conversion On Farm Support Services	25	0	1	1	
10. Compatibility With Existing Agricultural Use	10	0	1	1	
TOTAL CORRIDOR ASSESSMENT POINTS	160	48	55	57	0

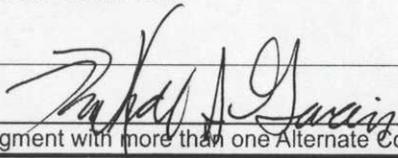
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	54	54	54	
Total Corridor Assessment (From Part VI above or a local site assessment)	160	48	55	57	0
TOTAL POINTS (Total of above 2 lines)	260	102	109	111	0

1. Corridor Selected: See 5	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
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5. Reason For Selection:

The Modified Existing Alignment Alternative - Corridor A has been selected as the preferred alignment because it provides the similar safety improvements to the other alternatives but with fewer impacts. A preferred typical section (32-ft vs. 40-ft) has not been identified at this time.

Signature of Person Completing this Part:



DATE

5-5-04

NOTE: Complete a form for each segment with more than one Alternate Corridor

Belfry North EA - Rural Corridor - 32ft - Segment Farmland Conversion

Question 1: How much land is in non-urban use within a 1.0 mile radius from where the project is intended?

Site	Alternative	Non-Urban Area (ac)	Area within a 1 mile radius of the project area (ac)	% of Area that is Non-Urban Land
A	Modified Existing 32-ft	14,036.37	14,578.25	96.28%
B	Ridgeway North 32-ft	14,036.37	14,578.25	96.28%
C	Ridgeway South 32-ft	14,036.37	14,578.25	96.28%

Question 2: How much of the perimeter of the site borders on land in non-urban use?

Site	Alternative	Total Perimeter (ft)	Perimeter Bording Non-Urban Land (ft)	% of Perimeter Bording Non-Urban Land
A	Modified Existing 32-ft	195,141.33	97,233.59	49.83%
B	Ridgeway North 32-ft	180,312.00	92,960.68	51.56%
C	Ridgeway South 32-ft	177,982.84	92,413.07	51.92%

Question 3: How much of the site has been farmed more than 5 of the last 10 years?

Site	Alternative	Total Area (ac)	Farmed Area (ac)	% of the site farmed
A	Modified Existing 32-ft	86.60	74.31	85.81%
B	Ridgeway North 32-ft	92.22	82.63	89.60%
C	Ridgeway South 32-ft	95.58	86.25	90.24%

Question 4: Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site	Alternative	Yes/No
A	Modified Existing 32-ft	No
B	Ridgeway North 32-ft	No
C	Ridgeway South 32-ft	No

Question 5: Is the farm unit(s) containing the site as large as the average-size farming unit in the county?

Site	Alternative	average size farm in county (ac)	median impacted farm size (ac)	% of the average size farm in the county
A	Modified Existing 32-ft	1,181.00	180.50	15.28%
B	Ridgeway North 32-ft	1,181.00	180.50	15.28%
C	Ridgeway South 32-ft	1,181.00	180.50	15.28%

Question 6: How much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Site	Alternative	total area	non-farmable area	% of the total area that becomes non-farmable
A	Modified Existing 32-ft	86.60	8.31	9.60%
B	Ridgeway North 32-ft	92.22	9.08	9.85%
C	Ridgeway South 32-ft	95.58	8.31	8.69%

Question 8: Does the site have farm investments?

Site	Alternative	total area	area of farm investments	% of the site that has farm investments
A	Modified Existing 32-ft	86.60	17.04	19.68%
B	Ridgeway North 32-ft	92.22	25.31	27.45%
C	Ridgeway South 32-ft	95.58	34.61	36.21%

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request	4. Sheet 1 of <u>3</u> Form # <u>3</u>
1. Name of Project Belfry North EA		5. Federal Agency Involved FHWA (MDT)	
2. Type of Project Transportation/Highway Corridor		6. County and State Carbon County, MT	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 12/11/03	2. Person Completing Form A. Ray McPhail
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated Average Farm Size 85,780 160	
5. Major Crop(s) Sugar beets, malt barley, beans, hay	6. Farmable Land in Government Jurisdiction Acres: 160,837 15 %		7. Amount of Farmland As Defined in FPPA Acres: 221,152 21 %
8. Name Of Land Evaluation System Used NA	9. Name of Local Site Assessment System NA	10. Date Land Evaluation Returned by NRCS 5/5/04	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment <u>Rural Corridor 40-ft</u>			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	92	97	100	
B. Total Acres To Be Converted Indirectly, Or To Receive Services	8	9	8	
C. Total Acres In Corridor	100	106	108	0

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	39,596	39,596	39,596	
B. Total Acres Statewide And Local Important Farmland	181,556	181,556	181,556	
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0 (<1%)	0 (<1%)	0 (<1%)	
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	14	14	14	

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)				
	54	54	54	

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))				
	Maximum Points			
1. Area in Nonurban Use	15	15	15	
2. Perimeter in Nonurban Use	10	6	7	
3. Percent Of Corridor Being Farmed	20	19	20	
4. Protection Provided By State And Local Government	20	0	0	
5. Size of Present Farm Unit Compared To Average	10	0	0	
6. Creation Of Nonfarmable Farmland	25	2	3	
7. Availability Of Farm Support Services	5	4	4	
8. On-Farm Investments	20	3	5	
9. Effects Of Conversion On Farm Support Services	25	0	1	
10. Compatibility With Existing Agricultural Use	10	0	1	
TOTAL CORRIDOR ASSESSMENT POINTS	160	49	55	0

PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)	100	54	54	54
Total Corridor Assessment (From Part VI above or a local site assessment)	160	49	55	57
TOTAL POINTS (Total of above 2 lines)	260	103	109	111

1. Corridor Selected: See 5	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
---------------------------------------	---	-----------------------	---

5. Reason For Selection:
The Modified Existing Alignment Alternative - Corridor A has been selected as the preferred alignment because it provides the similar safety improvements to the other alternatives but with fewer impacts. A preferred typical section (32-ft vs. 40-ft) has not been identified at this time.

Signature of Person Completing this Part: *A. Ray McPhail* DATE 5-5-04

NOTE: Complete a form for each segment with more than one Alternate Corridor

Belfry North EA - Rural Corridor - 40ft - Segment Farmland Conversion

Question 1: How much land is in non-urban use within a 1.0 mile radius from where the project is intended?

Site	Alternative	Non-Urban Area (ac)	Area within a 1 mile radius of the project area (ac)	% of Area that is Non-Urban Land
A	Modified Existing 40-ft	14036.37	14578.25	96.28%
B	Ridgeway North 40-ft	14036.37	14578.25	96.28%
C	Ridgeway South 40-ft	14036.37	14578.25	96.28%

Question 2: How much of the perimeter of the site borders on land in non-urban use?

Site	Alternative	Total Perimeter (ft)	Perimeter Bordering Non-Urban Land (ft)	% of Perimeter Bordering Non-Urban Land
A	Modified Existing 40-ft	196,398.28	97,986.55	49.89%
B	Ridgeway North 40-ft	181,832.00	93,725.52	51.55%
C	Ridgeway South 40-ft	179,312.36	93,179.82	51.97%

Question 3: How much of the site has been farmed more than 5 of the last 10 years?

Site	Alternative	Total Area (ac)	Farmed Area (ac)	% of the site farmed
A	Modified Existing 40-ft	91.85	80.26	87.38%
B	Ridgeway North 40-ft	96.97	87.01	89.73%
C	Ridgeway South 40-ft	100.32	90.62	90.33%

Question 4: Is the site subject to state or unit of local government policies or programs to protect farmland or covered by

Site	Alternative	Yes/No
A	Modified Existing 40-ft	No
B	Ridgeway North 40-ft	No
C	Ridgeway South 40-ft	No

Question 5: Is the farm unit(s) containing the site as large as the average-size farming unit in the county?

Site	Alternative	average size farm in county (ac)	median impacted farm size (ac)	% of the average size farm in the county
A	Modified Existing 40-ft	1,181.00	180.50	15.28%
B	Ridgeway North 40-ft	1,181.00	180.50	15.28%
C	Ridgeway South 40-ft	1,181.00	180.50	15.28%

Question 6: How much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Site	Alternative	total area	non-farmable area	% of the total area that becomes non-farmable
A	Modified Existing 40-ft	91.85	8.11	8.83%
B	Ridgeway North 40-ft	96.97	9.02	9.30%
C	Ridgeway South 40-ft	100.32	8.11	8.08%

Question 8: Does the site have farm investments?

Site	Alternative	total area	area of farm investments	% of the site that has farm investments
A	Modified Existing 40-ft	91.85	18.16	19.77%
B	Ridgeway North 40-ft	96.97	26.22	27.04%
C	Ridgeway South 40-ft	100.32	35.71	35.60%

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points

90 to 20 percent - 14 to 1 point(s)

Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points

90 to 20 percent - 9 to 1 point(s)

Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points

90 to 20 percent - 19 to 1 point(s)

Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points

Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)

As large or larger - 10 points

Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points

Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)

Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points

Some required services are available - 4 to 1 point(s)

No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points

Moderate amount of on-farm investment - 19 to 1 point(s)

No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points

Some reduction in demand for support services if the site is converted - 1 to 24 point(s)

No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points

Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)

Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points



DAVID EVANS
AND ASSOCIATES INC.

December 10, 2003

Mr. Ray McPhail
US Department of Agriculture - Natural Resources and Conservation Service
Joliet Field Office
606 West Front Avenue
Joliet, MT 59041

**SUBJECT: BELFRY NORTH EA
F STPP 72-1(1) 10 CN 1016 Control no. 1016
USDA NRCS-CPA-106 Farmland Conversion Impact Rating Forms**

Dear Mr. McPhail:

Please find the enclosed USDA NRCS CPA-106 Farmland Conversion Impact Rating forms for Corridor Type Projects and documentation containing supporting data prepared for the above referenced project. David Evans and Associates, Inc., project consultant, is managing the project for the Montana Department of Transportation.

We will be coordinating the identification of Important Farmlands and completion of the USDA NRCS CPA-106 forms through the Joliet Field Office, as directed in a July 1, 2002 correspondence from Dave White at the Bozeman Service Center.

The P-72 study area for the Environmental Assessment begins at the south end of the Town of Belfry at the P-72 and S-308 intersection (RP 10.54) and ends at the P-72 and US 310 intersection to the north (RP 21.42). For analysis purposes, the project has been divided into two segments. The Belfry Area segment (RP 10.54 – 12.73) has two build alignment alternatives. The Rural Corridor segment (RP 12.73 – 21.42) has three build alignment alternatives. In addition, each alternative has a 32ft width option and a 40ft width option which provides wider shoulders. The no-build alternative will have no impacts on important farmlands in either segment and as such is not included on either of the impact rating forms. The potential impact scores of the build alternatives for each segment have been filled into the impact rating forms as follows:

Belfry Area - NRCS-CPA-106 Form #1 (Area Corresponds to Attached Map 1)

Site A – Railroad Alignment – 32 ft width
Site B – Broadway Alignment – 32 ft width
Site C – Railroad Alignment - 40 ft width
Site D – Broadway Alignment – 40 ft width



DAVID EVANS
 AND ASSOCIATES INC.

Rural Corridor – 32 ft Width NRCS-CPA-106 Form #2 (Area Corresponds to Attached Maps 2-5)

- Site A – Modified Existing Alignment – 32 ft width
- Site B – Ridgeway North Alignment – 32 ft width
- Site C – Ridgeway South Alignment – 32 ft width

Rural Corridor – 40 ft Width - NRCS-CPA-106 Form #3 (Area Corresponds to Attached Maps 2-5)

- Site A – Modified Existing Alignment – 40 ft width
- Site B – Ridgeway North Alignment – 40 ft width
- Site C – Ridgeway South Alignment – 40 ft width

As per our phone conversation, I have provided hard copy documentation and hard copy maps for use in your review of this project. Below describes the contents of this transmittal.

Documentation	Description
<i>NRCS-CPA-106 #1</i> (Belfry Segment)	NRCS-CPA-106 Form #1 for all Belfry Area segment alternatives, 32-ft width and 40-ft width.
<i>Backup documentation #1</i> (Belfry Segment)	Spreadsheet with detailed percentages and calculations related NRCS-CPA-106 Section VI.
<i>NRCS-CPA-106 #2</i> (Rural Segment, 32ft)	NRCS-CPA-106 Form #2 for Rural Corridor segment alternatives, <u>32ft-width</u> options.
<i>Backup documentation #2</i> (Rural Segment, 32ft)	Spreadsheet with detailed percentages and calculations related NRCS-CPA-106 Section VI.
<i>NRCS-CPA-106 #3</i> (Rural Segment, 40ft)	NRCS-CPA-106 Form #3 for Rural Corridor segment alternatives, <u>40ft-width</u> options.
<i>Backup documentation #3</i> (Rural Segment, 40ft)	Spreadsheet with detailed percentages and calculations related NRCS-CPA-106 Section VI.
<i>Maps #1-5</i> (All Alternatives)	1:450 scale maps of the project area and alternatives. To simplify the maps, only the 40-ft width for each alternative is shown. They are identical to the 32ft alternatives only with wider shoulders.

The documentation above is also available in digital format at your request. This includes spreadsheets and GIS data used in the conversion rating process.

Natural Resource and Conservation Service
December 10, 2003
Page 3 of 3



**DAVID EVANS
AND ASSOCIATES INC.**

Please contact me at (720) 946-0969 if you have any questions about this information. Thank you for your assistance.

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read 'Richard J. Garcia', written over a faint, larger version of the company logo.

Richard J. Garcia
GIS Analyst/Planner

**Copies: Tom Martin, MDT
Debra Perkins-Smith, DEA
File**

**Attachments/Enclosures: NRCS-CPA-106 Farmland Conversion Impact Rating for Corridor Type Projects
Supporting documentation for calculations**

File Name P:\MDOT0000-0013 Belfry North\ADMIN\Transmittals\nrcs_CPA-106_coverletter.doc

Appendix C - Cultural Resources

Cultural Resource Inventory (1989, 2002, 2003)

Page 1 of 3

SITE NUMBER	NAME	DESCRIPTION	NRHP ELIGIBILITY	DATA SOURCE
24CB676	Riddle House	House in Belfry includes cobblestone architectural features	Eligible	June 23, 1992 MDT letter to State Historic Preservation Office
24CB678	First Presbyterian Church	Church in Belfry includes cobblestone architectural features	Eligible	June 23, 1992 MDT letter to State Historic Preservation Office
24CB1066	Silver Tip Creek Bridge	4.8 km (3 mile) NE of Belfry; 3-span timber stringer with timber deck built in 1949	Not eligible	1989 Cultural Resources Inventory of the Belfry-North Highway Improvement Project (MDT); 2002 RTI Inventory
24CB1088	MW&S Railroad Grade	8.8 km (5.5 mile) grade was abandoned in 1953.	Not eligible	1989 Cultural Resources Inventory (MDT)
24CB1135	Silver Tip Ranch	Property patented early 1900s. Early structures are gone, but 17 modern structures are on site today.	Not eligible	1989 Cultural Resources Inventory (MDT)
24CB1143	Richard Hergenrider Farmstead	Josiah Holland, a name that frequently appears in early Belfry history, patented Homestead in 1901.	Not eligible	1989 Cultural Resources Inventory (MDT)
24CB1145	Middlesworth Residence	Homesteaded around 1907 in bend of Clarks' Fork river and patented in 1909. The 1933 Craftsman-style house is significant. A peeled log building was first residence.	Craftsman house individually eligible; no other features are eligible.	1989 Cultural Resources Inventory (MDT)
24CB1146	MW&S Railroad Maintenance Shop	Historic shop property that stands today was built in 1910, replacing 1905 structure that burned. Coal dock, scale and stockyards have been removed.	Eligible	1989 Cultural Resources Inventory (MDT)
24CB1147	Dugout	Dugout is situated in south-facing terrace above Bear Creek to possibly serve as powder magazine associated with MW&S Railroad.	Not eligible	1989 Cultural Resources Inventory (MDT)
24CB1148	MW&S Railroad Depot at Belfry	Historic commercial property was built in 1905. Use of sandstone in structure is significant.	Eligible	1989 Cultural Resources Inventory (MDT)
24CB707/1144	Clarks Fork "south" bridge	NE of Belfry – north of Bear Creek and south of Dutch Lane. Built in 1939.	Eligible	1989 Cultural Resource Inventory (MDT) and 2002 RTI Inventory
24CB1149	Clarks Fork "north" bridge	6.4 km (4 mi) NE of Belfry; 4-span steel girder with timber deck built in 1934	Not eligible	1989 Cultural Resources Inventory (MDT)
24CB1150	Sand Creek Canal	Built in 1893, first major ditch in Bridger area. 12 km (7.5 mi) long.	Eligible	June 10, 1991 FHWA letter to Advisory Council on Historic Preservation
24CB1151	Currie Place	House is near Hwy 310 'Y' junction with P-72 and may have been built in 1940s.	Not eligible	1989 Cultural Resources Inventory (MDT)
24CB1152	Golden Ditch	Golden Ditch ROW was acquired in 1891. However, it was 1903 before water rights were appropriated. 4.5km (9 mi) long.	Eligible	June 10, 1991 FHWA letter to Advisory Council on Historic Preservation
24CB1153	Kuchinski Beet Shack	The sandstone foundation and a few fruit trees are all that's left of turn of century laborer's house and sugar beet shack.	Not eligible	1989 Cultural Resources Inventory (MDT)
24CB1154	Dry Creek Canal	Water rights appropriated 1893. 11.3 km (7 mi) long.	Eligible	June 10, 1991 FHWA letter to Advisory Council on Historic Preservation
24CB1155	Golden Section House	Built between 1926-29 to house MW&S section foreman.	Not eligible	1989 Cultural Resources Inventory (MDT)

Cultural Resource Inventory (1989, 2002, 2003)

Page 2 of 3

SITE NUMBER	NAME	DESCRIPTION	NRHP ELIGIBILITY	DATA SOURCE
24CB1173	Swan Carlson Homestead	Homesteaded in 1899 in bend of river and patented in 1902. First residence built 1906. Pumphouse/ bunkhouse built 1915. Use of sandstone in structure is significant.	Not eligible	1989 Cultural Resources Inventory (MDT)
24CB1174	Krum Residence/Gas Station/Motel	This commercial/residential property is within boundaries of a homestead patented in 1909. The residence was built in 1939, gas station in 1934, and motel in 1945.	Not eligible	1989 Cultural Resources Inventory (MDT)
24CB1683	Strong Farmstead	Farmstead north of Ridgeway Lane next to US 310. House, shed and chicken coop.	Not eligible	2003 RTI Inventory; MDT Bridger-South project inventory
24CB1801	Vaill Avenue Residence	Intersection of Vaill and Railroad Avenues; house (moved to the site) and four sheds	Not eligible	2002 RTI inventory
24CB1802	Oil Shed	East side of Railroad Avenue on western end of Belfry (across from Krum Garage (24CB1174))	Not eligible	2002 RTI inventory
24CB1803	Holland Hardware Store	Intersection of Broadway Avenue and Montana Street; lumber yard; associated with the early history of Belfry; also notable as well-preserved example of early 20 th Century commercial architecture	Eligible	2002 RTI inventory
24CB1804	Husky Service Station (Black's Garage)	Intersection of Broadway Avenue and Montana Street; garage and office building	Not eligible	2002 RTI inventory
24CB1805	Hall Grocery Store	On Broadway Avenue; timber structure with false façade, extensively remodeled from historic appearance	Not eligible	2002 RTI inventory
24CB1806	Belfry Masonic Lodge	On Broadway Avenue; vacant building measuring 8 by 18 m (26 by 60 ft), extensively remodeled from historic appearance	Not eligible	2002 RTI inventory
24CB1807	Belfry Bar	On Broadway Avenue; concrete block building with two adjacent lots; one lot has a trailer on it; building extensively remodeled from historic appearance	Not eligible	2002 RTI inventory
24CB1808	Moore Saloon (now operates as a church)	On Broadway Ave; single building, extensively remodeled from historic appearance	Not eligible	2002 RTI inventory
24CB1809	John Todd Building	On Broadway Avenue, concrete structure connected to a modern trailer; extensively remodeled from historic appearance	Not eligible	2002 RTI inventory
24CB1810	Hall's Garage	On Broadway Avenue; garage building; front half of the building roofed; back half open; extensively remodeled from historic appearance	Not eligible	2002 RTI inventory
24CB1811	Betty Scott Residence	On Broadway Avenue; house, garage, outhouse; buildings moved to current site	Not eligible	2002 RTI inventory
24CB1812	Walter and Dorothy Lindermann Residence (On Broadway Avenue; house and boxcar, both moved to current site	Not eligible	2002 RTI inventory
24CB1813	Kose Grocery	Two attached stone buildings on Broadway Avenue constructed early in Belfry's history	Eligible	2002 RTI inventory
24CB1814	Former School House	On Broadway Avenue; single building has been moved from its historic location and extensively remodeled from historic appearance	Not eligible	2002 RTI inventory

Cultural Resource Inventory (1989, 2002, 2003)

Page 3 of 3

SITE NUMBER	NAME	DESCRIPTION	NRHP ELIGIBILITY	DATA SOURCE
24CB1815	Belfry High School	On Wisconsin Street; conglomerate of four masonry brick structures; two original structures dwarfed by large recent additions	Not eligible	2002 RTI inventory
24CB1816	John Woodcock Place (house, shed, garage)	On Wisconsin Street; house, shed, and modern garage; extensively remodeled from historic appearance	Not eligible	2002 RTI inventory
24CB1817	Youst Ditch	Crosses Highway 72 at north edge of Belfry	Not evaluated	2002 RTI inventory
24CB1818	Kuchinski Farmstead	Farmstead 6.3 km (3.9 mi) north of Belfry; six farm structures on 48.6-ha (120-ac) parcel; structures moved to or within the property boundaries.	Not eligible	2002 RTI inventory
24CB1848	Jennings Homestead	Homestead south of and adjacent to Ridgeway Lane. House, granary/barn, and outhouse, turn of 20 th century.	Eligible	2003 RTI Inventory
24CB1849	Kozeluh Farmstead	Farmstead north of and adjacent to Ridgeway Lane. House, several historic outbuildings (1940s period), several modern outbuildings.	Not eligible	2003 RTI Inventory

Sources: As noted in right column.

2004021301



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director

C.F. Judy Martz, Governor

RECEIVED

MASTER FILE COPY

FEB 20 2004

February 11, 2004

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

ENVIRONMENTAL

Joseph
Belfry North
24CB1848
JENNINGS
Homestead

FEB 3 2004

Subject: F-STPP 72-1(1)10
Belfry - North
Control No. 1016

CONCUR
MONTANA SHPO

DATE 18 Feb 04 SIGNED *Joseph Martz*

Dear Mark:

On December 9, 2003, your office concurred with our determination that the Jennings Homestead (24CB1848) is eligible for the National Register of Historic Places. The site is located within the APE for alternates to the Montana Highway 78/U.S. Highway 310 junction. Attached is an aerial map showing the preferred alternative and its spatial relation to 24CB1848. Based on the information in the map, the proposed Highway 78 alignment would be shifted to the west and away from the site. Indeed, the Jennings Homestead is located 850± feet from both the proposed and existing alignments. It is, therefore, located well outside the APE for the project. The proposed project would have No Effect to the NRHP-eligible Jennings Homestead (24CB1848). We request your concurrence.

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

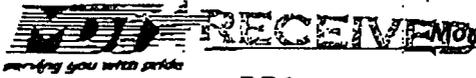
Jon Axline
Jon Axline, Historian
Environmental Services

Attachment

cc: Bruce Barrett, Billings District Administrator
Tom Martin, Consultant Design Bureau
Bonnie Steg, Resources Section

file: MDT/Belfry - North

2003112507



Montana Department of Transportation

David A. Galt, Director

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

C.R.

Judy Martz, Governor

DEC 11 2003

ENVIRONMENTAL

MASTER FILE COPY
JOSEF
MDT

CONCUR

MONTANA SHPO

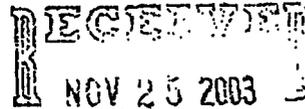
November 24, 2003

DATE 9 DEC 03 SIGNED

Josef W. Wambach

BELFRY - NORTH
ADDENDUM

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



Subject: F STPP 72-1(1)0
Belfry - North
Control No. 1016

BY:-----

Dear Mark:

Enclosed is an addendum to the cultural resource survey, CRABS and site forms for the above project. This report is an addendum to the February, 2003 report and concerns an alternative alignment recently developed near the junction of Montana Highway 72 and US Highway 310 on Ridgeway lane. This letter will also address a change in the design at the Montana, Wyoming & Southern Railroad Shop (24CB1146).

In the enclosed report, RTI recorded two additional historic sites within the APE for the proposed new alignment. One site, the Jennings Homestead (24CB1848) is recommended eligible for the National Register of Historic Places. We agree with that recommendation and request your concurrence. A third site, the Sarah Strong Farmstead (24CB1683) was recorded as part of the MDT's Bridger - South [NH 4-1(16)13] project and your office concurred in its ineligibility to the National Register on May 20, 2002. The Sand Creek Canal (24CB1150) was previously determined eligible for the National Register. If or when the revised alignment is approved, a Determination of Effect will be submitted to your office.

On June 30, 1992, your office concurred that the proposed Belfry - North project would have an Adverse Effect to the MW&S Shop (24CB1146). That determination was based on the assumption at the time that the proposed railroad grade alignment would result in the demolition of the structure. That Adverse Effect concurrence was restated in the amended Determination of Effect for this project on September 23, 2003. Since then, however, we have been working with the consultant to minimize the impact to the historic property. Consequently, an alternative has been proposed that would extend the curb and gutter section within the community of Belfry about 1,000-feet northward to encompass the old railroad shop. This would result in the minimization of the slopes and an offset of 5± feet to avoid the building. The roadway would be 32± feet in width and include two 12-foot driving lanes and two 4-foot shoulders in addition to the curb and gutter. Importantly, with this revision it would not be necessary to remove the MW&S Railroad Shop. Based on this modification of the design, we have revised our former

F.6. MDT/2003

Determination of Effect for this property. We have now determined that the proposed project would have **No Adverse Effect** to 24CB1146. Instead of being demolished, the building would remain in place and unaltered. The characteristics that make the site eligible for the NRHP would be perpetuated. It would not be isolated from its environment or suffer from neglect as a result of the project. It would not be demolished and the setting would largely remain intact. The MDT has, moreover, already conducted HABS-level photography of the site and completed other measures designed to mitigate the impacts to the site. The MDT would still install an historical marker along the proposed alignment between the shop and the MW&S Depot (24CB1148) within the community of Belfry. We feel this proposed option is a good alternative to the demolition of the historic building. We request your concurrence.

There are also two irrigation ditches on this project that are located within the Area of Potential Effect for this proposed project: the Sand Creek Canal (24CB1150) and the Dry Creek Canal (24CB1154). Montana Highway 72 crosses 24CB1150 twice at MP 19.88 and MP 20.42. Under the proposed project, the existing timber bridge would be removed and new concrete box culverts installed to replace them. The existing canal alignment would be perpetuated and the ditch would not be widened or re-channeled to accommodate the new structure. The highway crosses 24CB1154 three times at MPs 14.51, 16.48, and 19.40 (only the crossing at 14.51 is on a bridge). All three crossings would be replaced by box culverts (16.48 and 19.40 are already box culverts). The existing canal alignment would be perpetuated and there would be no widening or rechanneling to accommodate the new crossings. Based on this information, we have determined that the proposed project would have **No Effect** to the Sand Creek Canal (24CB1150) and the Dry Creek Canal (24CB1154). We request your concurrence.

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


Jon Axline, Historian
Environmental Services

Attachment

cc: Bruce Barrett, Billings District Administrator
Carl Peil, P.E., Preconstruction Bureau
Jean Riley, P.E., Engineering Section
Bonnie Steg, Resources Section



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

2003022503

February 24, 2003

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

Subject: F 72-1(1)10
Belfry - North
Control No. 1016

*Josef
MDT
Belfry-North updated*

RECEIVED
FEB 25 2003
BY:

Enclosed is the updated cultural resource report, CRABS and site forms for the above project in Carbon County. The MDT submitted the original cultural resource report to your office in 1989. I submitted site forms for additional properties in Belfry in the early 1990s. Eight sites have been previously determined eligible within the Belfry - North project corridor. They are: the First Presbyterian Church of Belfry (24CB678), the Clark's Fork River Bridge (24CB707/1144), the residence at the Middlesworth Farmstead (24CB1145), the Montana, Wyoming & Southern Railway (MW&S) Shop (24CB1146), the MW&S Depot (24CB1148), the Sand Creek Canal (24CB1150), the Golden Ditch (24CB1152), and the Dry Creek Canal (24CB1154). A Determination of Effect for these properties was submitted to your office in June, 1992 and a Memorandum of Agreement implemented in July, 1992.

The 2002 cultural resource survey recorded an additional 18 sites distributed in five parcels in the project area. RTI recommends two sites eligible for the NRHP: the Holland Lumber & Hardware Store (24CB1803) and the Kose Grocery (24CB1813). We agree with the recommendations and request your concurrence. RTI also noted the presence of the Youst Ditch (24CB1817) in the project area. It is covered under a programmatic agreement.

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

Jon Axline
Jon Axline, Historian
Environmental Services

**CONCUR
MONTANA SHPO**

DATE *11 Mar 03* SIGNED *Josef [Signature]*

Enclosures

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

file: MDT/2003

**Renewable Technologies, Inc.**e-mail: rjbutte@aol.com

511 Metals Bank Bldg., Butte, Montana 59701 Phone: (406) 782-0494 Fax: (406) 782-3064

December 18, 2002

Chairman
Crow Tribal Council
P.O. Box 159
Crow Agency, MT 59022

Dear Chairman,

The Montana Department of Transportation (MDT) is planning to reconstruct Montana Highway 72 in Carbon County from the small town of Belfry north to its junction with Highway 310. MDT's consultant, David Evans and Associates of Denver, Colorado, is currently evaluating design alternatives and preparing an environmental document. While the final design has not been established, the planned reconstruction will involve re-routing the highway through Belfry, flattening one or more curves, and changing slightly the Highway 72 and 30 intersection.

In conjunction with project planning, MDT sponsored cultural resource inventories of the impact areas, in the late 1980s and again this last fall. That work resulted in the identification of about two dozen historic properties (residential, commercial, agricultural, and transportation-related) along the project, no prehistoric or historic Native American sites were encountered. However, area residents report that they have found aboriginal artifacts in their fields on occasion. David Evans and Associates' sub-consultant, Renewable Technologies, Inc. (RTI), plans to conduct limited test excavations next spring using an auger in an attempt to find buried prehistoric sites at the south crossing of the Clarks Fork of the Yellowstone River.

RTI and David Evans and Associates are soliciting your comments on the Belfry - North highway project, specifically on the question of its possible impact on any traditional heritage properties. If you have any concerns about MDT's undertaking, please contact me at the address listed above or Debra Perkins-Smith at:

David Evans and Associates, Inc.
1350 17th Street, Suite 105
Denver, CO 80202
720-946-0969

Please forward a copy of this letter to the Crow Cultural Committee or any other parties who might be interested in commenting on this project. Thank you very much for your time.

Sincerely,

Mitzi Rossillon
Archaeologist

At:
Inj' cc: Debra Perkins-Smith

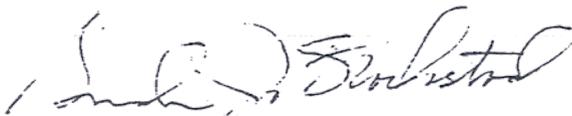
02-010

Janene Caywood
Page 2
November 9, 1993

The Northern Pacific agreed to buy slack coal from the MW&S in 1931. The following year, the NP obtained trackage rights to MW&S line between Bridger and Belfry. The railroad then expanded the train yards in Belfry. The MW&S continued to operate the line between Belfry and Bearcreek and paid the NP to haul coal out of Belfry. Faced with declining demand for coal and the aftermath of the Smith Mine Disaster, the MW&S ceased operations in 1953. According to a former employee of the railroad, the company's records were destroyed soon after the railroad was abandoned.

Please search for all references to the Yellowstone Park Railroad, Montana, Wyoming & Southern Railroad and the Bearcreek & Western Railroad in the Northern Pacific Railway archives. Also search for any references to Thomas Cooper, Robert Leavens and the coal mines listed above. Once you have ascertained how much material is available, contact Jon Axline in this office. The project should be completed by April 1, 1994.

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



Gordon J. Stockstad, Acting Chief
Environmental & Hazardous Waste Bureau

GJS:JA:D:ENV:119.yb

cc: Roy R. Ventura, Jr., P.E. Billings District Engineer
David S. Johnson, P.E., Preconstruction Bureau



Montana Department
of Transportation

01 Prospect Avenue
Helena, MT 59620-9726

David Johnson - [unclear]

Stan Stephens, Governor

JERRY

June 23, 1992

Marcella Sherfy
State Historic Preservation Office
225 North Roberts
Helena, MT 59620

Subject: F 72-1(1)10
Belfry - North
Control No. 1016

Date Recd. Preconst. 6-26-92		MAIL ROUTE	Attach	Initial
Act	Info			
	✓	30 Preconst. Eng.		
	✓	30 Assistant		
		30 Office Mgr.		
		31 Safety Mgmt.		
	✓	32 Road Design		
		32 Environment		
		34 Hydraulics		
		35 Survey & Mapping		
		36 Traffic Eng.		
		37 Traffic Operations		
		39 Consultants D.A.		
	✓	File		

In May 1992, a supplemental cultural resource survey was conducted by the Montana Department of Transportation along Montana Highway 72 in Belfry. The survey identified two historic sites that may be potentially eligible for listing on the National Register. They include: the Riddle House (24CB676) and the First Presbyterian Church of Belfry (24CB678). Both sites include cobblestone architectural features.

Enclosed are the CRABS and architectural inventory forms describing the sites. We are requesting your concurrence that 24CB676 and 24CB678 are eligible for NRHP.

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

Edrie Vinson

Edrie L. Vinson, Chief *MB*
Environmental and Hazardous Waste Bureau

ELV:JAA:D:ENV:2.kmc

Enclosures

cc: ✓ David S. Johnson, Preconstruction
Roy R. Ventura, Jr., Billings District
Edrie L. Vinson, Environmental Bureau
Environmental and Hazardous Waste Bureau

RECEIVED

JUN 13 1991

HELENA, MONTANA

Date Recd. Preconst. 6/12/91	
Act	Info
	MAIL ROUTE
	<input checked="" type="checkbox"/> 30 Preconst Engr
	<input checked="" type="checkbox"/> 30 Assistant
	<input type="checkbox"/> 30 Office Mgr
	<input checked="" type="checkbox"/> 32 Road Design
	<input checked="" type="checkbox"/> 33 Environment
	<input type="checkbox"/> 34 Hydraulics
	<input type="checkbox"/> 35 Survey & Mapping
	<input type="checkbox"/> 36 Traffic
	<input type="checkbox"/> 39 Consultant
	<input checked="" type="checkbox"/> Ventura
	<input type="checkbox"/> File

June 10, 1991

HPP-MT

Claudia Nissley, Director
 Advisory Council on Historic Preservation
 730 Simms Street, Suite 450
 Golden, CO 80401

Dear Ms. Nissley:

Subject: F 72-1(13)0 Belfry - North

The Federal Highway Administration intends to assist Montana Department of Highways (MDOH) with the reconstruction of Montana Highway 72 between Belfry and Bridger in Carbon County, Montana. As presently conceived, the project will reconstruct and widen approximately 11.1 miles of roadway. The proposed project will also include the construction of approximately 3,500 feet of new roadway. Six sites have been determined eligible for the National Register of Historic Places (NRHP) by the MDOH and Montana State Historic Preservation Office (SHPO) under Criterion A and C. The sites are: the Sand Creek Irrigation Canal (24CB1150), Golden Irrigation Ditch (24CB1152), Dry Creek Irrigation Canal (24CB1154), Craftsman residence at the Middleworth Farmstead (24CB1145), the abandoned Montana, Wyoming & Southern (M.W. & S.) Railroad Depot (24CB1148) and Shop (24CB1146).

The proposed Belfry - North project will have an adverse effect on two of the NRHP-eligible sites: the M.W. & S. depot and shop. Impact to the sites will be the construction of a new 36-foot wide roadway on the old M.W. & S. Railroad grade.

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 will be identified.

Sincerely,

Original Signed by
 DAVID C. MILLER
 David C. Miller
 Planning & Prog. Development Engineer

cc. State - Edrie Vinson
 cc. SHPO

JERRY

State Historic Preservation Office

Montana Historical Society

Mailing Address: 225 North Roberts • Helena, MT 59620-9990

Office Address: 102 Broadway • Helena, MT • (406) 441-7115

NO.	DATE	MAIL ROUTE	Attach	Initial
		4/5/89		
		30 Eng. Specialties		
		31 Contract Plans		
		32 Loc. Road Design		
		33 Environment		
		34 Hydraulic		
		35 Surrounding Design		
		36 Traffic		
		37 Pub. Hearing		
		38 Photogrammetry		
		39 Consultant Design		
		Continued		
		File		

April 5, 1989

Ms. Mitzi Rossillon, Archaeologist
 Environmental Unit
 Montana Department of Highways
 2701 Prospect Avenue
 Helena, MT 59620

F72-1(1) 10
 Belfry-North

Dear Mitzi:

Thank you for requesting our comments on the cultural resources inventory you conducted for the project referenced above. This was obviously a large and complex inventory, and you have provided a good deal of useful information. As is often the case with such undertakings, we will need to comment on several levels, which we will attempt to separate for the sake of clarity.

First, we concur that your survey methodology was appropriate for much of the project. We are concerned with the size of the survey corridor examined on either side of the proposed new highway alignment through Belfry. We believe that routing the highway through an area of town which has traditionally been along its fringes can be expected to alter the character of the area's setting, as well as introduce visual, auditory and atmospheric elements which are out of keeping with that character. Under those circumstances, we believe your corridor should extend a minimum of 150' on either side of the proposed centerline, and should include the first row of buildings on each side. As your Figure-3 illustrates, standing buildings of probable historic age are present along at least one side of the proposed new right-of-way just outside your 100' corridor. While we agree that designing that section of the highway as an urban section will be likely to minimize changes in the area's cultural matrix, such changes can be expected to occur as traffic and commercial patterns in Belfry accommodate to the new highway route.

Secondly, we urge that the concrete box culvert built in 1934 and presently carrying the highway over the Dry Creek Canal (24CB1154) be formally recorded and evaluated. Since its construction predates work on the highway, it may be appropriate to record it as a feature of the irrigation system, in which case you likely have sufficient information on hand to complete an amendment to the site form.

Third, we concur with your recommendation that sites 24CB1008 (railroad grade), 24CB1147 (dugout), 24CB1155 (Golden Section House), 24CB1144, 24CB1149 and 24CB1066 (bridges), 24CB1135 (Silver Tip Ranch), 24CB1143 (Hergenrider Farmstead), 24CB1153 (Kuchinski Beet Shack), 24CB1151 (Currie Place), and

Rossillon
April 5, 1989
page 2

24CB1174 (Krum Complex) are not eligible for listing in the National Register. At 24CB1145, we concur that the Craftsman residence is individually eligible for listing under Criterion C, but we do not believe the original residence can qualify without support from the remainder of the farmstead. Dating there does not appear to be well established, but better dates might be found in the County tax records. Should the owner of that property wish to pursue its potential eligibility, we will gladly offer what research assistance we can.

We find a similar problem at 24CB1173 (Swan Carlson Homestead) , where we cannot concur with individual eligibility for Structure 2. If the original residence could also qualify for listing, or if there were good supporting outbuildings in addition to the pumphouse, we would recommend consideration of the farmstead under Criterion A.

On the other hand, we believe that 24CB1150 (Sand Creek Canal), 24CB1152 (Golden Ditch) and 24CB1154 (Dry Creek Canal) do qualify for listing, either independently or, more cogently, as an irrigation canal district. Page 14 of your report provides more than sufficient justification for the eligibility of these canals under Criterion A. We do not, however, disagree with you that "... the green fields and modest farmsteads..." of the project area also illustrate the central role agriculture played in its development, and urge you to consider that approach to an historic district as well if you'd be more comfortable with it.

Finally, we heartily concur with your recommendation that both 24CB1148 (Belfry Depot) and 24CB1146 (Railroad Shop) are eligible for inclusion in the Register, the first property under Criteria A and C, the latter under Criterion A only.

As always, we appreciate the opportunity to comment. Please call if discussing these issues further will help.

Sincerely,



Katherine M. Huppe
Historical Survey Reviewer

File: Comp/MDOH/Belfry South

May 9, 1989

PROGRAMMATIC AGREEMENT

Among the Federal Highway Administration (FHWA), the Montana State Historic Preservation Office (MSHPO), and the Advisory Council on Historic Preservation (ACHP), to develop a historic preservation plan to establish processes for integrating the preservation and use of historic roads and bridges with the mission and programs of the FHWA in a manner appropriate to the nature of the historic properties involved, the nature of the roads and bridges in Montana, and the nature of FHWA's mission to provide safe, durable and economical transportation.

WHEREAS, Congress has mandated that highway bridges be evaluated, and where found substandard, be rehabilitated or replaced and has provided funding for these purposes, to insure the safety of the traveling public (through the Highway Bridge Replacement and Rehabilitation Program); and

WHEREAS, the American Association of State Highway and Transportation Officials (AASHTO) has standards regulating the construction and the rehabilitation of highways and bridges that must be met by the FHWA to insure the safety of the traveling public; and

WHEREAS, Congress declares it to be in the national interest to encourage the rehabilitation, reuse and preservation of bridges significant in American history, architecture, engineering and culture; and

WHEREAS, the FHWA proposes to make Federal funding available to the Montana Department of Highways (MDOH) for its ongoing program to construct and rehabilitate roads and bridges, and MDOH concurs in and accepts responsibilities for compliance with this Agreement; and

WHEREAS, the FHWA has determined that the construction and improvement of highways may have an effect on historic roads and bridges that are listed in the National Register of Historic Places, or may be determined eligible for listing, and have consulted with the ACHP and the MSHPO pursuant to Section 800.13 of the regulations (36CFR800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the parties understand that not all historic roads and bridges fall under the jurisdiction or sphere of influence of the FHWA, and that to encourage other parties to participate in preservation efforts; an education to foster a preservation ethic is needed; and

NOW THEREFORE, FHWA, MSHPO, and ACHP agree, and MDOH concurs, that the following program to enhance the preservation potential of historic roads and bridges, and to promote management and public understanding of and appreciation for these cultural resources will be enacted in lieu of regular Section 106 procedures as applied to historic roads and bridges only.

Stipulations

The Federal Highway Administration will ensure that the following program is carried out:

The Federal Highway Administration, in cooperation with the Montana Department of Highways, will develop a preservation plan to ensure the preservation and rehabilitation of the states significant historic roads and bridges, and will develop an on-going educational program to interpret significant historic roads and bridges that illustrate the engineering, economic, and political development of roads in Montana. Specifically:

A. For Public Education

1. MDOH will prepare technical documentation of the history of roads and road construction, and of the history of bridge building in the state, according to a format developed by MDOH in consultation with the MSHPO and in compliance with the Secretary of the Interior's Standards for Preservation Planning. From this documentation MDOH will prepare narrative histories suitable for publication for the general public. Draft copies of the documentation and the narrative histories will be submitted to the FHWA, MSHPO and a list of qualified reviewers to be determined by FHWA, MDOH and MSHPO by December 1, 1990, and 45 days will be allowed for reviewers to comment. MDOH will prepare final documentation and histories by May 1, 1991. Final copies will be distributed to the district, area, and field offices of the MDOH, to the County Commissioners, county road and bridge departments, and county historical societies, to the owners of significant roads and bridges identified in the documentation, to the Montana Historical Society Library and the Montana State Library, and to the general public as requested.
2. MDOH will develop and make available to newspapers and publishers of historical and of engineering journals articles suitable for public information on historic roads and bridges and on their construction and continued significance.
3. MDOH will augment its historic sign program by developing interpretation for the traveling public at existing rest areas or pull-overs to explain Montana's road construction and bridge engineering. It will develop on-site interpretation for significant resources that can be viewed and appreciated by the public.
4. By April 15, 1990 MDOH will develop and circulate a traveling exhibit that portrays the history of the development of transportation in Montana.
5. By December 1, 1991 MDOH will develop and circulate a public program (slide/tape or video) of approximately 20 minutes, suitable for use at public or organization gatherings, classrooms, etc.

B. For Historic Road and Bridge Preservation

1. The FHWA, in co-operation with the MDOH, will prepare a plan for the preservation of significant and representative road segments and bridge types around the state as identified in the research in part A. of this Agreement. The Historic Preservation Plan (HPP) will be presented to the FHWA, MSHPO, the ACHP and list of qualified reviewers by September 1, 1991, and 45 days comment period will be

allowed for discussion and adoption. FHWA will work to resolve disagreement on the proposed HPP. If agreement cannot be reached by December 1, 1991, all FHWA undertakings affecting historic roads and bridges will again become subject to 36 CFR 800 procedures.

The HPP for historic roads and bridges shall be prepared in accordance with the following guidelines:

- a. The essential purpose of the HPP will be to establish processes for integrating the preservation and use of historic roads and bridges with the mission and programs of the FHWA and the MDOH in a manner appropriate to the nature of the historic properties involved, the nature of the roads and bridges in Montana, and the nature of FHWA's mission, to provide safe, durable and economical transportation;
- b. In order to facilitate such integration, the HPP, including all maps and graphics, will be made consistent with the Federal Aid road and bridge numbering systems;
- c. The HPP will be prepared in consultation with the owners, managers, caretakers, or administrators of historic roads and bridges, including county governments, city governments, federal agencies, and private individuals or corporations, and with interested parties or organizations, including the American Society of Civil Engineers - Montana Section, and the Montana Society of Engineers;
- d. The HPP will be prepared with reference to the Secretary of Interior's Standards and Guidelines for Preservation Planning (48 FR 44716-20); and
- e. The HPP will be prepared by or under the supervision of an individual who meets, or individuals who meet, at a minimum, the "professional qualifications standards" for historian and archaeologist in the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9).

The contents of the HPP will be developed in conjunction with the MSHPO, and will include, but not be limited to, a schedule for the anticipated implementation of the various elements, plus the formulation and presentation of programs to:

- a. Preserve historic bridges that do not meet safety rating standards by rehabilitation in a manner that would preserve important historic features while meeting as many AASHTO standards as can be reasonably met;
- b. When a historic bridge must be replaced, give full consideration and demolition savings to reuse of the historic bridge in place by another party.
- c. When a historic bridge must be replaced and in place preservation is not feasible, give full consideration and

financial assistance to relocating and rehabilitating the historic bridge as a part of the replacement project;

- d. Develop and implement a program to encourage relocation and reuse of bridges of historic age that cannot be preserved in place or used on another location by the state or county;
- e. Provide a financial incentive by offering demolition savings on all relocation and reuse of bridges of historic age;
- f. Develop a list of historic roads and bridges that can be preserved. The list should include the variety available to reflect Montana highway construction history, while considering current condition and use. The list should be presented to and discussed with managing units to solicit their cooperation and/or participation in the preparation of the HPP; and
- g. Devise a program to pursue the preservation of the state's representative and outstanding examples of road and bridge technology. A list of historic roads and bridges that shall be preserved will be developed to implement this program, given currently known commitments to do so by property managers and subject to change by obtaining future commitments for other properties covered by this Agreement.

3. The HPP will not include information developed in Part A. above, narrative histories, but will be guided by and used in conjunction with Part A. above, and will be distributed to the same parties.
4. MDOH will prepare a report annually on its implementation of the HPP, and provide this report to the FHWA, the SHPO, and the ACHP for review, comment, and consultation as needed.

C Other Legal and Administrative Concerns

1. FHWA will continue to inventory, evaluate, seek determinations of eligibility, and fully comply with 36 CFR 800 for all undertakings with the potential to affect historic properties besides roads and bridges which are hereby excluded from such consideration.
2. The MSHPO, and the ACHP may monitor FHWA and MDOH activities to carry out this PA, by notifying FHWA in writing of their concerns and requesting such information as necessary to permit either or both MSHPO and ACHP to monitor the compliance with the terms of this Agreement. FHWA will cooperate with the SHPO, and the ACHP in carrying out their monitoring and review responsibilities.
3. FHWA will carry out the existing MOA's to preserve or record historic bridges that are now scheduled for replacement.
4. If a dispute arises regarding implementation of this PA, FHWA will consult with the objecting party to resolve the dispute. If any consulting party determines that the dispute cannot be resolved, FHWA will request further comments of the ACHP.

5. During any resolution of disagreements on the PA, and/or in the event MDOH does not carry out the terms of the PA, FHWA will carry out the procedures outlined in 36 CFR 800 for all undertakings otherwise covered by the agreement.

Execution of this PA evidences that FHWA has afforded the ACHP a reasonable opportunity to comment on FHWA's program to construct and improve Montana highways when those undertakings affect historic roads and bridges, and that FHWA has taken into account the effects of these undertakings on significant historic roads and bridges.

BY: FEDERAL HIGHWAY ADMINISTRATION

Roger K. Scott
Roger K. Scott
Division Administrator

5-11-89
Date

BY: MONTANA STATE HISTORIC PRESERVATION OFFICER

Marcella Sherfy
Marcella Sherfy, MSHPO

5-11-89
Date

BY: ADVISORY COUNCIL ON HISTORIC PRESERVATION

Robert D. Bush
Executive Director

6-1-89
Date

CONCUR

BY: MONTANA DEPARTMENT OF HIGHWAYS

Stephen C. Kologi
Stephen Kologi, P.E., Chief
Preconstruction Bureau

May 11, 1989
Date

cc

**Amendment To The Programmatic Agreement Regarding
Historic Roads and Bridges In Montana.**

We are hereby amending the following stipulations in the Programmatic Agreement.

A. For Public Education

- 1. In the third sentence December 1, 1990 becomes December 1, 1992. In the fourth sentence, May 1, 1991 becomes May 1, 1993.
- 5. December 1, 1991 becomes December 1, 1993.

B. For Historic Road and Bridge Preservation

- 1. September 1, 1991 becomes September 1, 1993 and December 1, 1991 becomes December 1, 1993.

By: Federal Highway Administration

Hank Honeywell DATE 02-27-92
 for Hank Honeywell, Division Administrator

By: Montana State Historic Preservation Officer

Marcella Sherfy DATE 2-27-92
Marcella Sherfy, Montana State Historic Preservation Officer

By: Advisory Council On Historic Preservation

Robert D. Bush DATE 3-16-92
Robert D. Bush, Executive Director

By: Montana Department of Transportation

Edrie Vinson DATE Feb 25, 1992
Edrie Vinson, Environmental and Hazardous Waste Bureau

Appendix D - Noise

APPENDIX D. NOISE

The following text and tables were taken from the *Belfry North, STPP-72-1(1)10, Traffic Noise Impact Assessment Report*.

Field Noise Measurements

The field-testing for this noise study was performed along the proposed alignment during morning and evening rush-hour traffic with the representative sampling performed at high traffic flows. These include measurements taken during times of high traffic volumes, commercial truck traffic, or peak periods of human activity and are not necessarily at rush hour. The measurements are not taken at each sensitive receptor and are only used to verify the computer model accuracy. A concerted effort is made to take noise measurements at each of the most sensitive areas, and field measurements can vary from the computer modeling results based on factors such as community noise and atmospheric.

The ambient noise levels were taken using a CEL-573.C1 precision impulse integrating sound level meter S1.4 Type 1. The meter was calibrated using a CEL 284/2 calibrator before use, with meteorological data taken before and after the field measurements. Ambient levels in the vicinity of a representative sample of the receptors were taken during a 2-day period on 9/3/02 and 9/4/02 for the Belfry North project. The resulting ambient levels are listed below in Table 1. A comparison of the field measurements to the noise levels predicted by modeling is shown in Tables 1 and 2. Since the modeled noise levels closely represented the actual levels, no adjustments were made to the noise model results.

Table 1. Actual and modeled noise levels at 3 receptor sites in Belfry.

Receptor	Address	Date	Location	Time	Leq Field	Leq Model
1.	Around the Corner	9/3/02	Northwest	2:10 pm	59	61
2.	MW&S Railroad Depot	9/3/02	North	2:45 pm	44	46
3.	St. John's Lutheran Church	9/3/02	West	1:00 pm	61	63
1.	Around the Corner	9/4/02	Northwest	7:00 am	62	61
2.	MW&S Railroad Depot	9/4/02	North	7:30 am	47	46
3.	St. John's Lutheran Church	9/4/02	West	8:00 am	60	63

Table 2. Calibration of model to field results based on observed traffic volumes and speeds.

Receptor	Address	Leq Field AM	Leq Model AM	Leq Field PM	Leq Model PM
1.	Around the Corner	62	60	59	60
2.	MW&S Railroad Depot	47	45	44	46
3.	St. John's Lutheran Church	60	59	61	62

Impacts

The results of the FHWA Traffic Noise Model 2.1 (TNM 2.1) computer model analysis at representative receptor locations in the project area are noted in Tables 3 - 6.

Table 3. No Build Alternative, current and projected Leq noise levels (dBA).

No.	Owner	2006 Vaill Avenue 40 kph	2026 Vaill Avenue 40 kph
1	Around the Corner	61	62
2	MW&S RR Depot	46	48
3	St. John's Church	63	65
4	Belfry School	56	58
5	Gasser Trust	49	51
6	Cichosz Residence	48	50
7	Roberts Residence	48	50
8	Krum Residence	49	51
9	Toogood Residence	45	47
10	Lenz Residence	58	60
11	Salo Residence	59	61
12	Secretary HUD	59	61

Table 4. Railroad Alignment Alternative, projected Leq noise levels (dBA).

No.	Owner	Railroad 2006 40 kph	Railroad 2026 40 kph	RR Alignment 2026 100 kph
1	Around the Corner	61	62	79
2	MW&S RR Depot	46	48	64
3	St. John's Church	63	65	50
4	Belfry School	56	58	47
5	Gasser Trust	49	51	49
6	Cichosz Residence	48	50	50
7	Roberts Residence	48	50	53
8	Krum Residence	49	51	60
9	Toogood Residence	45	47	59
10	Lenz Residence	58	60	55
11	Salo Residence	59	61	51
12	Secretary HUD	59	61	50

Table 5. Broadway Avenue Alternative, current and projected L_{eq} noise levels (dBA).

No.	Owner	Broadway 2006 40 kph*	Broadway 2026 30 kph	Broadway 2026 40 kph	Broadway 2026 50 kph	Broadway 2026 60 kph	Broadway 2026 70 kph
1	Around the Corner	61	70	70	71	72	64
2	MW&S RR Depot	46	61	60	58	56	55
3	St. John's Church	63	52	51	51	51	51
4	Belfry School	56	51	51	51	50	51
5	Gasser Trust	49	64	64	66	67	69
6	Cichosz Residence	48	63	64	65	66	68
7	Roberts Residence	48	62	62	63	64	70
8	Krum Residence	50	54	54	54	55	55
9	Toogood Residence	45	52	52	52	52	52
10	Lenz Residence	58	52	52	52	53	56
11	Salo Residence	59	50	50	50	51	53
12	Secretary HUD	59	51	51	51	51	52

Table 6. Ridgeway Lane Alternatives and Modified Existing Alignment Alternative, current and projected Leq noise levels (dBA).

No.	Owner	2006 P-72 100 kph (65 mph)	2026P-72 100 kph (65 mph) No Build
13	Hergenrider Residence	64	66
14	Morgan Residence	61	63

No.	Owner	2006 Ridgeway Lane 40 kph	2026 Ridgeway Lane 40 kph No Build	2026 Ridgeway Lane North 100 kph	2026 Ridgeway Lane South 100 kph
15	Nott Residence	55	55	51	50
16	Peterson Residence	50	50	66	69
17	Richards Residence	45	46	62	58
18	Kapor Residence	63	65	54	54
19	Meinhardt Residence	46	47	61	59
20	Feller Residence	45	47	47	43

Approximate Receptor Locations

Table 7. Sensitive Noise Receptors

Receptor No.	Property/Owner	Receptor No.	Property/Owner
1	Around the Corner	11	Salo Residence
2	MW&S RR Depot	12	Secretary HUD
3	St. John's Church	13	Hergenrider Residence
4	Belfry School	14	Morgan Residence
5	Gasser Trust	15	Nott Residence
6	Cichosz Residence	16	Peterson Residence
7	Roberts Residence	17	Richards Residence
8	Krum Residence	18	Kapor Residence
9	Toogood Residence	19	Meinhardt Residence
10	Lenz Residence	20	Feller Residence



Figure 1. Site map depicting receptors within the town of Belfry, MT 72 Belfry North project area, Carbon County, Montana.

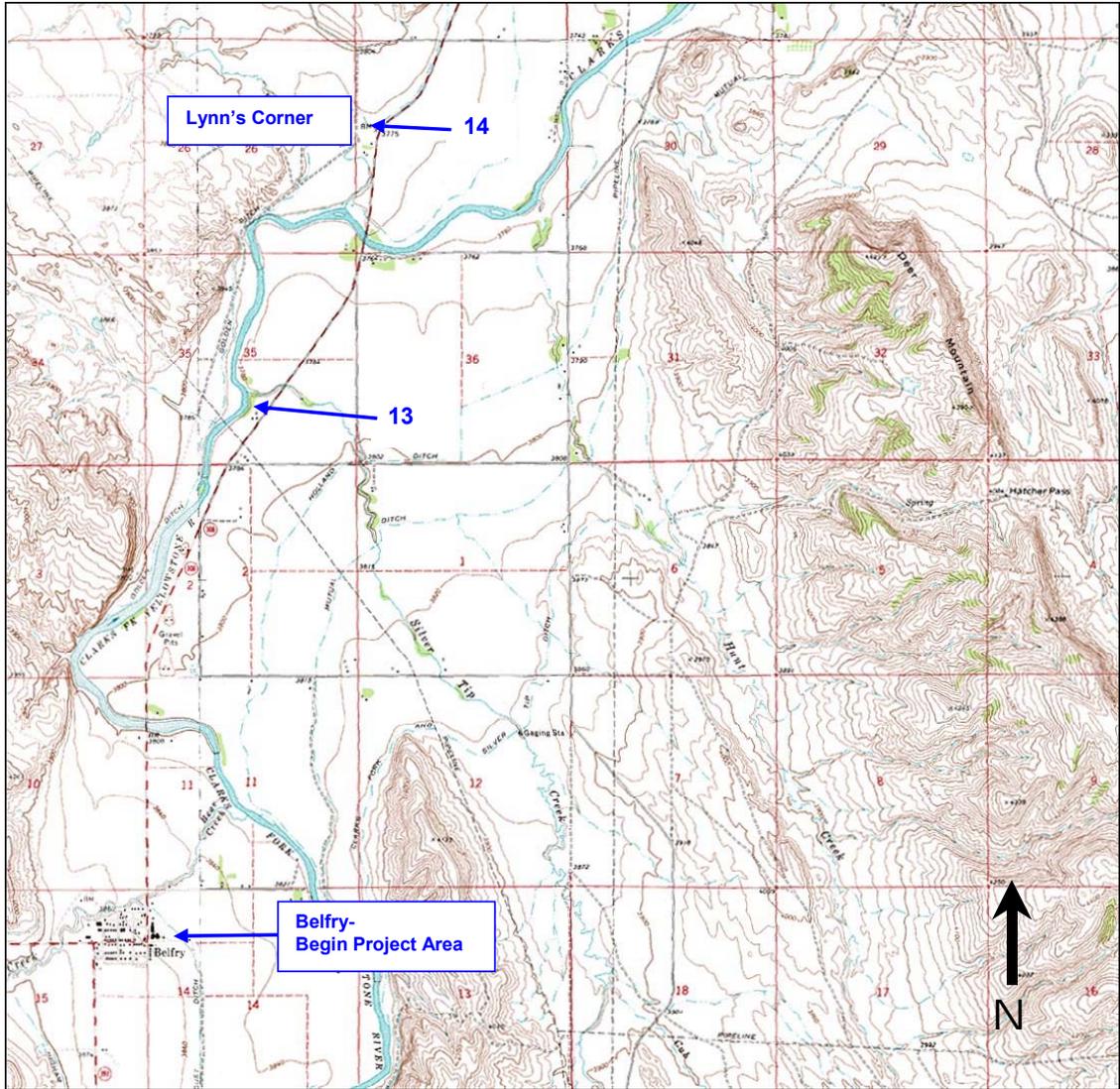


Figure 2. Site map depicting receptors north of Belfry to Lynn's Corner, MT 72 Belfry North project area, Carbon County, Montana.

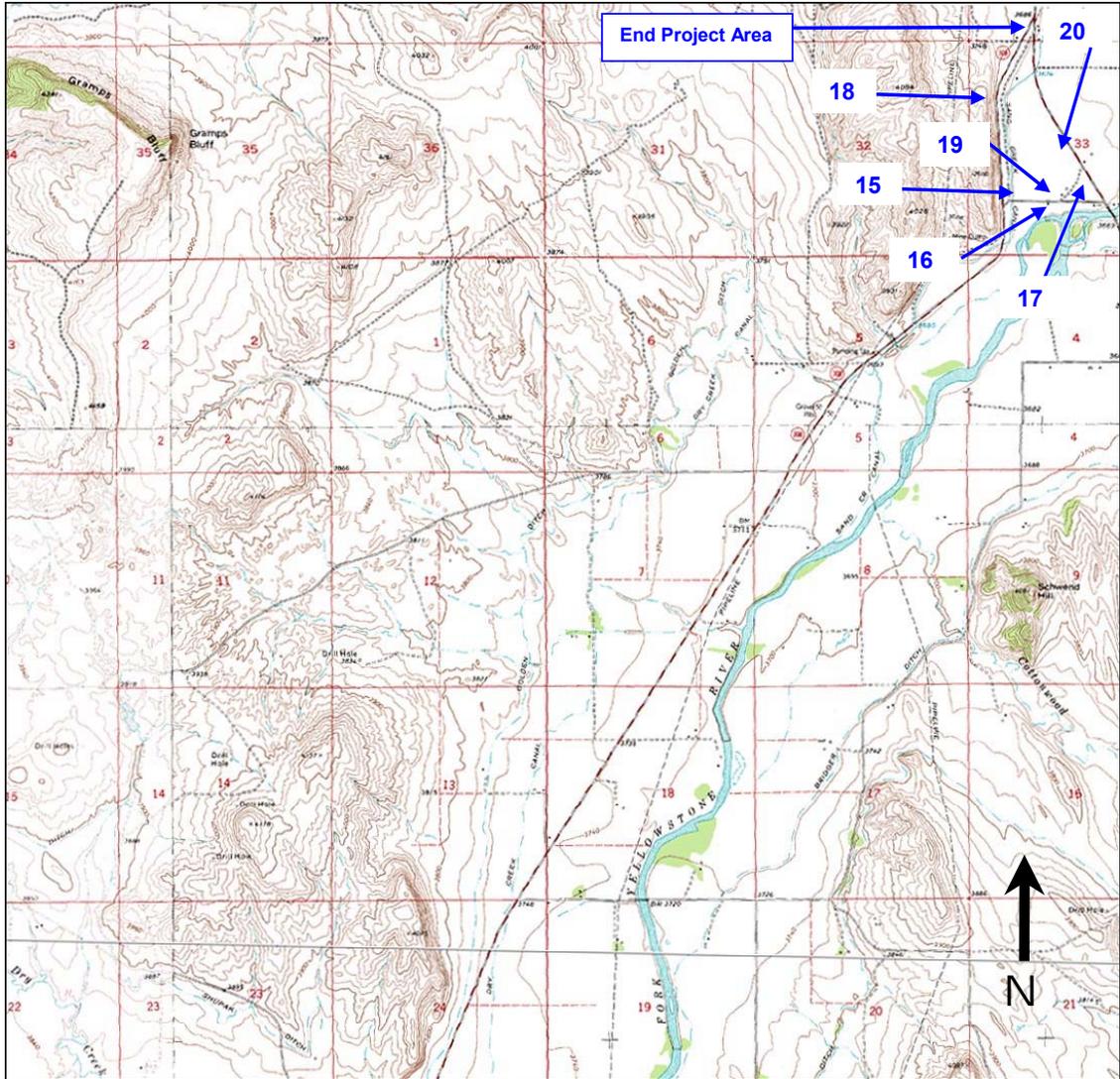


Figure 3. Site map depicting receptors north of Lynn’s Corner to project terminus, MT 72 Belfry North project area, Carbon County, Montana

**Appendix E - Section 4(f) Correspondence for MW&S Railroad
Maintenance Shop and Belfry School Picnic Area**

DMH:JAR:asj: [S:\PROJECTS\BILLINGS\1016\A782\MW&S-NO4(F)\LETTEREQ.DOC]

Attachments

copies: Bruce H. Barrett, Administrator - MDT Billings District No 5, w/Attachments
Carl S. Peil, P.E. - MDT Preconstruction Engineer, w/Attachments
Tom S. Martin, P.E. - MDT Consultant Design & CTEP Engineer, w/Attachments
John H. Horton, Jr. - MDT Right-of-Way Bureau Chief, w/Attachments
Timothy W. Reardon, Chief Counsel - MDT Legal Services, w/Attachments
Dave M. Hill, Chief - MDT Environmental Services Bureau, w/Attachments
Jean A. Riley, P.E. - MDT Environmental Services Bureau Engineering Section Supervisor

Attachment 1

former MW&S shop (site 24CB1146)
no "use" documentation for 23 CFR 771.135

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(PPMS-OPX2 C#1016)

The subsequent text is from FHWA's regulations concerning *Section 4(f)* of the *U.S. DEPARTMENT OF TRANSPORTATION Act* (49 U.S.C. 303), and documents both this proposed project's compliance with and avoidance of impacts to-same. The applicable portions of those provisions under 23 CFR 771.135 and this proposed project's relevance to-same are as-follows (note: the regulation's text is underlined, and "Administration" refers to the FHWA):

"(e) In determining the application of Section 4(f) to historic sites, the Administration, in cooperation with the applicant, will consult with the State Historic Preservation Office (SHPO) and appropriate local officials to identify all properties on or eligible for the National Register of Historic Places (National Register). The Section 4(f) requirements apply only to sites on or eligible for the National Register unless the Administration determines that the application of Section 4(f) is otherwise appropriate."

Two cultural resources surveys were made in this proposed project's corridor, and SHPO has concurred with the results of each regarding this former MW&S shop (site 24CB1146) as being "on or eligible for the National Register" (see attached copies of letters to SHPO).

"(f) The Administration may determine that Section 4(f) requirements do not apply to restoration, rehabilitation, or maintenance of transportation facilities that are on or eligible for the National Register when:

- (1) Such work will not adversely affect the historic qualities of the facility that caused it to be on or eligible for the National Register, and
- (2) The SHPO and the Advisory Council on Historic Preservation (ACHP) have been consulted and have not objected to the Administration finding in paragraph (f)(1) of this section."

Although SHPO has "been consulted and" . . . "not objected to the Administration finding in paragraph (f)(1) of this section" through the MDT Environmental Services Bureau's historian [note: under both 36 CFR 800.4(d)(1), & 36 CFR 800.5(c)(1), no ACHP consultation is required for findings of "no effect" & "no adverse effect" to National Register-eligible and/or listed sites], this proposed project's "preferred Railroad Alignment Alternative" is on a new location and the "restoration, rehabilitation, or maintenance of transportation facilities" criteria do not apply.

"(p) Use.

- (1) Except as set forth in paragraphs (f), (g)(2), and (h) of this section, "use" (in paragraph (a)(1) of this section) occurs:
 - (i) When land is permanently incorporated into a transportation facility;
 - (ii) When there is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes as determined by the criteria in paragraph (p)(7) of this section;
or
 - (iii) When there is a constructive use of land.
- (2) Constructive use occurs when the transportation project does not incorporate land from a Section 4(f) resource, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the resource are substantially diminished.
- (3) The Administration is not required to determine that there is no constructive use. However, such a determination could be made at the discretion of the Administration."

(continued-on next page)

Attachment 1

former MW&S shop (site 24CB1146)
no "use" documentation for 23 CFR 771.135

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BELFRY – NORTH
(PPMS-OPX2 C#1016)

[part "(p) use" - continued:]

MDT is hereby requesting the FHWA "to determine that there is no constructive use" regarding this proposed project's result on this site. The next parts and sub-parts from 23 CFR 771.135(p) have specific application to this proposed project regarding "such a determination" and have been evaluated as-listed below each:

"(4) The Administration has reviewed the following situations and determined that a constructive use occurs when:

(i) The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by Section 4(f), such as hearing the performances at an outdoor amphitheater, sleeping in the sleeping area of a campground, enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site's significance, or enjoyment of an urban park where serenity and quiet are significant attributes;"

This site is not a "noise-sensitive" facility as it was a railroad rolling stock maintenance shop; therefore, a quiet setting is neither a feature or attribute of the site's significance nor were such identified-in the cultural resources survey reports regarding this site.

"(ii) The proximity of the proposed project substantially impairs esthetic features or attributes of a resource protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the resource. Examples of substantial impairment to visual or esthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a park or historic site which derives its value in substantial part due to its setting;"

As-stated in MDT's letter of November 24, 2003 to the SHPO: "the building would remain in place and unaltered. The characteristics that make the site eligible for the National Register would be perpetuated. It would not be isolated from its environment or suffer from neglect as a result of the project. It would not be demolished and the setting would largely remain intact." SHPO concurred with these findings on December 9, 2003 (please refer-to **Attachment 3** for a copy of this letter and SHPO's stamp-of-concurrence on-same). That is also a concurrence regarding MDT not having a significant impact to the aesthetic qualities ("the setting") of the property. The new roadway would not obstruct or eliminate "the primary views of" the site. The building is currently located far enough away from Montana Primary highway #72's (P-72's) present route through Belfry that it is difficult to get any good view (if at all). Considering the historic "setting" of the building has all but disappeared (e.g.: the associated railroad yard trackage and associated features), the new roadway would not substantially detract from the former (and SHPO's concurrence included that aspect).

"(iii) The project results in a restriction on access which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site;"

The existing access to the site would be perpetuated, therefore there would be no restriction on the access (please refer-to **Attachment 4** for both a map of the site and the access to-same).

"(iv) The vibration impact from operation of the project substantially impairs the use of a Section 4(f) resource, such as projected vibration levels from a rail transit project that are great enough to affect the structural integrity of a historic building or substantially diminish the utility of the building;"

(concluded-on next page)

Attachment 1

former MW&S shop (site 24CB1146)
no "use" documentation for 23 CFR 771.135

STPP-F 72-1(1)10
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(PPMS-OPX2 C#1016)

[response-to sub-subpart "(p)(4)(iv) vibration levels" - concluded:]

Since this proposed action is for relocating a highway and not "a transit project", "vibration levels" are not expected to be "great enough to affect the structural integrity of" the "building or substantially diminish the utility of the building." Furthermore, historically there were noticeable "vibration levels" associated with both the building's function and adjacent features [see comments for sub-subparts (p)(4)(i) & (ii), preceding].

"or

- (v) The ecological intrusion of the project substantially diminishes the value of wildlife habitat in a wildlife or waterfowl refuge adjacent to the project or substantially interferes with the access to a wildlife or waterfowl refuge, when such access is necessary for established wildlife migration or critical life cycle processes."

This sub-subpart is not applicable to this National Register site since there is no designated "wildlife or waterfowl refuge adjacent to" this proposed project, nor will the latter interfere "with the access to a wildlife or waterfowl refuge, when such access is necessary for established wildlife migration or critical life cycle processes."

- (5) The Administration has reviewed the following situations and determined that a constructive use does not occur when:

- (i) Compliance with the requirements of Section 106 of the National Historic Preservation Act and 36 CFR part 800 for proximity impacts of the proposed action, on a site listed on or eligible for the National Register of Historic Places, results in an agreement of "no effect" or "no adverse effect"."

SHPO concurred that this "proposed project would have No Adverse Effect to 24CB1146" on December 9, 2003 [please refer to preceding sub-subpart (p)(4)(ii)'s response & Attachment 3 for that concurrence].

- (ii) The projected traffic noise levels of the proposed highway project do not exceed the FHWA noise abatement criteria as contained in Table 1, 23 CFR part 772."

FHWA noise abatement criteria (NAC) for an industrial use is in Activity Category C, which has 72 dB_A for L_{eq}(h). This site's within 0.4± kilometer (km, ¼± mile) of Belfry's northerly side, and therefore this proposed project's portion of the "preferred Railroad Alignment Alternative" is likely to be posted-for 70± km/h (45 mph). The predicted noise levels for this project in 2026 for various speeds and transects (distances from centerline) were presented in a subconsultant's Traffic Noise Impact Assessment Report of January 15, 2004. Estimated Traffic Noise Levels in this site's area are predicted to be below that 72 dB_A NAC.

- (iii) The projected noise levels exceed the relevant threshold in paragraph (p)(5)(ii) of this section because of high existing noise, but the increase in the projected noise levels if the proposed project is constructed, when compared with the projected noise levels if the project is not built, is barely perceptible (3 dB_A or less)."

Predicted noise levels in this site's vicinity will not "exceed the relevant threshold in paragraph (p)(5)(ii)" [see comments for sub-subpart (5)(ii), preceding]. MDT's Noise Policy places far less emphasis on noise abatement and modeling of Land Use Category C sites, and therefore none would have been made for this site. However, as this site is not currently adjacent-to P-72 but will be just westerly-of the proposed highway, there is a good chance that the noise levels will increase by 13 dB_A or more. While this increase represents an impact for sensitive noise receptors in MDT's Noise Policy, this site is not considered as-being such a recipient.

(concluded-on next page)

Attachment 1

former MW&S shop (site 24CB1146)
no "use" documentation for 23 CFR 771.135

STPP-F 72-1(1)10
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(PPMS-OPX2 C#1016)

[response-to subpart "(p)(5)" no "constructive use" - concluded:]

"(iv) There are proximity impacts to a Section 4(f) resource, but a governmental agency's Right-of-Way acquisition, an applicant's adoption of project location, or the Administration approval of a final environmental document, established the location for a proposed transportation project before the designation, establishment, or change in the significance of the resource. However, if the age of an historic site is close to, but less than, 50 years at the time of the governmental agency's acquisition, adoption, or approval, and except for its age would be eligible for the National Register, and construction would begin after the site was eligible, then the site is considered a historic site eligible for the National Register."

This site would have "proximity impacts" from this proposed project's "preferred Railroad Alignment Alternative" [see responses-to subpart "(e)(4)"]. However, it was previously determined "eligible for the National Register" [see response to part "(e)" previous], and therefore is not a "late designation" for "no constructive use" on same.

"(v) There are impacts to a proposed public park, recreation area, or wildlife refuge, but the proposed transportation project and the resource are concurrently planned or developed. Examples of such concurrent planning or development include, but are not limited to:

(A) Designation or donation of property for the specific purpose of such concurrent development by the entity with jurisdiction or ownership of the property for both the potential transportation project and the Section 4(f) resource, or

(B) Designation, donation, planning or development of property by two or more governmental agencies, with jurisdiction for the potential transportation project and the Section 4(f) resource, in consultation with each other;"

Although this site is neither "a proposed public park, recreation area," nor "wildlife refuge" MDT has been "in consultation with" SHPO [see responses-to parts "(e)" & "(f)" previous] regarding this proposed project's affect on-same. A resultant measure to minimize harm is the proposed placement of an interpretive sign about the history of this site "within the community of Belfry" (see 1ST paragraph in Attachment 2's "Page 2 of 2"), which would be a "concurrent development by the entity with jurisdiction . . . of the property for both the potential transportation project and the Section 4(f) resource" on this proposed project.

"(vi) Overall (combined) proximity impacts caused by a proposed project do not substantially impair the activities, features, or attributes that qualify a resource for protection under Section 4(f);"

Essentially, the "(o)verall (combined) proximity impacts caused by" this proposed project on this site are the "no adverse effect" to its National Register eligibility, plus those from traffic noise and vibration [each referenced under the preceding responses to subpart "(4)'s" sub-subparts "(ii)" plus "(i)" & "(iv)" respectively]. As-mentioned in those responses, the latter two items were related-to this site's historic background in regards to sounds and effects from transportation-related (although technically different) activities. Therefore, this proposed project's "(o)verall (combined) proximity impacts" would not "impair the activities, features, or attributes that qualify a resource for protection under Section 4(f)" at this site.

"(vii) Proximity impacts will be mitigated to a condition equivalent to, or better than, that which would occur under a no-build scenario;"

As-referenced under the responses to this subpart "(5)'s" sub-subparts "(ii)" & "(iii)" this proposed project's noise impacts are less-than those required-for NAC mitigation. (concluded on next page)

Attachment 1

former MW&S shop (site 24CB1146)
no "use" documentation for 23 CFR 771.135

STPP-F 72-1(1)10
BELFRY - NORTH
(PPMS-OPX2 C#1016)

[response-to sub-subpart "(p)(5)(vii)" - conclusion:]

Although more-noticeable than the (current) "no-build scenario" vibration impacts should (also) be minor based-on traffic volumes for this proposed project's "preferred **Railroad Alignment Alternative**" [see also response-to sub-subpart (4)(iv), preceding]. Placement of that historical interpretation sign referenced-in the preceding response to sub-subpart "(v)" would not occur under this proposed project's "no-build scenario" and no such marker exists at present.

"(viii) Change in accessibility will not substantially diminish the utilization of the Section 4(f) resource;"

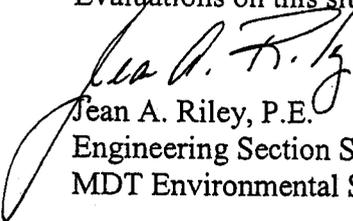
Both entry to and passage from the site, which is currently (on) private property, will be perpetuated, and therefore this proposed project's "preferred **Railroad Alignment Alternative** will not substantially diminish the utilization of" same.

"or

(ix) Vibration levels from project construction activities are mitigated, through advance planning and monitoring of the activities, to levels that do not cause a substantial impairment of the Section 4(f) resource."

This proposed project's "preferred **Railroad Alignment Alternative**" would cross Bear Creek approximately 110 meters (360+ ft.) southerly from the site's southerly end. That would be the nearest area where "vibration levels from project construction activities" (viz.: driving sheet-piles for a bridge) could exceed those from earth-moving equipment, vibratory compaction rollers, trucks, and similar during work in this site's immediate vicinity.

In accordance with the provisions of 23 CFR 771.135(p), this pending action's (preferred) "**Railroad Alignment Alternative**" would not cause any "use" (including "constructive use") under *Section 4(f)* of the 1966 U.S. DEPARTMENT OF TRANSPORTATION Act (49 U.S.C. 303). Therefore, the FHWA's concurrence is requested that this proposed project will not need in any further reviews regarding *Section 4(f)*, including those required-for either a "Nationwide" Programmatic or "full" DRAFT and FINAL Evaluations on this site.


Jean A. Riley, P.E.
Engineering Section Supervisor
MDT Environmental Services Bureau

Concur  , Date: 3 MAR 04
Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

Attachment 2 -
National Register eligibility correspondence



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

2003022503

February 24, 2003

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

Subject: F 72-1(1)10
Belfry - North
Control No. 1016

*Josef
MDT
Belfry-North updated*

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FEB 25 2003
BY: _____

Enclosed is the updated cultural resource report, CRABS and site forms for the above project in Carbon County. The MDT submitted the original cultural resource report to your office in 1989. I submitted site forms for additional properties in Belfry in the early 1990s. Eight sites have been previously determined eligible within the Belfry - North project corridor. They are: the First Presbyterian Church of Belfry (24CB678), the Clark's Fork River Bridge (24CB707/1144), the residence at the Middlesworth Farmstead (24CB1145), the Montana, Wyoming & Southern Railway (MW&S) Shop (24CB1146), the MW&S Depot (24CB1148), the Sand Creek Canal (24CB1150), the Golden Ditch (24CB1152), and the Dry Creek Canal (24CB1154). A Determination of Effect for these properties was submitted to your office in June, 1992 and a Memorandum of Agreement implemented in July, 1992.

The 2002 cultural resource survey recorded an additional 18 sites distributed in five parcels in the project area. RTI recommends two sites eligible for the NRHP: the Holland Lumber & Hardware Store (24CB1803) and the Kose Grocery (24CB1813). We agree with the recommendations and request your concurrence. RTI also noted the presence of the Youst Ditch (24CB1817) in the project area. It is covered under a programmatic agreement.

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

Jon Axline
Jon Axline, Historian
Environmental Services

**CONCUR
MONTANA SHPO**

DATE 11 Mar 03 SIGNED

Josef [Signature]

Enclosures

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

file: MDT/2003

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MDT ENVIRONMENTAL

PAGE 02

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Montana Department of Transportation

David A. Galt, Director
Judy Martz, Governor

DEC 11 2003

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

C.R.

ENVIRONMENTAL

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JOSEF
MDT

November 24, 2003

**CONCUR
MONTANA SHPO**

BELFRY-NORTH
ADDENDUM

DATE 9 Dec 03 SIGNED *Josef Warburton*

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

RECEIVED
NOV 25 2003

Subject: F STPP 72-1(1)0
Belfry - North
Control No. 1016

BY: _____

Dear Mark:

Enclosed is an addendum to the cultural resource survey, CRABS and site forms for the above project. This report is an addendum to the February, 2003 report and concerns an alternative alignment recently developed near the junction of Montana Highway 72 and US Highway 310 on Ridgeway lane. This letter will also address a change in the design at the Montana, Wyoming & Southern Railroad Shop (24CB1146).

In the enclosed report, RTI recorded two additional historic sites within the APE for the proposed new alignment. One site, the Jennings Homestead (24CB1848) is recommended eligible for the National Register of Historic Places. We agree with that recommendation and request your concurrence. A third site, the Sarah Strong Farmstead (24CB1683) was recorded as part of the MDT's Bridger - South [NH 4-1(16)13] project and your office concurred in its ineligibility to the National Register on May 20, 2002. The Sand Creek Canal (24CB1150) was previously determined eligible for the National Register. If or when the revised alignment is approved, a Determination of Effect will be submitted to your office.

On June 30, 1992, your office concurred that the proposed Belfry - North project would have an Adverse Effect to the MW&S Shop (24CB1146). That determination was based on the assumption at the time that the proposed railroad grade alignment would result in the demolition of the structure. That Adverse Effect concurrence was restated in the amended Determination of Effect for this project on September 23, 2003. Since then, however, we have been working with the consultant to minimize the impact to the historic property. Consequently, an alternative has been proposed that would extend the curb and gutter section within the community of Belfry about 1,000-feet northward to encompass the old railroad shop. This would result in the minimization of the slopes and an offset of 5± feet to avoid the building. The roadway would be 32± feet in width and include two 12-foot driving lanes and two 4-foot shoulders in addition to the curb and gutter. Importantly, with this revision it would not be necessary to remove the MW&S Railroad Shop. Based on this modification of the design, we have revised our former

File: MDT/2003

Environmental Services Unit
Phone: (406) 444-7228
Fax: (406) 444-7245

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TTY: (800) 335-7592

Attachment 3 –
“Determination of Effect” Correspondence

12/15/2003 09:31 4064447245

MDT ENVIRONMENTAL

PAGE 03

Determination of Effect for this property. We have now determined that the proposed project would have No Adverse Effect to 24CB1146. Instead of being demolished, the building would remain in place and unaltered. The characteristics that make the site eligible for the NRHP would be perpetuated. It would not be isolated from its environment or suffer from neglect as a result of the project. It would not be demolished and the setting would largely remain intact. The MDT has, moreover, already conducted HABS-level photography of the site and completed other measures designed to mitigate the impacts to the site. The MDT would still install an historical marker along the proposed alignment between the shop and the MW&S Depot (24CB1148) within the community of Belfry. We feel this proposed option is a good alternative to the demolition of the historic building. We request your concurrence.

There are also two irrigation ditches on this project that are located within the Area of Potential Effect for this proposed project: the Sand Creek Canal (24CB1150) and the Dry Creek Canal (24CB1154). Montana Highway 72 crosses 24CB1150 twice at MP 19.88 and MP 20.42. Under the proposed project, the existing timber bridge would be removed and new concrete box culverts installed to replace them. The existing canal alignment would be perpetuated and the ditch would not be widened or re-channeled to accommodate the new structure. The highway crosses 24CB1154 three times at MPs 14.51, 16.48, and 19.40 (only the crossing at 14.51 is on a bridge). All three crossings would be replaced by box culverts (16.48 and 19.40 are already box culverts). The existing canal alignment would be perpetuated and there would be no widening or rechanneling to accommodate the new crossings. Based on this information, we have determined that the proposed project would have No Effect to the Sand Creek Canal (24CB1150) and the Dry Creek Canal (24CB1154). We request your concurrence.

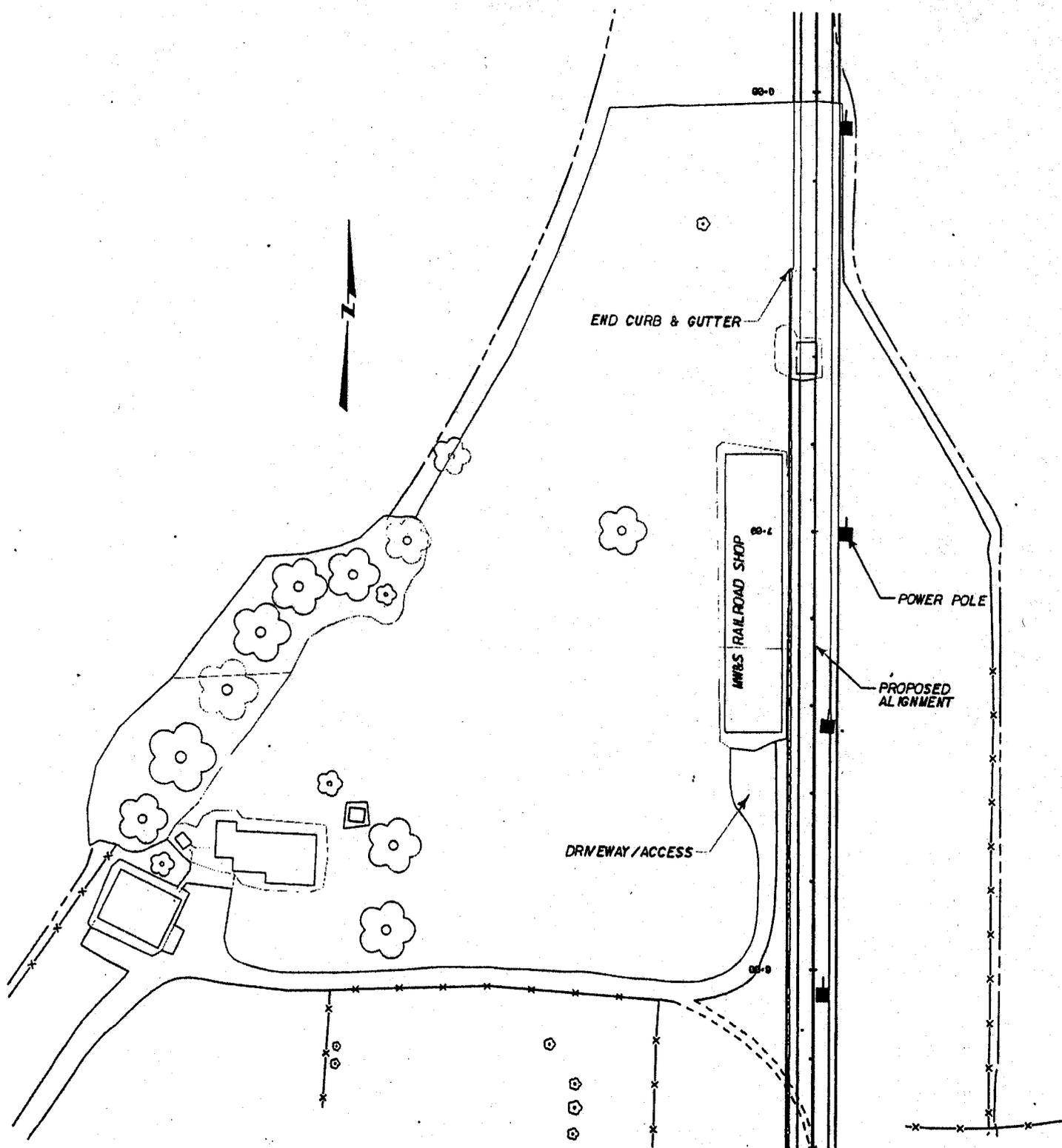
If you have any questions, please contact me at 444-6258.

Jon Axline
Jon Axline, Historian
Environmental Services

Attachment

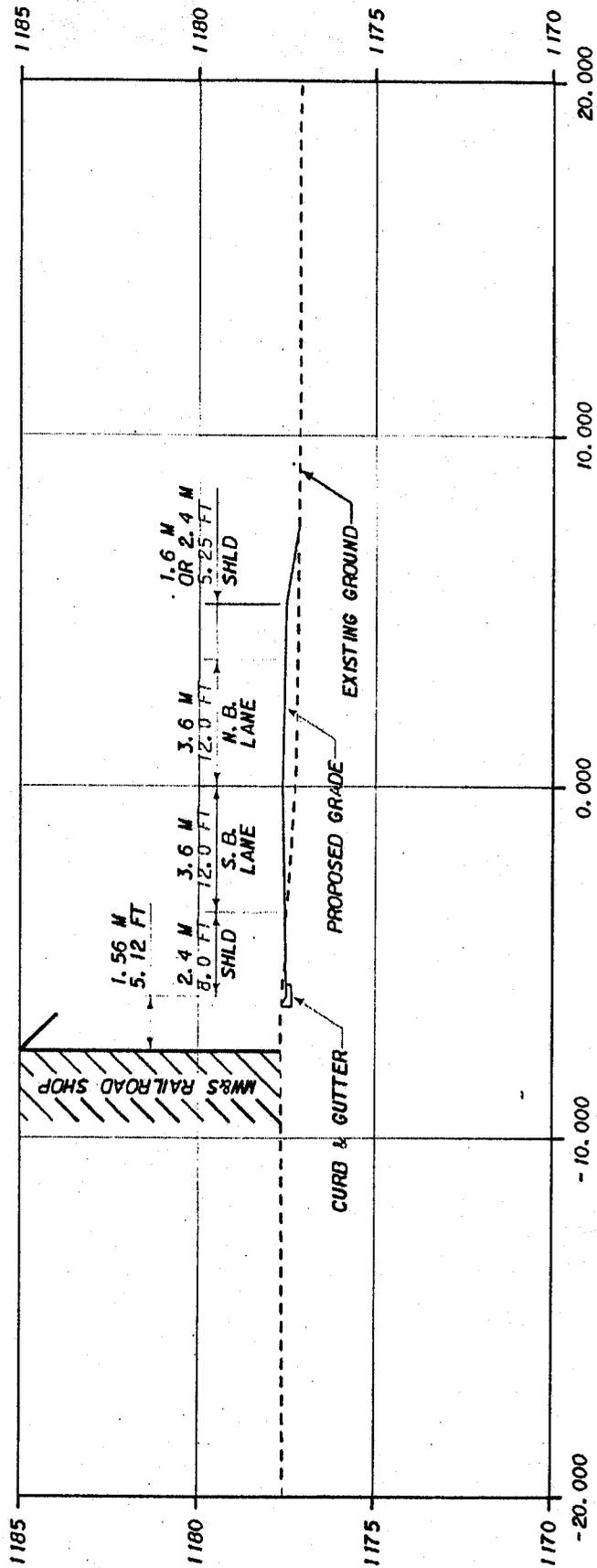
cc: Bruce Barrett, Billings District Administrator
Carl Peil, P.E., Preconstruction Bureau
Jean Riley, P.E., Engineering Section
Bonnie Steg, Resources Section

Attachment 4-
(preferred) "Railroad Alignment Alternative" Site Map @ former MW&S shop



No Scale

Attachment 5 –
(preferred) "Railroad Alignment Alternative" Typical Section @ former MW&S shop



No Scale

MASTER FILE
COPY

RECEIVED

MAY 19 2004

ENVIRONMENTAL

Attachment 1

Belfry – North STPP-F 72-1(1)10

Picnic Area West of Wisconsin Street – Section 4(f) Applicability

Location and Site Description

The picnic area is located between Broadway Avenue and Vaill Avenue west of Wisconsin Street (MT 72) as shown on attachment 2. The picnic area is in a school district parcel across the street from the Belfry K-12 School. This parcel size is 615 sq m (6620 sq ft) and is currently used for teacher and visitor parking as well as a picnic area. The parking area is adjacent to Wisconsin Street and the picnic area buffers the school parking from local residences. The parking area is approximately one-third of the site and the picnic facilities and undeveloped area cover approximately two-thirds of the site. The facilities on the picnic area include two picnic tables, a shade shelter, and a swing. There are several trees on this parcel.

Ownership

The parcel is owned by the Belfry School District 34. Therefore, this land is considered publicly owned.

Significance of Site

This parcel (both the picnic area and the parking) is open to the entire public at all times. According to Jed Landsman-Yankin, Superintendent, these facilities are occasionally used by travelers along MT-72 who will stop at the picnic facilities. The local community has access to extensive playground facilities behind the school and therefore they are not inclined to use the facilities on the picnic site. This picnic area is not used as a school playground and the school does not perform any routine maintenance of the facilities. The picnic area has no official designation as a park or recreation area.

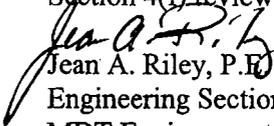
The official with jurisdiction over the site, the Superintendent, was consulted by letter on March 4, 2004 (refer to attachment 3). Although the Superintendent has not responded in writing, he did state in telephone conversations on March 12, 2004 and on May 5, 2004 that he believes that the site was developed as a buffer between the school parking and the residences and that is its main function or purpose. He has stated that the picnic site is not significant to the community as a park or recreation site, especially when compared to the other school playground facilities.

Applicability of Section 4(f) (23 CFR 771.135)

23 CFR 771.135 (a)(1) pertains to "land from a significant publicly owned public park, recreation area," Although the picnic area is publicly owned and it is open to the entire public; it is not "significant" as determined by the official with jurisdiction, the School District Superintendent.

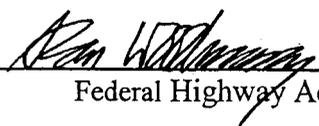
Concurrence on Findings

Based on the above information, 23 CFR 771.135 does not apply to the picnic area west of Wisconsin Street. The FHWA's concurrence is requested on this finding and that no further Section 4(f) reviews are needed for this site.


Jean A. Riley, P.E.

Engineering Section Supervisor
MDT Environmental Services Bureau

Concur


Federal Highway Administration

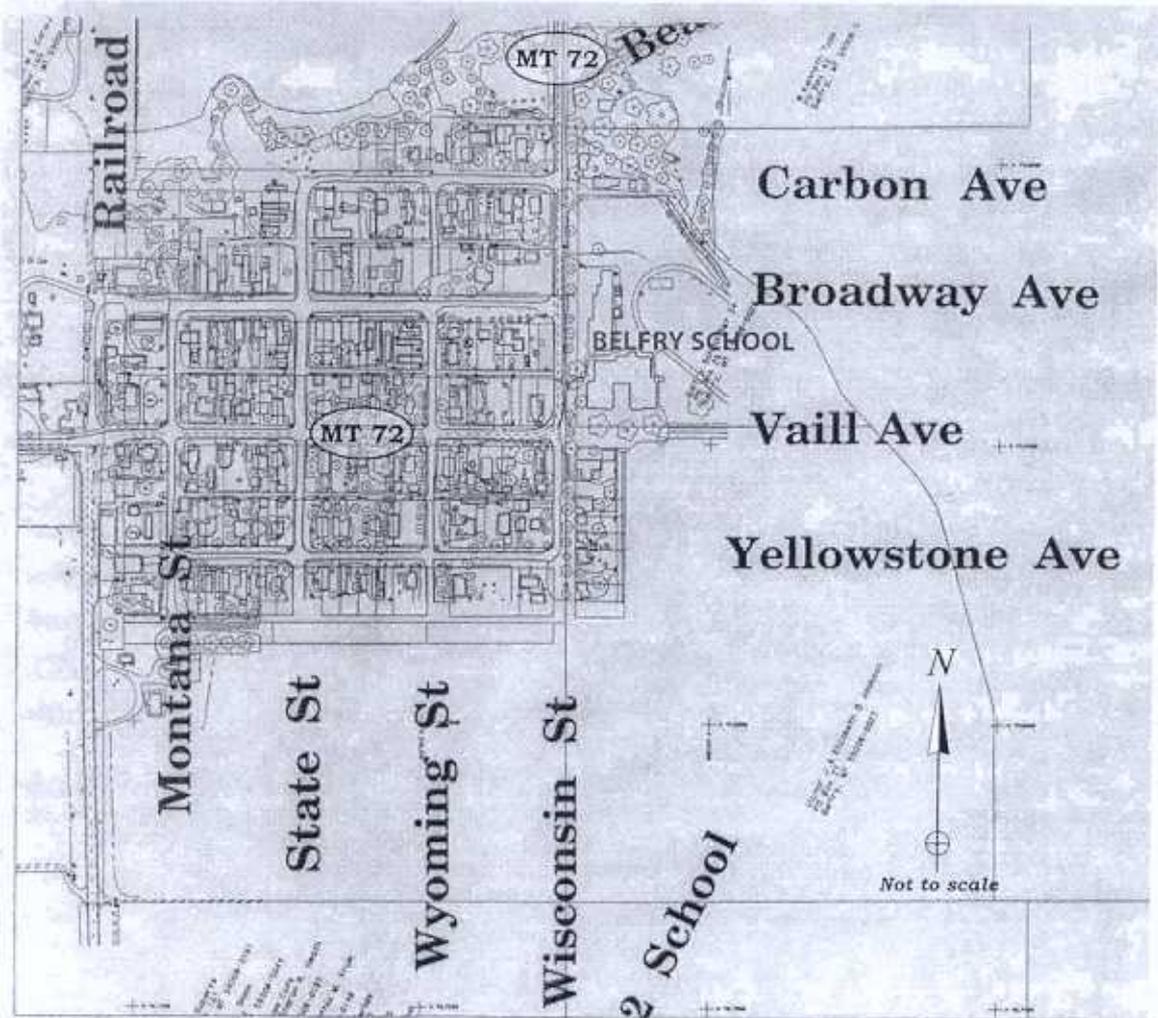
Date 18 MAY 04

ATTACHMENT 2



Belfry School Picnic Area,
left side of photograph
(view from MT 72/Wisconsin
Street, looking north)

 Belfry School Picnic Area on Map





DAVID EVANS
AND ASSOCIATES INC

March 4, 2004

Belfry K-12 Schools, Districts 34 and 3
P.O. Box 210
Belfry, MT 59008-0028

Attention: Mr. Jed Landsman-Yankin,
Superintendent

**Subject: STPP-F 72-1(1)10
BELFRY - NORTH
(PPMS-OPX2 Control #1016)**

Dear Mr. Landsman-Yankin,

You may recall a letter David Evans and Associates, MDT's project consultant, sent you on May 31, 2002 to inform you of the above-referenced highway improvement project on MT 72. This letter is to request School District No. 34 to be a Cooperating Agency on this proposed project in accordance with the U.S. Department of Transportation's Federal Highway Administration (FHWA) regulations under the *National Environmental Policy Act (NEPA)*, see 23 CFR 771.111(d).

The proposed project's current route on Montana Primary highway route #72 adjoins both the school grounds along Wisconsin Street's easterly side between Vaill Avenue and Carbon Avenue, and the school district's parking and picnic areas on both sides of Broadway Avenue ending at its "T" intersection with Wisconsin Street. These areas are between MT 72's "Reference" (Mile) Posts 10.8± and 11.0± on Belfry's easterly side, with the school grounds located in the N.W.¼ of the N.W.¼ in Section 14 within Township - 8 - South, Range - 22 - East. The parking and picnic areas are located in lots 19 - 24 of block 9 and lots 1 - 2 of block 16 in the original plat of Belfry's townsite in the N.E.¼ of the N.E.¼ in Section 15 within Township - 8 - South, Range - 22 - East.

Alternatives

The proposed project is a full reconstruction that will involve selection of a route through Belfry. There are three alternatives under consideration within Belfry. They include the No-Build Alternative (MT 72 remains on Vaill Avenue and Wisconsin Street), the Railroad Alignment Alternative, and the Broadway Avenue Alternative. Copies of the documentation describing this proposed project with maps for this proposed project's alternatives are enclosed.

Mr. Jed Landsman-Yankin,
 Superintendent
 Page 2
 March 4, 2004



As shown on the attached maps, the No-Build Alternative and the Railroad Alignment Alternative do not result in any roadway changes to Wisconsin Street between Vaill Avenue and Carbon Avenue in front of the school. However, in the Railroad Alignment Alternative, the regional traffic would be diverted from Vaill Avenue to the Railroad Avenue Alignment and therefore the traffic passing by the school would be substantially reduced.

The Broadway Alternative includes improving Broadway Avenue as MT 72. Consequently, the Broadway Avenue and Wisconsin Street Intersection would be reconfigured so that Wisconsin Street would be closed at this intersection. As shown in the attached figure, this closure provides an opportunity to include a cul-de-sac or school bus turnaround on Wisconsin Street in front of the school. This proposed cul-de-sac or turnaround would encroach into the school-owned picnic area on the west side of Wisconsin Street.

Section 4(f) Regulations

Regulations under 49 U.S.C. 303 (Section 4(f)), pertain to public parks and recreation areas, wildlife and waterfowl refuges and historic sites that are considered significant by the agency with jurisdiction over the land. Therefore we need your assistance in determining the applicability of Section 4(f) to school property in this area.

This proposed project's Broadway Avenue Alternative may be under the provisions of "*Section 4(f)*" of the 1966 *U.S. Department of Transportation Act (49 U.S.C. 303)*. These provisions only apply if the School's lands are used and/or designated as any of the following:

- a. Parks and/or Recreation Areas;
- b. Wildlife/Waterfowl Refuges;
- c. Sites eligible for inclusion, or in the NATIONAL REGISTER OF HISTORIC PLACES under *Section 106* of the *National Historic Preservation Act (16 U.S.C. 470)*. (Note: MDT has conducted Cultural Resource Surveys to identify these sites, and none were located-on School's parcels.);

and/or

- d. Lands managed for multiple-use with specifically-designated recreational, or wildlife/waterfowl management sites, and under statute(s) providing for same. This only applies to those same specific site/s.

Although the School's parcels could be classified "*Section 4(f)*" in either items "a." or "d." preceding, this proposed project will not require use of those for new or additional easements under its No-Build or Railroad Alignment alternatives. However, as stated previously, the Broadway Avenue Alignment Alternative could require use of the school property, especially on the west side of Wisconsin Street. Therefore, the School is requested to provide information on the following:

Mr. Jed Landsman-Yankin.
 Superintendent
 Page 3
 March 4, 2004



if the School's parcels are open for public (e.g.: "recreational" such as in a park) use at any time other than for school-related activities; and

if "yes" to the preceding, are these parcels (including the parcels on the west side of Wisconsin Street) considered significant for such use within the unincorporated community of Belfry.

A written response to this Cooperating Agency request and a response to the preceding 4(f) items, is needed for the environmental documentation on this proposed project. Please send your response to the address on the first page. MDT will provide a copy of the ROUGH DRAFT environmental document (currently, an Environmental Assessment) on this proposed project for review by the School District as a Cooperating Agency.

If you have any questions, please feel free to contact me at (720) 946-0969 to discuss this request.

Sincerely,
DAVID EVANS AND ASSOCIATES, INC.

Debra Perkins-Smith, AICP
 Vice President

Copies Bruce H. Barrett, Administrator – MDT Billings District № 5
 Carl S. Peil, P.E. – MDT Preconstruction Engineer
 Thomas S. Martin, P.E. – MDT Consultant Design Engineer
 John H. Horton, Jr. – MDT Right-of-Way Bureau Chief
 Timothy W. Reardon, Chief Counsel – MDT Legal Services
 Dave M. Hill, Chief – MDT Environmental Services Bureau, w/attachments
 Jean A. Riley, P.E. – MDT Environmental Services Engineering Section Supervisor
 Carl D. James, Field Operations Engineer – FHWA MT Division

Attachments/Enclosures

Initials: srsa

File Name: P:\MDOT0000-0013 Belfry North\ADMIN\Letters\4(f)\Impacts School_MDT+DEA.doc

Alternatives within the town of Belfry

Three alternatives are under consideration within the town of Belfry and are described here.

No-Build Alternative

The No-Build Alternative is the current MT 72 alignment and configuration. In the town it is located on Vaill Avenue and curves northward in front of the Belfry School on Wisconsin Street and proceeds north on the existing alignment. There would be no change in roadway, pedestrian or parking conditions under the No-Build Alternative. MDT would continue to maintain the highway.

Railroad Alignment Alternative

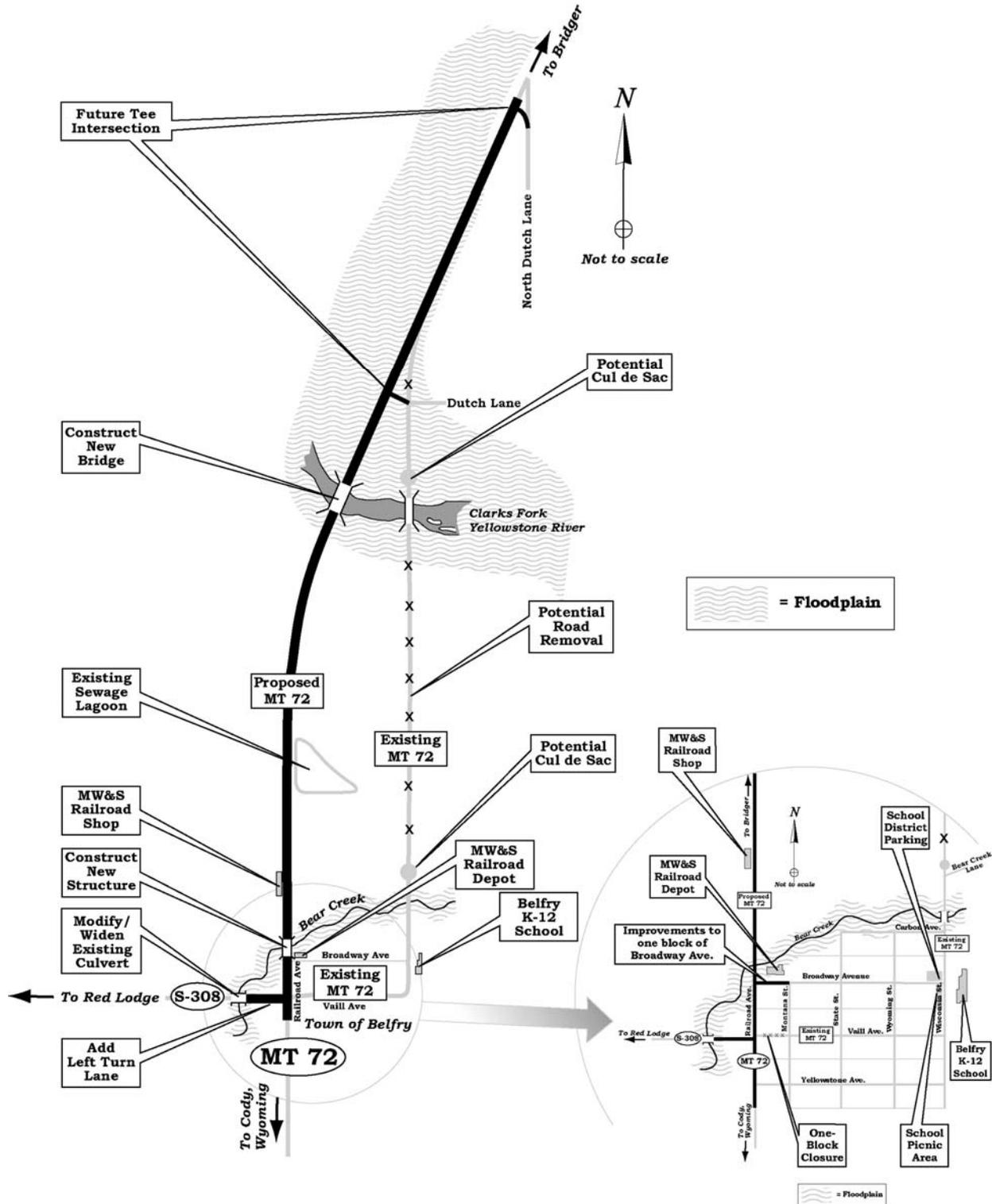
This alternative would create a new alignment for MT 72, relocating it from Vaill Avenue and Wisconsin Street to Railroad Avenue on the western edge of town. The alternative would begin on MT 72, south of Railroad Avenue's present intersection with S-308. It would follow Railroad Avenue to its current terminus in town and continue north on the old MW&S Railroad alignment to North Dutch Lane. With this alternative, Vaill Avenue would be closed one block to the east to create a safer tee ("T") intersection where S-308 intersects with MT 72. The realignment of MT 72 to the west side of town would divert through-traffic away from residential Vaill Avenue, and would reduce the amount of traffic in front of the Belfry School. To improve the connection between the business district and the new MT 72, the first block of Broadway Avenue adjacent to the new MT 72 alignment would be improved and reconstructed.

Broadway Avenue Alternative

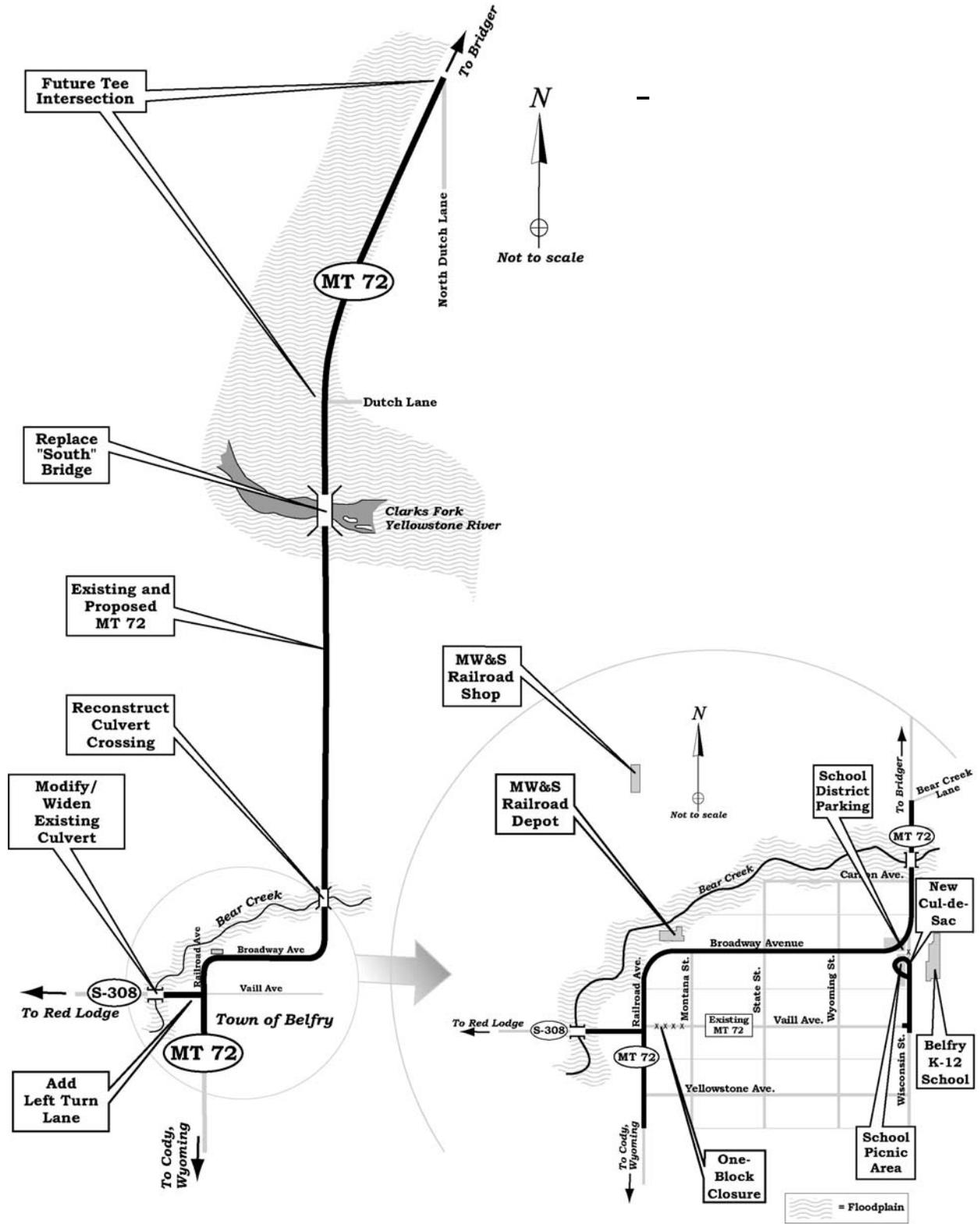
Under the Broadway Avenue Alternative, the MT 72 alignment would be shifted one block north from Vaill Avenue to Broadway Avenue. This alternative, like the Railroad Alignment Alternative, would begin near the existing MT 72/S-308 intersection. This intersection would be redesigned into a tee ("T") intersection, eliminating the connection to Vaill Avenue to improve the intersection.

From the S-308 intersection, the MT 72 alignment would continue north along Railroad Avenue to Broadway Avenue and follow a 40 kph (25 mph) curve to join MT 72 to Broadway Avenue west of Montana Street. The section of Broadway between Railroad Avenue and Wisconsin Street would be improved with parking and sidewalks on each side. At the Wisconsin Street tie-in, the current 3-legged intersection at Broadway Avenue and Wisconsin Street would be modified to a curve, and Wisconsin Street south of Broadway Avenue would be disconnected from Broadway Avenue. In front of the Belfry School near this curve, a segment of Wisconsin Street would be reconstructed into a cul de sac, which would be accessible only from Vaill Avenue and Yellowstone Avenue. The cul de sac would provide drop-off and turn-around access to Belfry School for school buses and parents. From the Wisconsin Street curve, the Broadway Avenue alignment would proceed northerly on the existing MT 72 alignment.

Railroad Alignment Alternative



Broadway Avenue Alternative



From: <JLandsmany@aol.com>
To: <dps@deainc.com>
Date: 5/7/04 9:09AM
Subject: (no subject)

May 7, 2004

Debra,

I had one incorrect letter in the address.....hope this works!
Jed

May 5, 2004

Hi Debra,

Belfry School District #3 is interested in being a co-operating agent regarding the "Belfry-North" highway project.

To the best of my knowledge, the "picnic area" across the street from the entrance to the elementary building is not a significant area. It is occasionally used by people passing through town.

Please call me if there is anything I can do to help you.

Jed L-Yakin
Superintendent, Belfry Schools

Appendix F - Programmatic Section 4(f) Evaluations

MONTANA DIVISION
 "NATIONWIDE" PROGRAMMATIC SECTION 4(f) EVALUATION FOR
 HISTORIC BRIDGES

Project № STPP-F-72-1(1)10 (PPMS-OPX2 C#1016) Project Name: Belfry North EA
 Description: Clarks Fork "south" bridge, 24CB707/1144; three-span steel girder with
 concrete deck measuring 75.9 m (249 ft) long with a clear roadway width of 7.3 m (24 ft)
 constructed in 1939. See Attachment A for an expanded description.
 Location: On MT 72, 1.6 km (1 mile) north of the town of Belfry at RP 11.9. See
 Attachment B for map.

This proposed project requires use of a historic bridge structure that is on, or eligible-for listing on the NATIONAL REGISTER OF HISTORIC PLACES. A description and location map of this proposed bridge replacement project is attached.

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement. Consult the "Nationwide" Section 4(f) Evaluation procedures.

	<u>YES</u>	<u>NO</u>
1. Is the bridge a NATIONAL HISTORIC LANDMARK?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have agreements been reached through procedures pursuant to Section 106 of the National Historic Preservation Act with the following:		
STATE HISTORIC PRESERVATION OFFICE (SHPO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Any other agency/ies with jurisdiction at this location?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) If "YES" will additional approval(s) for this Section 4(f) application be required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) List of agencies with jurisdiction at this location:		
USA - Corps of Engineers (Sections 10 & 404 permits)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
USDA - Forest Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
USDA - Natural Resource Conservation Service (formerly SCS, FPPA)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
FEMA Regulatory Floodway (permit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MDFW&P - Parks Division (Fishing Access Site)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDFW&P - Wildlife Division (Management Areas: WMAs)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDFW&P - Fisheries Division (124SPA permit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MDNR&C - SELO (navigable rivers under state law)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDNR&C (irrigation systems)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDEQ - Permitting & Compliance Division (MPDES authorization)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MDEQ - Planning, Prevention & Assistance Division (TMDLs)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other:		

ALTERNATIVES & FINDINGS

EACH of the following **ALTERNATIVES** for this proposed project have been evaluated under *Section 106* of the *National Historic Preservation Act (NHPA, 16 U.S.C. 470f)* to avoid the use of the historic bridge:

1. "Do Nothing."
2. Rehabilitate the existing bridge without affecting the historic integrity of the structure in accordance with the provisions of *Section 106* in the *NHPA*.
3. Construct the proposed bridge at a location where the existing historic structure's integrity will not be affected as determined by the provisions of the *NHPA*.

(**ALTERNATIVES & FINDINGS** – conclusion:)

The preceding **ALTERNATIVES** have been applied in accordance with this PROGRAMMATIC SECTION 4(f) EVALUATION, and are supported by **EACH** of the following **FINDINGS**:

	<u>YES</u>	<u>NO</u>
1. The "Do Nothing" ALTERNATIVE has been evaluated, and has been found to ignore the basic transportation need at this location.	<u>X</u>	<input type="checkbox"/>
This ALTERNATIVE is neither feasible nor prudent for the following reasons:		
a) Maintenance — this ALTERNATIVE does not correct the structurally deficient condition and/or poor geometrics (clearances, approaches, visibility restrictions) found at the existing bridge. Any of these factors can lead to a sudden catastrophic collapse, and/or a potential injury including loss of life. Normal maintenance will not change this situation. The bridge has a structural sufficiency rating of 47.4 and therefore is not considered structurally deficient.	<u>X</u>	<input type="checkbox"/>
b) Safety — this ALTERNATIVE also does not correct the situation that causes the existing bridge to be considered deficient (i.e., it is narrow). Because of these deficiencies, the existing bridge presents serious and unacceptable safety hazards to the travelling public and/or places intolerable restrictions (gross vehicle weight, height, and/or width) on transport. (Bridge is 6.4-m [21-ft] wide; applicable MDT standards provide for replacement of any bridge with a width less than 8.4 m [28 ft]).	<u>X</u>	<input type="checkbox"/>
A copy of the MDT Bridge Bureau's Inspection Report(s) is (are) attached.	<u>X</u>	<input type="checkbox"/>
2. The rehabilitation ALTERNATIVE has been evaluated with one or more of the following FINDINGS :		
a) The existing bridge's structural deficiency is such that it cannot be rehabilitated to meet minimum acceptable load and traffic requirements without adversely affecting the structure's historic integrity.	_____	<u>X</u>
b) The existing bridge's geometrics (height, width) cannot be changed without adversely affecting the structure's historic integrity.	<u>X</u>	_____
c) This ALTERNATIVE does not correct the serious restrictions on visibility (approach geometrics, structural requirements) which also contributes to an unsafe condition at this location.	_____	<u>X</u>
Is this rehabilitation ALTERNATIVE therefore considered to be feasible and/or prudent based on the preceding evaluations?	<input type="checkbox"/>	<u>X</u>
3. The relocation ALTERNATIVE , in which the new bridge has been moved to a site that presents no adverse effect upon the existing structure has also been considered under the following FINDINGS :		
a) Terrain and/or local geology. The present structure is located at the only feasible and/or prudent site for a bridge on the existing route. Relocating to a new site — either up-, or downstream of the preferred location — will result in extraordinary bridge/approach engineering and associated construction costs. Local geologic conditions are such that any other location in the general vicinity of the preferred site is not prudent. Any other location would cause extraordinary disruption to existing traffic patterns.	_____	<u>X</u>
b) Significant social, economic and/or environmental impacts. Locating the proposed bridge in other than the preferred site would result in significant social/economic impacts such as the displacement of families, businesses, or severing of prime/unique farmlands. Significant environmental impacts such as the extraordinary involvement in wetlands, regulated floodplains, or habitat of threatened/endangered species are likely to occur in any location outside the preferred site.	_____	<u>X</u>
c) Engineering and economics. Where difficulty/ies associated with a new location are less-extreme than those listed above, the site may still not be feasible and prudent where costs and/or	_____	<u>X</u>

engineering difficulties reach extraordinary magnitudes. Does the **ALTERNATE** location result in significantly increased engineering or construction costs (e.g.: longer span/approaches, etc.)?

_____ X

d) Preservation of existing historic bridge may not be possible due-to either or both of the following:
the existing structure has deteriorated beyond all reasonable possibility of rehabilitation for a transportation or alternative use;

_____ X

no responsible party can be located to maintain and preserve the historic structure.

 X* _____

Therefore, in accordance with the previously-listed **FINDINGS** it is neither feasible nor prudent to locate the proposed bridge at a site other-than the preferred **ALTERNATE** as-described.

 X

MEASURES TO MINIMIZE HARM

This "Nationwide" PROGRAMMATIC SECTION 4(f) EVALUATION applies only when the following **Measures to Minimize Harm** have been assured; a check in a box MAY void the Programmatic application — if so, a "full" Section 4(f) Evaluation **will be required**:

- | | <u>YES</u> | <u>NO</u> |
|---|--------------|--|
| 1. Is the bridge being rehabilitated?
If " YES " is the historic integrity of the structure being preserved to the greatest extent possible; consistent with unavoidable transportation needs, safety, and load requirements?
<u>NOTE:</u>
If " NO ", refer-to item 2., following, to determine <u>Programmatic</u> applicability. | _____ | <u> X </u> |
| | _____ | <input type="checkbox"/> |
| 2. The bridge is being replaced, or rehabilitated to the point where historic integrity is affected. Are adequate records being made of the existing structure under HISTORIC AMERICAN ENGINEERING RECORD standards, or other suitable means developed through consultation with SHPO and the ACHP? | <u> X </u> | <input type="checkbox"/> |
| 3. If the bridge is being replaced, is the existing structure being made available for alternative use with a responsible party to maintain and preserve same? | <u> X </u> | <input type="checkbox"/> |
| 4. If the bridge is being adversely affected, has agreement been reached through the <u>NHPA-Section 106</u> process on these Measures to Minimize Harm (which will be incorporated-into the proposed project) with the following:
SHPO? (Date: <u>5/11/1989 amended 2/27/92</u>)
ACHP? (Date: <u>6/1/1989 amended 3/16/92</u>)
FHWA? (Date: <u>5/11/1989 amended 2/27/92</u>) | <u> X </u> | <input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> |
| A copy of the Programmatic Agreement (dated May 9, 1989) and Amendment (3/16/92) signed/approved by these agencies is attached. | <u> X </u> | <input type="checkbox"/> |

COORDINATION

There has been additional **COORDINATION** with the following agencies regarding this proposed project (other-than those listed previously):**

- SHPO: February 24, 2003 letter attached
- City/County government: Board of Commissioners, County of Carbon (June 30, 2004 letter attached)
- Local historical society: N/A
- Adjacent property owners: Spauldings, Wolfes, Brown Trust (operated by Spauldings) contacted by phone and at public meetings.
- Others: USDOJ - BLM

This proposed project is also documented as an Environmental Assessment under the

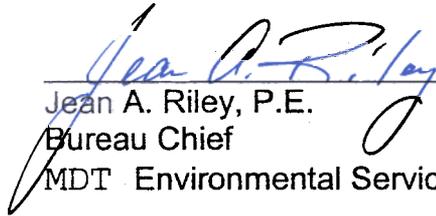
* Unknown at this time. MDT needs to formally initiate the Adopt A Bridge process to determine if another owner can be located.
** MDT coordination to be undertaken with these parties.

requirements of the *National Environmental Policy Act* (42 U.S.C. 4321, et seq.).

SUMMARY & APPROVAL

The proposed action meets all criteria regarding the required **ALTERNATIVES, FINDINGS, and Measures to Minimize Harm**, which will be incorporated into this proposed project. This proposed project therefore complies with the July 5, 1983 Programmatic Section 4(f) Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration.

This document is submitted pursuant to 49 U.S.C. 303 and in accordance with the provisions of 16 U.S.C. 470f.



Jean A. Riley, P.E.
Bureau Chief
MDT Environmental Services Bureau

Date: 12/20/07

Approved 

Federal Highway Administration

Date: 21 DEC 2004

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

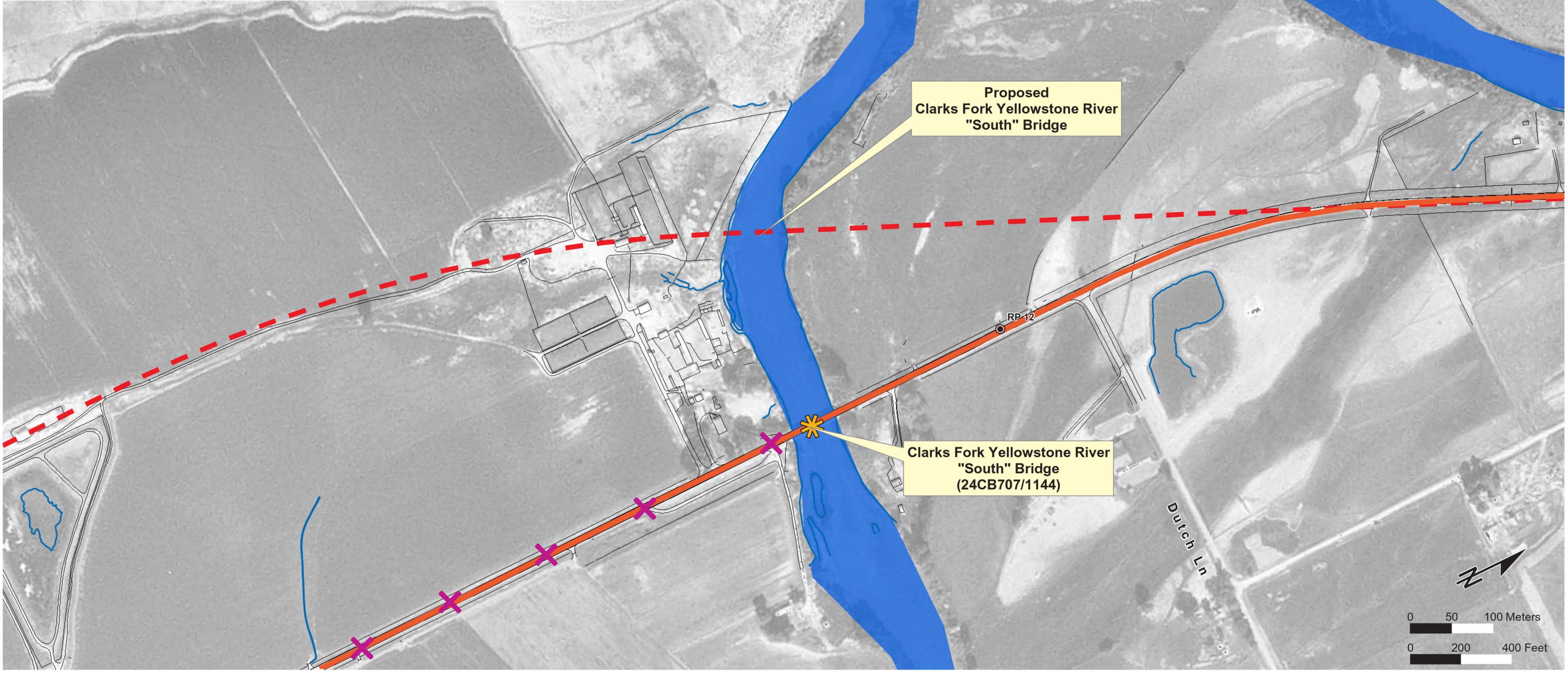
Attachment A

Project Description

The Clarks Fork “south” bridge is located on the existing MT 72 alignment, approximately 1.6 km (1 mi) northeast of Belfry at RP 11.87. The structure was constructed in 1939 and has a 7.3-m (24-ft) clear roadway width. It has a sufficiency rating of 47.4. Although the bridge is in generally good condition for its age, it is narrow by MDT current standards. MDT standards indicate the need for replacement of any bridge narrower than 8.5 m (28 ft), and therefore, MDT would eventually expect to replace this bridge.

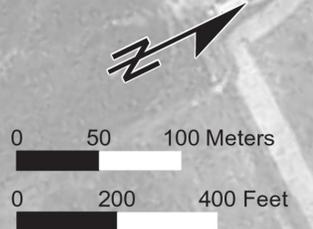
To improve safety within Belfry, specifically in front of the Belfry School, the Preferred Alternative (the Railroad Alignment Alternative) would reroute MT 72 to the west side of Belfry, which would result in crossing the Clarks Fork on a new alignment.

Therefore, the Preferred Alternative, the Railroad Alignment Alternative, does not directly impact the bridge because the alignment is relocated, and a new bridge would be constructed at the new location of the crossing of the Clarks Fork north of the existing crossing. The existing bridge could be left in place. However, with a new bridge, MDT would not continue to maintain the existing bridge. MDT will complete its Adopt a Bridge Program process to attempt to locate a new owner for the bridge. If no viable owner can be identified, the bridge will be removed to avoid safety problems.



Proposed
Clarks Fork Yellowstone River
"South" Bridge

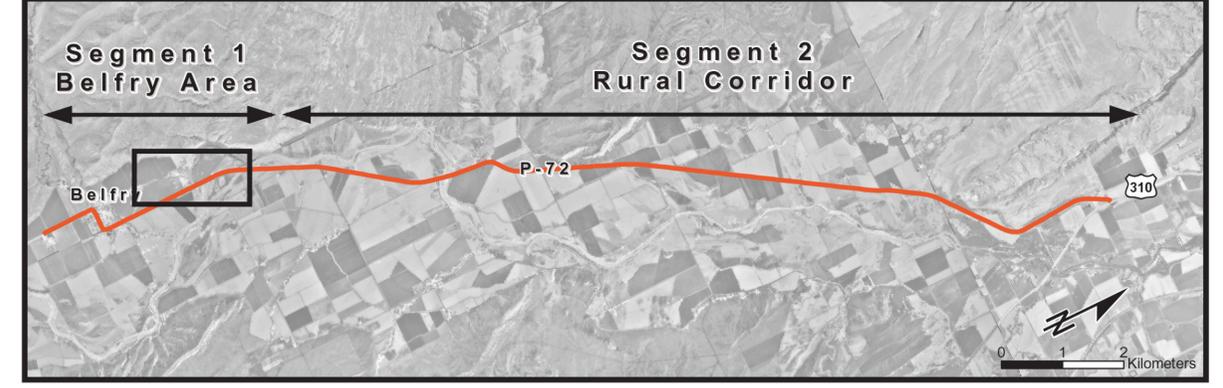
Clarks Fork Yellowstone River
"South" Bridge
(24CB707/1144)



Legend:

- Reference Post
- MT 72 Existing Centerline
- ✕✕ Eliminated MT 72 Section
- - - Modified Existing Alignment Alternative (Preferred Alternative)
- ~ Ditches
- Clarks Fork Yellowstone River
- ✱ Cultural Resources

Map Location:



File Path: P:\MDC\T000-0013 Belfry North\GIS\Descultural.mxd
Print Date: February 9, 2005

INITIAL ASSESSMENT FORM FOR STRUCTURE :

Printed by: OPS\$U6628

P00072011+09041

Location : 1M N BELFRY

Structure Name : none

General Location Data

District Code, Number, Location : 05 Dist 5 BILLINGS Division Code, Location :51 BILLINGS
 County Code, Location : 009 CARBON City Code, Location :00000 RURAL AREA
 Kind to Hwy Code, Description : 3 3 State Hwy Signed Route Number :00072
 Str Owner Code, Description : 1 State Highway Agency Maintained by Code, Description :1 State Highway Agency
 Intersecting Feature : CLARKS FORK YELLOWSTONE Kilometer Post, Mile Post : 19.15 km 11.87

Structure on the State Highway System : Latitude : 45°09'18"
 Structure on the National Highway System : Longitude : 109°00'18"
 Str Meet or Exceed NBIS Bridge Length :

Construction Data

Construction Project Number : S 320-B 1
 Construction Station Number : 10+92.00
 Construction Drawing Number : 2124
 Construction Year : 1939
 Reconstruction Year : 0

Traffic Data

Current ADT : 1,390 ADT Count Year : 2000 Percent Trucks 2 %

Structure Loading, Rating and Posting Data

Loading Data :

Design Loading :		2 M 13.5 (H 15)
Inventory Load, Design	17.2 mton	2 AS Allowable Stress
Operating Load, Design	40.8 mton	2 AS Allowable Stress
Posting :		5 At/Above Legal Loads

Rating Data :

	Operating	Inventory	Posting
Truck Type 1 :	-1	-1	
Truck Type 2 :	-1	-1	
Truck Type 3 :	65	-1	

Structure Roadway, Span and Clearance Data

Structure Deck, Roadway and Span Data :

Structure Length : 75.90 m
 Number of Main Spans : 3
 Number of Approach Spans : 0
 Deck Area : 609.00 m sq
 Deck Roadway Width : 7.32 m
 Approach Roadway Width : 7.32 m

Structure Vertical and Horizontal Clearance Data :

Vertical Clearance Over the Structure : 99.99 m
 Reference Feature for Vertical Clearance : N Feature not hwy or RR
 Vertical Clearance Under the Structure : 0.00 m
 Reference Feature for Lateral Underclearance : N Feature not hwy or RR
 Minimum Lateral Under Clearance Right : 0.00 m
 Minimum Lateral Under Clearance Left : 0.00 m

Structure Vertical and Horizontal Clearance Data By Span and Inventory Route :

Span Group	Over / Under Direction	Inventory Route	South, East or Bi-directional Travel			North or West Travel		
			Direction	Vertical	Horizontal	Direction	Vertical	Horizontal
0	Route On Structure	P00072	Both	99.99 m	7.77 m	N/A		

Inspection Data

Inspection Due Date : 22 March 2002

(91) Inspection Frequency (months) : 24

NBI Inspection Data

Sufficiency Rating : 47.4

Structure Status : Structurally Sufficient

(90) Date of Last Inspection : 22 March 2000
 (90) Inspection Date :

Last Inspected By : Richard Hutton - 79
 Inspected By :

(67) Structure Rating :

4	
---	--

 (58) Deck Rating :

6	
---	--

 (59) Superstructure Rating :

6	
---	--

 (60) Substructure Rating :

6	
---	--

(68) Deck Geometry :

4	
---	--

 (72) App Rdwy Align :

8	
---	--

 (41) Posting Status :

A	
---	--

(36A) Bridge Rail Rating :

1	
---	--

 (36B) Transition Rating :

N	
---	--

 (36C) Approach Rail Rating :

N	
---	--

 (36D) End Rail Rating :

0	
---	--

(62) Culvert Rating :

N	
---	--

 (61) Channel Rating :

8	
---	--

 (113) Scour Critical :

6	
---	--

 (71) Waterway Adequacy :

8	
---	--

Crew Hours for inspection :

3	
---	--

 Helper Hours :

0	
---	--

 Special Crew Hours :

0	
---	--

 Special Equipment Hours :

0	
---	--

Snooper Required :
 Snooper Hours for inspection :

2	
---	--

 Flagger Hours :

2	
---	--

Unrepaired Spalls :

2 M SQ	
--------	--

 Deck Surfacing Depth :

IN	
----	--

INITIAL ASSESSMENT FORM FOR STRUCTURE :

Form: bms001c

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P00072011+09041

Location : 1M N BELFRY

Structure Name : none

Span Data

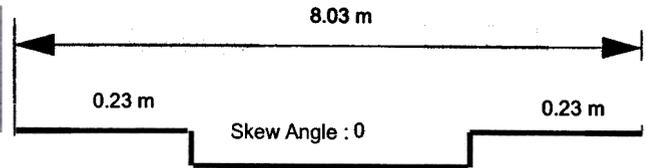
Group : 0

Type : Main

Description :

Material Type Code, Description : **Steel continuous**
 Span Design Code, Description : **Stringer/Multi-beam or Girder**
 Deck Structure Type : **Concrete Cast-in-Place**
 Deck Surfacing Type : **Monolithic concrete (concurrently placed with structural deck)**
 Deck Protection Type : **None**
 Deck Membrain Type :

Median Code, Description : **No median**
 NBI Main Span Flag : **X** NBI Approach Span Flag :



Element Inspection Data

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
12						0	0	544	100	0	0	0	0	0	0
Bare Concrete Deck		1	544	sq.m.	X		%		%		%		%		%

Previous Inspection Notes :

05/01/1994 - REF1
 03/01/1996 - YDNF
 03/16/1998 - Minor scaling and moderate wear, transverse and random cracks-cracks with moderate efflorescence noted in soffit, also areas of rust staining, delaminations, and spalling with exposed reinforcement at overhangs right and left. UBLA
 03/22/2000 - Scaling and some minor spalling on deck surface with transverse cracking throughout. VCDV

Inspection Notes:

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
107						223	75	74	25	0	0	0	0	0	0
Paint Stl Opn Girder		2	297	m.			%		%		%		%		%

Previous Inspection Notes :

05/01/1994 - REF1
 03/01/1996 - YDNF
 03/16/1998 - Paint beginning to fail, blistering and minor crevice corrosion typical at exterior connections and lower flange cover plates. Areas of blistering, peeling paint worse at Lt. interiors. Numerous areas of failed paint from shotgun blasts. Crevice corrosion present at lower flange connection plates. UBLA
 03/22/2000 - Paint blistering is a few areas. No other changes from previous inspection. VCDV

Inspection Notes:

INITIAL ASSESSMENT FORM FOR STRUCTURE :

Form: bms001c

Printed by: OPSSU6628

P00072011+09041

Location : 1M N BELFRY

Structure Name : none

Span Data

Group : 0

Type : Main

Description :

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
181						90	100	0	0	0	0	0	0	0	0
Pnt Vrt X-Frame		2	90	m.			%		%		%		%		%

Previous Inspection Notes :

03/16/1998 - Cracks checked in vertical stiffeners (previous reports) which are actually the verticals making up the frame of the diaphragms or vertical cross frames 4 cracks located measured marked at current termination. See notes on final page of this inspection for locations and details. UBLA

03/22/2000 - Cracks on vertical members that attach to diaphragms at locations listed have continued to propagate with the exception of one in Span 1. Diaphragms themselves are fine. VCDV

Inspection Notes:

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
210						13	90	2	10	0	0	0	0		
R/Conc Pier Wall		2	15	m.			%		%		%		%		

Previous Inspection Notes :

05/01/1994 - REFI

03/01/1996 - YDNF

03/16/1998 - Each has a vertical crack visible from banks, scaling at water line at approx center of wall and cap. Crack at pier 2 originates at lacing anchorage 2nd left and that at pier 3 is approximate center line of wall. Both cracks go through entire cross section of wall cap and are in excess of 1.5 mm. UBLA

03/22/2000 - Both piers have vertical cracks at midpier that extend across top of cap. VCDV

Inspection Notes:

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
215						19	100	0	0	0	0	0	0		
R/Conc Abutment		2	19	m.			%		%		%		%		

Previous Inspection Notes :

05/01/1994 - REFI

03/01/1996 - YDNF

03/16/1998 - Dirt on caps on from run off erosion at abutment 1 left. Moisture present left abutment 1, and right abutment 4. UBLA

03/22/2000 - Structurally fine, debris atop caps. VCDV

Inspection Notes:

INITIAL ASSESSMENT FORM FOR STRUCTURE :

Form: bms001c

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P00072011+09041

Location : 1M N BELFRY

Structure Name : none

Span Data

Group : 0

Type : Main

Description :

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
234						16	100	0	0	0	0	0	0		
R/Conc Cap		2	16	m.			%		%		%		%		

Previous Inspection Notes :

05/01/1994	REFI
03/01/1996	YDNF
03/16/1998 - Cracking in each visable from the banks. Cracks at pier 2 originate near bearing anchorage at 2nd bearing from left. Crack at pier 3 is close to center line. Cracks at both go through the entire cross section of each cap.	UBLA
03/22/2000 - Vertical crack midcap that continues across top of cap. Condition present at both piers.	VCDV

Inspection Notes:

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
304						13	90	2	10	0	0				
Open Expansion Joint		2	15	m.			%		%		%				

Previous Inspection Notes :

05/01/1994	REFI
03/01/1996	YDNF
3/16/1998 - No problems found on deck portions. Exteriors of joints at right side of deck are exhibiting severe corrosion with loss of section and active moss growth, also impacted with debris.	UBLA
03/22/2000 - Joints working as intended on roadway surface.	VCDV

Inspection Notes:

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
305						13	90	2	10	0	0				
Assm Jt w/o Seal		1	15	m.			%		%		%				

Previous Inspection Notes :

03/16/1998 - Abutments 1 and 2-Leaking at both	UBLA
03/22/2000 - Moisture and debris coming through	VCDV

Inspection Notes:

INITIAL ASSESSMENT FORM FOR STRUCTURE :

Form: bms001c

Printed by: OPS\$U6628

P00072011+09041

Location : 1M N BELFRY

Structure Name : none

Span Data

Group : 0

Type : Main

Description :

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
311						11	90	10	0						
Moveable Bearing		2	12	ea.		%		%		%					

Previous Inspection Notes

05/01/1994	REFI
03/01/1996	YDNF
03/16/1998 - Minimal debris at rockers at abutments 1 and 4. Paint system beginning to fail, bird droppings on exterior bearings typical.	UBLA
03/22/2000 - No change from previous inspection.	VCDV

Inspection Notes:

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
313						4	90	0	10						
Fixed Bearing		2	4	ea.		%		%		%					

Previous Inspection Notes :

05/01/1994	REFI
03/01/1996	YDNF
03/16/1998 - Bird droppings typical at exteriors.	UBLA
03/22/2000 - No change from previous inspection.	VCDV

Inspection Notes:

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
331						142	95	7	5						
Conc Bridge Railing		2	149	m.		%		%		%		%			

Previous Inspection Notes

05/01/1994	REFI
03/01/1996	YDNF
03/16/1998 - Some exposed reinforcing steel with light, if any corrosion.	UBLA
03/22/2000 - No change from previous inspection.	VCDV

Inspection Notes:

INITIAL ASSESSMENT FORM FOR STRUCTURE :

Form: bms001c

Printed by: OPS\$U6628

P00072011+09041

Location : 1M N BELFRY

Structure Name : none

Span Data

Group : 0

Type : Main

Description :

Element No.	Smart Flag	Env	Quantity	Units	Insp Each	Qty 1	Pct 1	Qty 2	Pct 2	Qty 3	Pct 3	Qty 4	Pct 4	Qty 5	Pct 5
Element Description						Pct Stat 1		Pct Stat 2		Pct Stat 3		Pct Stat 4		Pct Stat 5	
359	X					0	0	0	0	0	0	1	100	0	0
Soffit Smart Flag			1	ea.	X		%		%		%		%		%

Previous Inspection Notes

03/16/1998 - Spalling on over hangs with corroding reinforcement. A few transverse cracks with moderate efflorescence (through a couple of cold joints) with rust staining. UBLA

03/22/2000 - No change. VCDV

Inspection Notes:

INITIAL ASSESSMENT FORM FOR STRUCTURE :

Form: bms001c

Printed by: OPS\$U6628

P00072011+09041

Location : 1M N BELFRY

Structure Name : none

General Inspection Notes

01/01/1901 - Sufficiency Rating Calculation Accepted by ops\$u5963 at 3/10/97 14:39:01	YDNF
Sufficiency Rating Calculation Accepted by ops\$u9004 at 2/19/97 12:40:49	
05/01/1994 -	REFI
03/16/1998 - Location and details of 5 cracks found in vertical stiffeners to date.	UBLA
#1) Span 1 Vertical stiffner interior face of left exterior girder, 3rd diaphragm AOL from abutment 1 3/16/98 measurement = 7.5" 3/26/96 measurement = 7.375" Propagation = 0.125"	
#2) Span 1 Vertical stiffner interior face of right exterior girder, 3rd diaphragm AOL from abutment 1 3/16/98 measurement = 6.25" 3/26/96 measurement = 6.0" Propagation = 0.25"	
#3) Span 1 Vertical stiffner interior face of left exterior girder 2nd diaphragm AOL from abutment 1 3/16/98 measurement = 4.3125" 3/26/96 measurement = 4.3125 No Propagation	
#4) Span 2 Vertical stiffner interior face of right exterior girder 3rd diaphragm AOL from pier 2 3/16/98 measurement = 5"(to rivet below) 3/26/96 measurement = 4" Propagation = 1"	
#5) Span 2 Vertical stiffner interior face of right exterior girder 2nd diaphragm AOL from pier 2 3/16/98 measurement = 4.5" 3/26/96 measurement = 3.5" Propagation = 1"	
03/22/2000 - Crack propagation monitoring. See above for locations.	VCDV
#1) 3/98 inspection length 7 1/2" 3/00 inspection length 8 1/4" Propagation 3/4"	
#2) 3/98 inspection length 6 1/4" 3/00 inspection length 6 1/4" Propagation Unchanged	
#3) 3/98 inspection length 4 5/16" 3/00 inspection length 4 3/4" Propagation 7/16"	
#4) 3/98 inspection length 5" 3/00 inspection length 6" Propagation 1"	
#5) 3/98 inspection length 4 1/2" 3/00 inspection length 5" Propagation 1/2"	
Under water type I completed on 1/20/00 attached to hard copy with photographs.	

May 9, 1989

PROGRAMMATIC AGREEMENT

Among the Federal Highway Administration (FHWA), the Montana State Historic Preservation Office (MSHPO), and the Advisory Council on Historic Preservation (ACHP), to develop a historic preservation plan to establish processes for integrating the preservation and use of historic roads and bridges with the mission and programs of the FHWA in a manner appropriate to the nature of the historic properties involved, the nature of the roads and bridges in Montana, and the nature of FHWA's mission to provide safe, durable and economical transportation.

WHEREAS, Congress has mandated that highway bridges be evaluated, and where found substandard, be rehabilitated or replaced and has provided funding for these purposes, to insure the safety of the traveling public (through the Highway Bridge Replacement and Rehabilitation Program); and

WHEREAS, the American Association of State Highway and Transportation Officials (AASHTO) has standards regulating the construction and the rehabilitation of highways and bridges that must be met by the FHWA to insure the safety of the traveling public; and

WHEREAS, Congress declares it to be in the national interest to encourage the rehabilitation, reuse and preservation of bridges significant in American history, architecture, engineering and culture; and

WHEREAS, the FHWA proposes to make Federal funding available to the Montana Department of Highways (MDOH) for its ongoing program to construct and rehabilitate roads and bridges, and MDOH concurs in and accepts responsibilities for compliance with this Agreement; and

WHEREAS, the FHWA has determined that the construction and improvement of highways may have an effect on historic roads and bridges that are listed in the National Register of Historic Places, or may be determined eligible for listing, and have consulted with the ACHP and the MSHPO pursuant to Section 800.13 of the regulations (36CFR800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the parties understand that not all historic roads and bridges fall under the jurisdiction or sphere of influence of the FHWA, and that to encourage other parties to participate in preservation efforts; an education to foster a preservation ethic is needed; and

NOW THEREFORE, FHWA, MSHPO, and ACHP agree, and MDOH concurs, that the following program to enhance the preservation potential of historic roads and bridges, and to promote management and public understanding of and appreciation for these cultural resources will be enacted in lieu of regular Section 106 procedures as applied to historic roads and bridges only.

Stipulations

The Federal Highway Administration will ensure that the following program is carried out:

The Federal Highway Administration, in cooperation with the Montana Department of Highways, will develop a preservation plan to ensure the preservation and rehabilitation of the states significant historic roads and bridges, and will develop an on-going educational program to interpret significant historic roads and bridges that illustrate the engineering, economic, and political development of roads in Montana. Specifically:

A. For Public Education

1. MDOH will prepare technical documentation of the history of roads and road construction, and of the history of bridge building in the state, according to a format developed by MDOH in consultation with the MSHPO and in compliance with the Secretary of the Interior's Standards for Preservation Planning. From this documentation MDOH will prepare narrative histories suitable for publication for the general public. Draft copies of the documentation and the narrative histories will be submitted to the FHWA, MSHPO and a list of qualified reviewers to be determined by FHWA, MDOH and MSHPO by December 1, 1990, and 45 days will be allowed for reviewers to comment. MDOH will prepare final documentation and histories by May 1, 1991. Final copies will be distributed to the district, area, and field offices of the MDOH, to the County Commissioners, county road and bridge departments, and county historical societies, to the owners of significant roads and bridges identified in the documentation, to the Montana Historical Society Library and the Montana State Library, and to the general public as requested.
2. MDOH will develop and make available to newspapers and publishers of historical and of engineering journals articles suitable for public information on historic roads and bridges and on their construction and continued significance.
3. MDOH will augment its historic sign program by developing interpretation for the traveling public at existing rest areas or pull-overs to explain Montana's road construction and bridge engineering. It will develop on-site interpretation for significant resources that can be viewed and appreciated by the public.
4. By April 15, 1990 MDOH will develop and circulate a traveling exhibit that portrays the history of the development of transportation in Montana.
5. By December 1, 1991 MDOH will develop and circulate a public program (slide/tape or video) of approximately 20 minutes, suitable for use at public or organization gatherings, classrooms, etc.

B. For Historic Road and Bridge Preservation

1. The FHWA, in co-operation with the MDOH, will prepare a plan for the preservation of significant and representative road segments and bridge types around the state as identified in the research in part A. of this Agreement. The Historic Preservation Plan (HPP) will be presented to the FHWA, MSHPO, the ACHP and list of qualified reviewers by September 1, 1991, and 45 days comment period will be

allowed for discussion and adoption. FHWA will work to resolve disagreement on the proposed HPP. If agreement cannot be reached by December 1, 1991, all FHWA undertakings affecting historic roads and bridges will again become subject to 36 CFR 800 procedures.

The HPP for historic roads and bridges shall be prepared in accordance with the following guidelines:

- a. The essential purpose of the HPP will be to establish processes for integrating the preservation and use of historic roads and bridges with the mission and programs of the FHWA and the MDOH in a manner appropriate to the nature of the historic properties involved, the nature of the roads and bridges in Montana, and the nature of FHWA's mission, to provide safe, durable and economical transportation;
 - b. In order to facilitate such integration, the HPP, including all maps and graphics, will be made consistent with the Federal Aid road and bridge numbering systems;
 - c. The HPP will be prepared in consultation with the owners, managers, caretakers, or administrators of historic roads and bridges, including county governments, city governments, federal agencies, and private individuals or corporations, and with interested parties or organizations, including the American Society of Civil Engineers - Montana Section, and the Montana Society of Engineers;
 - d. The HPP will be prepared with reference to the Secretary of Interior's Standards and Guidelines for Preservation Planning (48 FR 44716-20); and
 - e. The HPP will be prepared by or under the supervision of an individual who meets, or individuals who meet, at a minimum, the "professional qualifications standards" for historian and archaeologist in the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9).
2. The contents of the HPP will be developed in conjunction with the MSHPO, and will include, but not be limited to, a schedule for the anticipated implementation of the various elements, plus the formulation and presentation of programs to:
- a. Preserve historic bridges that do not meet safety rating standards by rehabilitation in a manner that would preserve important historic features while meeting as many AASHTO standards as can be reasonably met;
 - b. When a historic bridge must be replaced, give full consideration and demolition savings to reuse of the historic bridge in place by another party.
 - c. When a historic bridge must be replaced and in place preservation is not feasible, give full consideration and

financial assistance to relocating and rehabilitating the historic bridge as a part of the replacement project;

- d. Develop and implement a program to encourage relocation and reuse of bridges of historic age that cannot be preserved in place or used on another location by the state or county;
 - e. Provide a financial incentive by offering demolition savings on all relocation and reuse of bridges of historic age;
 - f. Develop a list of historic roads and bridges that can be preserved. The list should include the variety available to reflect Montana highway construction history, while considering current condition and use. The list should be presented to and discussed with managing units to solicit their cooperation and/or participation in the preparation of the HPP; and
 - g. Devise a program to pursue the preservation of the state's representative and outstanding examples of road and bridge technology. A list of historic roads and bridges that shall be preserved will be developed to implement this program, given currently known commitments to do so by property managers and subject to change by obtaining future commitments for other properties covered by this Agreement.
3. The HPP will not include information developed in Part A. above, narrative histories, but will be guided by and used in conjunction with Part A. above, and will be distributed to the same parties.
 4. MDOH will prepare a report annually on its implementation of the HPP and provide this report to the FHWA, the SHPO, and the ACHP for review, comment, and consultation as needed.

C. Other Legal and Administrative Concerns

1. FHWA will continue to inventory, evaluate, seek determinations of eligibility, and fully comply with 36 CFR 800 for all undertakings with the potential to affect historic properties besides roads and bridges which are hereby excluded from such consideration.
2. The MSHPO, and the ACHP may monitor FHWA and MDOH activities to carry out this PA, by notifying FHWA in writing of their concerns and requesting such information as necessary to permit either or both MSHPO and ACHP to monitor the compliance with the terms of this Agreement. FHWA will cooperate with the SHPO, and the ACHP in carrying out their monitoring and review responsibilities.
3. FHWA will carry out the existing MOA's to preserve or record historic bridges that are now scheduled for replacement.
4. If a dispute arises regarding implementation of this PA, FHWA will consult with the objecting party to resolve the dispute. If any consulting party determines that the dispute cannot be resolved, FHWA will request further comments of the ACHP.

5. During any resolution of disagreements on the PA, and/or in the event MDOH does not carry out the terms of the PA, FHWA will carry out the procedures outlined in 36 CFR 800 for all undertakings otherwise covered by the agreement.

Execution of this PA evidences that FHWA has afforded the ACHP a reasonable opportunity to comment on FHWA's program to construct and improve Montana highways when those undertakings affect historic roads and bridges, and that FHWA has taken into account the effects of these undertakings on significant historic roads and bridges.

BY: FEDERAL HIGHWAY ADMINISTRATION

Roger K. Scott
Roger K. Scott
Division Administrator

5-11-89
Date

BY: MONTANA STATE HISTORIC PRESERVATION OFFICER

Marcella Sherfy
Marcella Sherfy, MSHPO

5-11-89
Date

BY: ADVISORY COUNCIL ON HISTORIC PRESERVATION

Robert D. Bush
Executive Director

6-1-89
Date

CONCUR

BY: MONTANA DEPARTMENT OF HIGHWAYS

Stephen C. Kologji
Stephen Kologji, P.E., Chief
Preconstruction Bureau

May 11, 1989
Date

cc

Amendment To The Programmatic Agreement Regarding Historic Roads and Bridges In Montana.

We are hereby amending the following stipulations in the Programmatic Agreement.

A. For Public Education

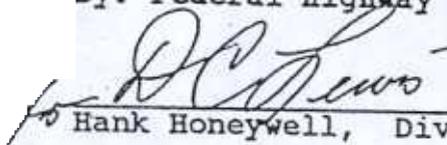
1. In the third sentence December 1, 1990 becomes December 1, 1992. In the fourth sentence, May 1, 1991 becomes May 1, 1993.

5. December 1, 1991 becomes December 1, 1993.

B. For Historic Road and Bridge Preservation

1. September 1, 1991 becomes September 1, 1993 and December 1, 1991 becomes December 1, 1993.

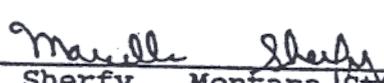
By: Federal Highway Administration



Hank Honeywell, Division Administrator

DATE 02-27-92

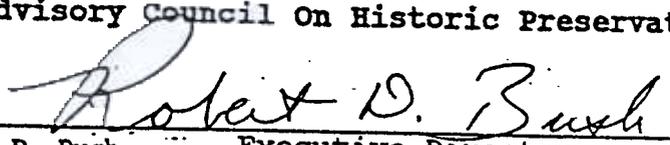
By: Montana State Historic Preservation Officer



Marcella Sherfy, Montana State Historic Preservation Officer

DATE 2-27-92

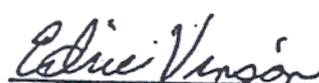
By: Advisory Council On Historic Preservation



Robert D. Bush, Executive Director

DATE 3-16-92

By: Montana Department of Transportation



Edrie Vinson, Environmental and Hazardous Waste Bureau

DATE Feb 25, 1992



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

2003022503

February 24, 2003

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

Subject F 72-1(1)10
Belfry - North
Control No. 1016

Josef MDT Belfry-North updated
RECEIVED
BY: FEB 5

Enclosed is the updated cultural resource report, CRABS and site forms for the above project in Carbon County. The MDT submitted the original cultural resource report to your office in 1989. I submitted site forms for additional properties in Belfry in the early 1990s. Eight sites have been previously determined eligible within the Belfry - North project corridor. They are: the First Presbyterian Church of Belfry (24CB678), the Clark's Fork River Bridge (24CB707/1144), the residence at the Middlesworth Farmstead (24CB1145), the Montana, Wyoming & Southern Railway (MW&S) Shop (24CB1146), the MW&S Depot (24CB1148), the Sand Creek Canal (24CB1150), the Golden Ditch (24CB1152), and the Dry Creek Canal (24CB1154). A Determination of Effect for these properties was submitted to your office in June, 1992 and a Memorandum of Agreement implemented in July, 1992.

The 2002 cultural resource survey recorded an additional 18 sites distributed in five parcels in the project area. RTI recommends two sites eligible for the NRHP: the Holland Lumber & Hardware Store (24CB1803) and the Kose Grocery (24CB1813). We agree with the recommendations and request your concurrence. RTI also noted the presence of the Youst Ditch (24CB1817) in the project area. It is covered under a programmatic agreement.

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

Jon Axline
Jon Axline, Historian
Environmental Services

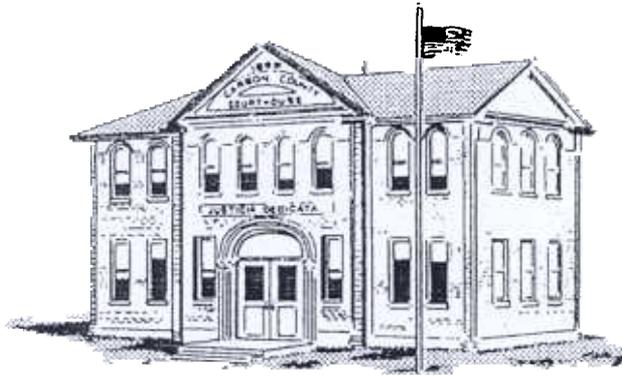
CONCUR
MONTANA SHPO

DATE 11 Mar 03 SIGNED *Josef MDT*

Enclosures

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

file: MDT/2003



BOARD of COMMISSIONERS

COUNTY OF CARBON • STATE OF MONTANA

Post Office Box 887
Red Lodge, MT 59068

Phone: (406) 446-1595
Fax: (406) 446-2640

June 30, 2004

Debra Perkins-Smith
Consultant Project Manager
David Evans and Associates, Inc.
1331 Seventeenth Street, Suite 900
Denver, CO 80202

REC'D JUL 02 2004

**Subject: MT 72 BELFRY-North EA
F STPP 72-1(1)10 CN 1016
DRAFT EA FOR COOPERATING AGENCY REVIEW**

Ms. Perkins-Smith:

After reviewing your EA for the Belfry Road, I concur with your plan with the following conditions:

Carbon County will not take on any new roads with the exception of that portion of State Highway 72 that lies within the town of Belfry proper, ending at Bearcreek Lane. Carbon County is not responsible for the construction or expense of extending Public or Private Roads to connect them with the new proposed road.

Carbon County will accept extensions of existing County Roads, which are necessary to connect with the realignment, based upon a County Review.

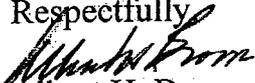
The County will not accept extensions of private roads as their responsibility.

Any portion of the existing Highway 72 that is not a part of the proposed realignment, will not be accepted by Carbon County without an individual review and approval of each separate portion.

Work with landowners to insure a private crossing where the stream, known as Bear Creek, intersects the existing Highway MT 72, just north of Belfry MT.

Carbon County will not accept any new bridges.

Respectfully


Albert H. Brown

Carbon County Commissioner

PO Box 887

Red Lodge MT 59068 Phone: (406) 446-1595

MONTANA DIVISION
 "NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
 ON
 HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project № **STTP-F-72-1(1)10**, (PPMS-OPX2 C1016)
 Project Name: Belfry North

Description: Dry Creek Canal (24CB1154), circa 1893. Canal crosses existing MT 72 three times with a bridge at RP 14.51, a culvert at RP 16.48, and a culvert at RP 19.40. The canal is approximately 11.3 km (+/- 7 mi) long.

Location: The canal runs along MT 72 between Belfry and Bridger in Carbon County, Montana. The canal's first crossing of MT 72 at RP 14.51 occurs approximately 6.4 km (4 mi) north of Belfry, just north of the Clarks Fork Yellowstone River.

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement. Consult the "Nationwide" Section 4(f) Evaluation procedures.

- | | <u>YES</u> | <u>NO</u> |
|--|-------------------------------------|-------------------------------------|
| 1. Is the 4(f) site adjacent-to/crossed-by the existing highway? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Does the proposed project require the removal or alteration of historic structures, and/or objects? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <i>The reconstruction and widening of MT 72 will require replacement of one existing bridge and two culverts with new structures. The existing structures are not historic and are considered an element of the roadway infrastructure and not part of the canal. The widening of MT-72 would result in more of the canal being incorporated into the roadway infrastructure at these transverse crossings. The remainder of the 12 km (± 7.5 mi) canal would not be impacted.</i> | | |
| 3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <i>The impact is considered minor (No Effect).</i> | | |
| 5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <i>Yes. MDT sent Determination of Effect letter to SHPO Nov. 24, 2003. On Dec. 9, 2003, SHPO concurred with MDT there was No Effect.</i> | | |
| 6. Is the proposed action under an <u>Environmental Impact Statement</u> (E.I.S.)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

7. Is the proposed project on a new location? X
The proposed project in this location follows the existing alignment.
8. The Scope-of-Work for the proposed project is one of the following: X
 a) Improved traffic operation;
 b) Safety improvements;
 c) 3R;
 d) Bridge replacement on essentially the same alignment; or
 e) Addition of lanes.

ALTERNATIVES CONSIDERED

1. The “do-nothing” **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. X
Do-nothing alternative does not address project purpose and need to improve safety and therefore is not prudent.
2. An **ALTERNATIVE** has been evaluated which improves the highway without any 4(f) impacts, and is also not considered to be feasible and prudent. X
3. An **ALTERNATIVE** on a new location avoiding the 4(f) site has been evaluated, and is not considered to be feasible and prudent. X

YES NO

(ALTERNATIVES CONSIDERED - conclusion:)

Descriptions of **ALTERNATIVES 2.** and **3.** are as-follows:/attached. X

2. Alternative 2: “No 4(f) Impacts”

An alternative to improve the highway except at the Section 4(f) crossing of the historic canals and the Clark’s Fork South bridge would not improve safety because these areas are narrow, therefore this alternative is not prudent.

3. Alternative 3: “Avoiding the 4(f) site”

An alternative outside the corridor would avoid the historic canal. This alternative was considered but is not prudent because it would not improve safety of the existing MT-72. Another alternative was considered that would have avoided one of the crossings. This alternative referred to as the Bluff Bypass Without River Crossing, was identified in Belfry-North EA. This bluff alternative was eliminated because it did not meet the project goal to improve MT-72 at a reasonable cost. Therefore, this alternative was not prudent.

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm. X
2. Measures to minimize harm include the following:
At the crossings of the Dry Creek Canal, maintaining the highway on the existing alignment minimizes impacts to the Dry Creek Canal because the impact is occurring at an existing disturbed area of the

canal. If the crossing were to occur on a new alignment, a previously undisturbed area of the canal would be impacted and greater rechanneling of the canal may be needed, resulting in a greater impact.

Minimizing right-of-way, if it does not reduce safety, will be considered during final design to minimize impacts at the canal crossings.

The proposed fill slopes will be kept to the minimum allowed under current MDT design standards for the depth-of-fill needed.

COORDINATION

1. The proposed project has been **COORDINATED** with the following:

a) SHPO

X

(Dates of correspondence related to Dry Creek Canal: Feb. 24, 2003; Determination of No Effect on: Nov. 24, 2003. Concurred on Dec. 9, 2003)

b) ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP, on: June 10, 1991)

X

c) Property owner

X

Some of the canal's adjacent property owners who were contacted in October 2002 include Bruce Giest, James Hoskin, Karl Graham, and Roger Webber as well as the Dry Creek Canal Company.

d) Local/State/Federal agencies

X

List: US Army Corps of Engineers
Carbon County Commissioners

2. No. of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:

For item #1.a), SHPO concurred with the findings for the proposed project's effects (if any) to this site on Dec. 9, 2003. (see attached copies of Dec. 9, 2003 letter to-same ^{w/}"Determination of Effect").

Further **COORDINATION** is pending with those preceding agencies listed-under item #1.d), and (for the new crossing's permits) with both the county's Federal Emergency Management Agency regulatory Floodplain Administrator and the U.S. ARMY's Corps of Engineers. This proposed project is also documented as an Environmental Assessment under *National Environmental Policy Act (42 U.S.C. 4321, et seq.)* requirements.

SUMMARY

The required **ALTERNATIVES** have been evaluated and the proposed project meets all the criteria in the "Nationwide Programmatic" *Section 4(f)* evaluation approved on December 23, 1986. This Programmatic Evaluation includes all possible planning to minimize harm that will be incorporated in this proposed project.

APPROVAL

This document is both submitted pursuant-to **49 U.S.C. 303**, and in accordance with the provisions of **16 U.S.C. 470f**.



Jean A. Riley, P.E.
Bureau Chief
MDT Environmental Services Bureau

Date: 12/20/07

Approved:  _____ Date 21 DEC 2004
Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

2003112507

RECEIVED Montana Department of Transportation

David A. Galt, Director
Judy Martz, Governor

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

C.R.

DEC 11 2003

ENVIRONMENTAL

MASTER FILE COPY JOSEF
MOT

CONCUR

MONTANA SHPO

BELFRY - North
ADDENDUM

November 24, 2003

DATE 9 Dec 03 SIGNED

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

RECEIVED
NOV 25 2003

Subject: F STPP 72-1(1)0
Belfry - North
Control No. 1016

BY:

Dear Mark:

Enclosed is an addendum to the cultural resource survey, CRABS and site forms for the above project. This report is an addendum to the February, 2003 report and concerns an alternative alignment recently developed near the junction of Montana Highway 72 and US Highway 310 on Ridgeway lane. This letter will also address a change in the design at the Montana, Wyoming & Southern Railroad Shop (24CB1146).

In the enclosed report, RTI recorded two additional historic sites within the APE for the proposed new alignment. One site, the Jennings Homestead (24CB1848) is recommended eligible for the National Register of Historic Places. We agree with that recommendation and request your concurrence. A third site, the Sarah Strong Farmstead (24CB1683) was recorded as part of the MDT's Bridger - South [NH 4-1(16)13] project and your office concurred in its ineligibility to the National Register on May 20, 2002. The Sand Creek Canal (24CB1150) was previously determined eligible for the National Register. If or when the revised alignment is approved, a Determination of Effect will be submitted to your office.

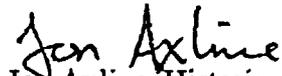
On June 30, 1992, your office concurred that the proposed Belfry - North project would have an Adverse Effect to the MW&S Shop (24CB1146). That determination was based on the assumption at the time that the proposed railroad grade alignment would result in the demolition of the structure. That Adverse Effect concurrence was restated in the amended Determination of Effect for this project on September 23, 2003. Since then, however, we have been working with the consultant to minimize the impact to the historic property. Consequently, an alternative has been proposed that would extend the curb and gutter section within the community of Belfry about 1,000-feet northward to encompass the old railroad shop. This would result in the minimization of the slopes and an offset of 5± feet to avoid the building. The roadway would be 32± feet in width and include two 12-foot driving lanes and two 4-foot shoulders in addition to the curb and gutter. Importantly, with this revision it would not be necessary to remove the MW&S Railroad Shop. Based on this modification of the design, we have revised our former

File: MOT/2003

Determination of Effect for this property. We have now determined that the proposed project would have **No Adverse Effect** to 24CB1146. Instead of being demolished, the building would remain in place and unaltered. The characteristics that make the site eligible for the NRHP would be perpetuated. It would not be isolated from its environment or suffer from neglect as a result of the project. It would not be demolished and the setting would largely remain intact. The MDT has, moreover, already conducted HABS-level photography of the site and completed other measures designed to mitigate the impacts to the site. The MDT would still install an historical marker along the proposed alignment between the shop and the MW&S Depot (24CB1148) within the community of Belfry. We feel this proposed option is a good alternative to the demolition of the historic building. We request your concurrence.

There are also two irrigation ditches on this project that are located within the Area of Potential Effect for this proposed project: the Sand Creek Canal (24CB1150) and the Dry Creek Canal (24CB1154). Montana Highway 72 crosses 24CB1150 twice at MP 19.88 and MP 20.42. Under the proposed project, the existing timber bridge would be removed and new concrete box culverts installed to replace them. The existing canal alignment would be perpetuated and the ditch would not be widened or re-channeled to accommodate the new structure. The highway crosses 24CB1154 three times at MPs 14.51, 16.48, and 19.40 (only the crossing at 14.51 is on a bridge). All three crossings would be replaced by box culverts (16.48 and 19.40 are already box culverts). The existing canal alignment would be perpetuated and there would be no widening or rechanneling to accommodate the new crossings. Based on this information, we have determined that the proposed project would have **No Effect** to the Sand Creek Canal (24CB1150) and the Dry Creek Canal (24CB1154). We request your concurrence.

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


Jon Axline, Historian
Environmental Services

Attachment

cc: Bruce Barrett, Billings District Administrator
Carl Peil, P.E., Preconstruction Bureau
Jean Riley, P.E., Engineering Section
Bonnie Steg, Resources Section



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

2003022503

February 24, 2003

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

Subject: F 72-1(1)10
Belfry - North
Control No. 1016

*Josef
MDT
Belfry-North updated*

RECEIVED
FEB 25 2003
BY: _____

BY: _____

Enclosed is the updated cultural resource report, CRABS and site forms for the above project in Carbon County. The MDT submitted the original cultural resource report to your office in 1989. I submitted site forms for additional properties in Belfry in the early 1990s. Eight sites have been previously determined eligible within the Belfry - North project corridor. They are: the First Presbyterian Church of Belfry (24CB678), the Clark's Fork River Bridge (24CB707/1144), the residence at the Middlesworth Farmstead (24CB1145), the Montana, Wyoming & Southern Railway (MW&S) Shop (24CB1146), the MW&S Depot (24CB1148), the Sand Creek Canal (24CB1150), the Golden Ditch (24CB1152), and the Dry Creek Canal (24CB1154). A Determination of Effect for these properties was submitted to your office in June, 1992 and a Memorandum of Agreement implemented in July, 1992.

The 2002 cultural resource survey recorded an additional 18 sites distributed in five parcels in the project area. RTI recommends two sites eligible for the NRHP: the Holland Lumber & Hardware Store (24CB1803) and the Kose Grocery (24CB1813). We agree with the recommendations and request your concurrence. RTI also noted the presence of the Youst Ditch (24CB1817) in the project area. It is covered under a programmatic agreement.

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

Jon Axline
Jon Axline, Historian
Environmental Services

**CONCUR
MONTANA SHPO**

DATE 11 Mar 03 SIGNED *Josef [Signature]*

Enclosures

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

file: MDT/2003

RECEIVED

3 1991

HELENA, MONTANA

June 10, 1991

HPP-MT

Date Recd. Preconst. 6/12/91	
Act	Info
	MAIL ROUTE
	<input checked="" type="checkbox"/> 30 Preconst Engr
	<input checked="" type="checkbox"/> 30 Assistant
	30 Office Mgr
	<input checked="" type="checkbox"/> 32 Road Design
	<input checked="" type="checkbox"/> 33 Environment
	34 Hydraulics
	<input checked="" type="checkbox"/> 35 Survey & Mapping
	36 Traffic
	<input checked="" type="checkbox"/> 39 Consultant
	<i>Ventura</i>
	<input checked="" type="checkbox"/> File

Claudia Nissley, Director
 Advisory Council on Historic Preservation
 730 Simms Street, Suite 450
 Golden, CO 80401

Dear Ms. Nissley:

Subject: F 72-1(13)0 Belfry - North

The Federal Highway Administration intends to assist Montana Department of Highways (MDOH) with the reconstruction of Montana Highway 72 between Belfry and Bridger in Carbon County, Montana. As presently conceived, the project will reconstruct and widen approximately 11.1 miles of roadway. The proposed project will also include the construction of approximately 3,500 feet of new roadway. Six sites have been determined eligible for the National Register of Historic Places (NRHP) by the MDOH and Montana State Historic Preservation Office (SHPO) under Criterion A and C. The sites are: the Sand Creek Irrigation Canal (24CB1150), Golden Irrigation Ditch (24CB1152), Dry Creek Irrigation Canal (24CB1154), Craftsman residence at the Middleworth Farmstead (24CB1145), the abandoned Montana, Wyoming & Southern (M.W. & S.) Railroad Depot (24CB1148) and Shop (24CB1146).

The proposed Belfry - North project will have an adverse effect on two of the NRHP-eligible sites: the M.W. & S. depot and shop. Impact to the sites will be the construction of a new 36-foot wide roadway on the old M.W. & S. Railroad grade.

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 will be identified.

Sincerely,

Original Signed by
 DAVID C. MILLER
 David C. Miller
 Planning & Prog. Development Engineer

cc. State - Edrie Vinson
 cc. SHPO

MONTANA DIVISION
 "NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
 ON
 HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project No **STTP-F-72-1(1)10**, (PPMS-OPX2 C1016)
 Project Name: Belfry North

Description: Sand Creek Canal (24CB1150), circa 1893. Canal crosses existing MT 72 two times with a bridge at RP 19.88 and a bridge at RP 20.42. The canal is approximately 12.1 km (+/- 7.5 mi) long.

Location: The canal runs along MT 72 between Belfry and Bridger in Carbon County, Montana. The canal's first crossing of MT 72 at RP19.88 occurs approximately 2.7 km (1.7 mi) south of the US 310 intersection with MT 72, south of Bridger.

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement. Consult the "Nationwide" Section 4(f) Evaluation procedures.

- | | <u>YES</u> | <u>NO</u> |
|--|-------------------------------------|-------------------------------------|
| 1. Is the 4(f) site adjacent-to/crossed-by the existing highway? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Does the proposed project require the removal or alteration of historic structures, and/or objects? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <i>The reconstruction and widening of MT 72 will require replacement of two existing bridges over the canal with new structures. The existing bridges are not historic and are considered an element of the roadway infrastructure and not part of the canal. The widening of MT-72 would result in more of the canal being incorporated into the roadway infrastructure at these transverse crossings. The remainder of the 12 km (± 7.5 mi) canal would not be impacted.</i> | | |
| 3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <i>The impact is considered minor (No Effect).</i> | | |
| 5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <i>Yes. MDT sent Determination of Effect letter to SHPO Nov. 24, 2003. On Dec. 9, 2003, SHPO concurred with MDT there was No Effect.</i> | | |
| 6. Is the proposed action under an <u>Environmental Impact Statement</u> (E.I.S.)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

7. Is the proposed project on a new location? X
The proposed project in this location follows the existing alignment.
8. The Scope-of-Work for the proposed project is one of the following: X
 a) Improved traffic operation;
 b) Safety improvements;
 c) 3R;
 d) Bridge replacement on essentially the same alignment; or
 e) Addition of lanes.

ALTERNATIVES CONSIDERED

1. The “do-nothing” **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. X
Do-nothing alternative does not address project purpose and need to improve safety and therefore is not prudent.
2. An **ALTERNATIVE** has been evaluated which improves the highway without any 4(f) impacts, and is also not considered to be feasible and prudent. X
3. An **ALTERNATIVE** on a new location avoiding the 4(f) site has been evaluated, and is not considered to be feasible and prudent. X

(ALTERNATIVES CONSIDERED - conclusion:)

Descriptions of **ALTERNATIVES 2.** and **3.** are as-follows:/attached. X

2. Alternative 2: “4(f) Impacts”

An alternative to improve the highway except at the Section 4(f) crossing of the historic canals and the Clark’s Fork South bridge would not improve safety because these areas are narrow, therefore this alternative is not prudent.

3. Alternative 3: “Avoiding the 4(f) site”

An alternative outside the corridor would avoid the historic canal. This alternative was considered but is not prudent because it would not improve safety of the existing MT-72.

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm. X
2. Measures to minimize harm include the following:

The preferred alternative (Modified Existing Alignment) would have fewer impacts on the Sand Creek Canal than the Ridgeway Lane Alternatives which would have required more rechanneling of the canal. Therefore, the preferred alternative would minimize impacts compared to these other alternatives.

At the crossings of the Sand Creek Canal, maintaining the highway on the existing alignment minimizes impacts to the Sand Creek Canal because the impact is occurring at an existing disturbed area of the canal. If the crossing were to occur on a new alignment, a previously undisturbed area of the canal would be impacted and greater rechanneling of the canal may be needed, resulting in a greater impact.

Minimizing right-of-way, if it does not reduce safety, will be considered during final design to minimize impacts at the canal crossings.

The proposed fill slopes will be kept to the minimum allowed under current MDT design standards for the depth-of-fill needed.

COORDINATION

1. The proposed project has been **COORDINATED** with the following:

a) SHPO

X

(Dates of correspondence related to Sand Creek Canal: Feb. 24, 2003; Determination of No Effect on: Nov. 24, 2003. Concurred on Dec. 9, 2003)

b) ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP, on: June 10, 1991)

X

c) Property owner:

X

Some of the canal's adjacent property owners who were contacted in October 2002 include William Meinhardt and Harold Peterson as well as the Sand Creek Canal Company.

d) Local/State/Federal agencies

X

List: US Army Corps of Engineers
Carbon County Commissioners

2. No. of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:

For item #1.a), SHPO concurred with the findings for the proposed project's effects (if any) to this site on Dec. 9, 2003. (see attached copies of Dec. 9, 2003 letter to-same ^{w/}"Determination of Effect").

Further **COORDINATION** is pending with those preceding agencies listed-under item #1.d), and (for the new crossing's permits) with both the county's Federal Emergency Management Agency regulatory Floodplain Administrator and the U.S. ARMY's Corps of Engineers. This proposed project is also documented as an Environmental Assessment under *National Environmental Policy Act (42 U.S.C. 4321, et seq.)* requirements.

SUMMARY

The required **ALTERNATIVES** have been evaluated and the proposed project meets all the criteria in the "Nationwide Programmatic" *Section 4(f)* evaluation approved on December 23, 1986. This Programmatic Evaluation includes all possible planning to minimize harm that will be incorporated in this proposed project.

APPROVAL

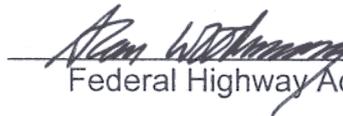
This document is both submitted pursuant-to **49 U.S.C. 303**, and in accordance with the provisions of **16 U.S.C. 470f**.



Jean A. Riley, P.E.
Bureau Chief
MDT Environmental Services Bureau

Date: 12/20/04

Approved


Federal Highway Administration

Date: 21 DEC 2004

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

2003112507



RECEIVED Montana Department of Transportation

David A. Galt, Director
Judy Martz, Governor

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

DEC 11 2003

ENVIRONMENTAL

C.R.
MASTER FILE COPY

JOSEF
MOT

CONCUR

MONTANA SHPO

BELFRY-NORTH
ADDITIONAL

November 24, 2003

DATE 9 DEC 03 SIGNED

Josef Maubach

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

RECEIVED
NOV 25 2003

Subject: F STPP 72-1(1)0
Belfry - North
Control No. 1016

BY:

Dear Mark:

Enclosed is an addendum to the cultural resource survey, CRABS and site forms for the above project. This report is an addendum to the February, 2003 report and concerns an alternative alignment recently developed near the junction of Montana Highway 72 and US Highway 310 on Ridgeway lane. This letter will also address a change in the design at the Montana, Wyoming & Southern Railroad Shop (24CB1146).

In the enclosed report, RTI recorded two additional historic sites within the APE for the proposed new alignment. One site, the Jennings Homestead (24CB1848) is recommended eligible for the National Register of Historic Places. We agree with that recommendation and request your concurrence. A third site, the Sarah Strong Farmstead (24CB1683) was recorded as part of the MDT's Bridger - South [NH 4-1(16)13] project and your office concurred in its ineligibility to the National Register on May 20, 2002. The Sand Creek Canal (24CB1150) was previously determined eligible for the National Register. If or when the revised alignment is approved, a Determination of Effect will be submitted to your office.

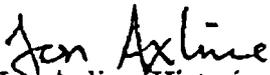
On June 30, 1992, your office concurred that the proposed Belfry - North project would have an Adverse Effect to the MW&S Shop (24CB1146). That determination was based on the assumption at the time that the proposed railroad grade alignment would result in the demolition of the structure. That Adverse Effect concurrence was restated in the amended Determination of Effect for this project on September 23, 2003. Since then, however, we have been working with the consultant to minimize the impact to the historic property. Consequently, an alternative has been proposed that would extend the curb and gutter section within the community of Belfry about 1,000-feet northward to encompass the old railroad shop. This would result in the minimization of the slopes and an offset of 5± feet to avoid the building. The roadway would be 32± feet in width and include two 12-foot driving lanes and two 4-foot shoulders in addition to the curb and gutter. Importantly, with this revision it would not be necessary to remove the MW&S Railroad Shop. Based on this modification of the design, we have revised our former

File: M6 2003

Determination of Effect for this property. We have now determined that the proposed project would have **No Adverse Effect** to 24CB1146. Instead of being demolished, the building would remain in place and unaltered. The characteristics that make the site eligible for the NRHP would be perpetuated. It would not be isolated from its environment or suffer from neglect as a result of the project. It would not be demolished and the setting would largely remain intact. The MDT has, moreover, already conducted HABS-level photography of the site and completed other measures designed to mitigate the impacts to the site. The MDT would still install an historical marker along the proposed alignment between the shop and the MW&S Depot (24CB1148) within the community of Belfry. We feel this proposed option is a good alternative to the demolition of the historic building. We request your concurrence.

There are also two irrigation ditches on this project that are located within the Area of Potential Effect for this proposed project: the Sand Creek Canal (24CB1150) and the Dry Creek Canal (24CB1154). Montana Highway 72 crosses 24CB1150 twice at MP 19.88 and MP 20.42. Under the proposed project, the existing timber bridge would be removed and new concrete box culverts installed to replace them. The existing canal alignment would be perpetuated and the ditch would not be widened or re-channeled to accommodate the new structure. The highway crosses 24CB1154 three times at MPs 14.51, 16.48, and 19.40 (only the crossing at 14.51 is on a bridge). All three crossings would be replaced by box culverts (16.48 and 19.40 are already box culverts). The existing canal alignment would be perpetuated and there would be no widening or rechanneling to accommodate the new crossings. Based on this information, we have determined that the proposed project would have **No Effect** to the Sand Creek Canal (24CB1150) and the Dry Creek Canal (24CB1154). We request your concurrence.

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


Jon Axline, Historian
Environmental Services

Attachment

cc: Bruce Barrett, Billings District Administrator
Carl Peil, P.E., Preconstruction Bureau
Jean Riley, P.E., Engineering Section
Bonnie Steg, Resources Section



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

2003022503

February 24, 2003

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

Subject F 72-1(1)10
Belfry - North
Control No. 1016

*Josef
MDT
Belfry-North updated*

REC'D
FEB 25 2003
BY:

By: B

Enclosed is the updated cultural resource report, CRABS and site forms for the above project in Carbon County. The MDT submitted the original cultural resource report to your office in 1989. I submitted site forms for additional properties in Belfry in the early 1990s. Eight sites have been previously determined eligible within the Belfry - North project corridor. They are: the First Presbyterian Church of Belfry (24CB678), the Clark's Fork River Bridge (24CB707/1144), the residence at the Middlesworth Farmstead (24CB1145), the Montana, Wyoming & Southern Railway (MW&S) Shop (24CB1146), the MW&S Depot (24CB1148), the Sand Creek Canal (24CB1150), the Golden Ditch (24CB1152), and the Dry Creek Canal (24CB1154). A Determination of Effect for these properties was submitted to your office in June, 1992 and a Memorandum of Agreement implemented in July, 1992.

The 2002 cultural resource survey recorded an additional 18 sites distributed in five parcels in the project area. RTI recommends two sites eligible for the NRHP: the Holland Lumber & Hardware Store (24CB1803) and the Kose Grocery (24CB1813). We agree with the recommendations and request your concurrence. RTI also noted the presence of the Youst Ditch (24CB1817) in the project area. It is covered under a programmatic agreement.

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

Jon Axline
Jon Axline, Historian
Environmental Services

**CONCUR
MONTANA SHPO**

DATE *JUN 03* SIGNED *Josef M. ...*

Enclosures

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

file: MDT/2003

NOTED
RE
RE

12 1991

HELENA, MONTANA

June 10, 1991

HPP-MT

Date Recd. Preconst. 6/12/91	
Act	Info
	MAIL ROUTE
	<input checked="" type="checkbox"/> 30 Preconst Engr
	<input checked="" type="checkbox"/> 30 Assistant
	<input type="checkbox"/> 30 Office Mgr
	<input checked="" type="checkbox"/> 32 Road Design
	<input checked="" type="checkbox"/> 33 Environment
	<input type="checkbox"/> 34 Hydraulics
	<input type="checkbox"/> 35 Survey & Mapping
	<input type="checkbox"/> 36 Traffic
	<input type="checkbox"/> 39 Consultant
	<i>Ventura</i>
	<input checked="" type="checkbox"/> File
Attach	

Claudia Nissley, Director
Advisory Council on Historic Preservation
730 Simms Street, Suite 450
Golden, CO 80401

Dear Ms. Nissley:

Subject: F 72-1(13)0 Belfry - North

The Federal Highway Administration intends to assist Montana Department of Highways (MDOH) with the reconstruction of Montana Highway 72 between Belfry and Bridger in Carbon County, Montana. As presently conceived, the project will reconstruct and widen approximately 11.1 miles of roadway. The proposed project will also include the construction of approximately 3,500 feet of new roadway. Six sites have been determined eligible for the National Register of Historic Places (NRHP) by the MDOH and Montana State Historic Preservation Office (SHPO) under Criterion A and C. The sites are: the Sand Creek Irrigation Canal (24CB1150), Golden Irrigation Ditch (24CB1152), Dry Creek Irrigation Canal (24CB1154), Craftsman residence at the Middleworth Farmstead (24CB1145), the abandoned Montana, Wyoming & Southern (M.W. & S.) Railroad Depot (24CB1148) and Shop (24CB1146).

The proposed Belfry - North project will have an adverse effect on two of the NRHP-eligible sites: the M.W. & S. depot and shop. Impact to the sites will be the construction of a new 36-foot wide roadway on the old M.W. & S. Railroad grade.

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 will be identified.

Sincerely,

Original Signed by
DAVID C. MILLER
David C. Miller
Planning & Prog. Development Engineer

cc. State - Edrie Vinson
cc. SHPO

Appendix G - Agency Coordination

**FOR CORRESPONDENCE WITH THE
MONTANA STATE HISTORIC PRESERVATION OFFICE,
PLEASE REFER TO:
APPENDIX C – CULTURAL RESOURCES
And
FOR SECTION 4(f) RELATED CORRESPONDENCE,
PLEASE REFER TO:
APPENDIX E – SECTION 4(f) CORRESPONDENCE**

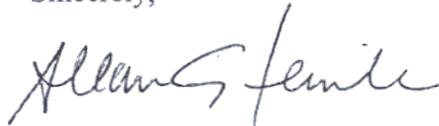
The following sites are not jurisdictional wetlands and waters of the U. S. under the authority of Section 404 of the Clean Water Act:

Ditch A (NJA)	NJB	NJC	NJD
NJG	Wall Ditch	NJH	NJI
NJK	NJL	NJM	NJN
NJO	NJP	NJQ	NJS
NJR	NJT	NJW	NJAA
NJBB	NJCC	NJDD	NJEE
NJFF	NJGG	NJKK	NJMM
NJPP	NJQQ	NJSS	NJVV
NJRR	NJTT	NJUJ	NJWW
Lynn Ditch	NJAAA	NJZZ	NJBBB
NJCCC	NJKKKK	NJIII	NJJJJ
NJKKK	NJOOO	NJPPP	NJUUU
NJAAAA	NJYYY	NJDDD	NJEEE
NJFFF	Crest Ditch	NJGGG	NJHHH
NJNNN	NJMMM	NJRRR	NJSSS
NJTTT	NJVVV	NJWWW	NJQQQ
NJXXX	NJZZZ	NJCCCC	NJDDDD
NJFFFF	NJBBBB	NJEEEE	NJGGGG
NJNJHHHH	Wagner Ditch		

The enclosed Jurisdictional Determination (JD) forms describe the extent of waters of the United States on the project site. These are preliminary jurisdictional determinations, and are not appealable. However, you may request that we issue approved jurisdictional determinations, which would be appealable. If you would like more information on the jurisdictional appeal process, contact this office.

If you have any questions, please call Shannon Warner of the Billings office at (406) 657-5910, and reference File No. 200290343.

Sincerely,



Allan Steinle
Montana Program Manager

Enclosures

JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers

DISTRICT OFFICE: Omaha
FILE NUMBER: 200290343

PROJECT LOCATION INFORMATION:

State: Montana
County: Carbon
Center coordinates of site (latitude/longitude): 45-12-38.9377 / 108-58-27.2559
Approximate size of area (parcel) reviewed, including uplands: 11.1 mile corridor acres.
Name of nearest waterway: Clarks Fork Yellowstone River
Name of watershed: Clarks Fork Yellowstone River

JURISDICTIONAL DETERMINATION

Completed: Desktop determination Date: September 13, 2004
Site visit(s) Date(s):

Jurisdictional Determination (JD):

- Preliminary JD - Based on available information, *there appear to be* (or) *there appear to be no* "waters of the United States" and/or "navigable waters of the United States" on the project site. A preliminary JD is not appealable (Reference 33 CFR part 331).
- Approved JD - An approved JD is an appealable action (Reference 33 CFR part 331).
Check all that apply:
- There are* "navigable waters of the United States" (as defined by 33 CFR part 329 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:
- There are* "waters of the United States" (as defined by 33 CFR part 328 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:
- There are* "isolated, non-navigable, intra-state waters or wetlands" within the reviewed area.
 Decision supported by SWANCC/Migratory Bird Rule Information Sheet for Determination of No Jurisdiction.

BASIS OF JURISDICTIONAL DETERMINATION:

A. Waters defined under 33 CFR part 329 as "navigable waters of the United States":

- The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

B. Waters defined under 33 CFR part 328.3(a) as "waters of the United States":

- (1) The presence of waters, which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- (2) The presence of interstate waters including interstate wetlands¹.
- (3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such waters (check all that apply):
- (i) which are or could be used by interstate or foreign travelers for recreational or other purposes.
- (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- (iii) which are or could be used for industrial purposes by industries in interstate commerce.
- (4) Impoundments of waters otherwise defined as waters of the US.
- (5) The presence of a tributary to a water identified in (1) - (4) above.
- (6) The presence of territorial seas.
- (7) The presence of wetlands adjacent² to other waters of the US, except for those wetlands adjacent to other wetlands.

Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above). *If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document the rationale used to make adjacency determination:* Waters and wetlands listed on attached sheet all have a hydrologic connection. Clarks Fork flows into the Yellowstone River.

Lateral Extent of Jurisdiction: (Reference: 33 CFR parts 328 and 329)

- Ordinary High Water Mark indicated by:
- clear, natural line impressed on the bank
 - the presence of litter and debris
 - changes in the character of soil
 - destruction of terrestrial vegetation
 - shelving
 - other:
- High Tide Line indicated by:
- oil or scum line along shore objects
 - fine shell or debris deposits (foreshore)
 - physical markings/characteristics
 - tidal gages
 - other:
- Mean High Water Mark indicated by:
- survey to available datum; physical markings; vegetation lines/changes in vegetation types
- Wetland boundaries, as shown on the attached wetland delineation map and/or in a delineation report prepared by David Evans and Associates, Inc.

Basis For Not Asserting Jurisdiction:

- The reviewed area consists entirely of uplands.
- Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7).
- Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(3).
- The Corps has made a case-specific determination that the following waters present on the site are not Waters of the United States:
- Waste treatment systems, including treatment ponds or lagoons, pursuant to 33 CFR part 328.3.
 - Artificially irrigated areas, which would revert to upland if the irrigation ceased.
 - Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
 - Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
 - Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States found at 33 CFR 328.3(a).
 - Isolated, intrastate wetland with no nexus to interstate commerce.
 - Prior converted cropland, as determined by the Natural Resources Conservation Service. Explain rationale:
 - Non-tidal drainage or irrigation ditches excavated on dry land. Explain rationale:
 - Other (explain):

DATA REVIEWED FOR JURISDICTIONAL DETERMINATION (mark all that apply):

- Maps, plans, plots or plat submitted by or on behalf of the applicant.
- Data sheets prepared/submitted by or on behalf of the applicant.
- This office concurs with the delineation report, dated July 22, 2004, prepared by (company): David Evans and Associates, Inc.
- This office does not concur with the delineation report, dated _____, prepared by (company): _____
- Data sheets prepared by the Corps.
- Corps' navigable waters' studies:
- U.S. Geological Survey Hydrologic Atlas:
 - U.S. Geological Survey 7.5 Minute Topographic maps:
 - U.S. Geological Survey 7.5 Minute Historic quadrangles:
 - U.S. Geological Survey 15 Minute Historic quadrangles:
 - USDA Natural Resources Conservation Service Soil Survey:
 - National wetlands inventory maps:
 - State/Local wetland inventory maps:
 - FEMA/FIRM maps (Map Name & Date):
 - 100-year Floodplain Elevation is: _____ (NGVD)
 - Aerial Photographs (Name & Date):
 - Other photographs (Date): July 22, 2004
 - Advanced Identification Wetland maps:
 - Site visit/determination conducted on:
 - Applicable/supporting case law:
 - Other information (please specify):

¹Wetlands are identified and delineated using the methods and criteria established in the Corps Wetland Delineation Manual (87 Manual) (i.e. occurrence of hydrophytic vegetation, hydric soils and wetland hydrology).

²The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.

Jurisdictional Waters

Clarks Fork Yellowstone River and its unnamed tributaries

Silver Tip Creek and its unnamed tributaries

Bear Creek and its unnamed tributaries

Dry Creek and its unnamed tributaries

Youst Ditch

NJIII

NJU

NJE

NJF

NJJ

NJV

NJX

NJHH

NJII

NJY

NJOO

NJZ

NJLL

NJXX

NJYY

NJLLL

Wetland A

Wetland B

Wetland C

Wetland D

Wetland FX

Wetland F

Wetland G

Wetland H

Wetland I

Wetland J/K

Wetland AX

Wetland EX

Dry Creek Canal

NJCCC (Golden Ditch)

Sand Creek Canal

DISTRICT OFFICE: Omaha
FILE NUMBER: 200290343

PROJECT LOCATION INFORMATION:

State: Montana
County: Carbon
Center coordinates of site (latitude/longitude): 45-12-38.9377 / 108.58.2559
Approximate size of area (parcel) reviewed, including uplands: 11.1 mile corridor acres.
Name of nearest waterway: Clarks Fork Yellowstone River
Name of watershed: Clarks Fork Yellowstone River

JURISDICTIONAL DETERMINATION

Completed: Desktop determination Date: September 13, 2004
Site visit(s) Date(s):

Jurisdictional Determination (JD):

Preliminary JD - Based on available information, there appear to be (or) there appear to be no "waters of the United States" and/or "navigable waters of the United States" on the project site. A preliminary JD is not appealable (Reference 33 CFR part 331).

Approved JD - An approved JD is an appealable action (Reference 33 CFR part 331).
Check all that apply:

There are "navigable waters of the United States" (as defined by 33 CFR part 329 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:

There are "waters of the United States" (as defined by 33 CFR part 328 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:

There are "isolated, non-navigable, intra-state waters or wetlands" within the reviewed area.

Decision supported by SWANCC/Migratory Bird Rule Information Sheet for Determination of No Jurisdiction.

BASIS OF JURISDICTIONAL DETERMINATION:

A. Waters defined under 33 CFR part 329 as "navigable waters of the United States":

The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

B. Waters defined under 33 CFR part 328.3(a) as "waters of the United States":

(1) The presence of waters, which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.

(2) The presence of interstate waters including interstate wetlands¹.

(3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such waters (check all that apply):

(i) which are or could be used by interstate or foreign travelers for recreational or other purposes.

(ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

(iii) which are or could be used for industrial purposes by industries in interstate commerce.

(4) Impoundments of waters otherwise defined as waters of the US.

(5) The presence of a tributary to a water identified in (1) - (4) above.

(6) The presence of territorial seas.

(7) The presence of wetlands adjacent² to other waters of the US, except for those wetlands adjacent to other wetlands.

Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above). *If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document the rationale used to make adjacency determination. Non-jurisdictional waters and wetland listed on attached sheet. These ditches and wetlands have no connection to jurisdictional waters of the US, including wetlands.*

Lateral Extent of Jurisdiction: (Reference: 33 CFR parts 328 and 329)

- Ordinary High Water Mark indicated by:
- clear, natural line impressed on the bank
 - the presence of litter and debris
 - changes in the character of soil
 - destruction of terrestrial vegetation
 - shelving
 - other:
- High Tide Line indicated by:
- oil or scum line along shore objects
 - fine shell or debris deposits (foreshore)
 - physical markings/characteristics
 - tidal gages
 - other:
- Mean High Water Mark indicated by:
- survey to available datum; physical markings; vegetation lines/changes in vegetation types.
- Wetland boundaries, as shown on the attached wetland delineation map and/or in a delineation report prepared by

Basis For Not Asserting Jurisdiction:

- The reviewed area consists entirely of uplands.
- Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7).
- Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(3).
- The Corps has made a case-specific determination that the following waters present on the site are not Waters of the United States:
- Waste treatment systems, including treatment ponds or lagoons, pursuant to 33 CFR part 328.3.
 - Artificially irrigated areas, which would revert to upland if the irrigation ceased.
 - Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
 - Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
 - Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States found at 33 CFR 328.3(a).
 - Isolated, intrastate wetland with no nexus to interstate commerce.
 - Prior converted cropland, as determined by the Natural Resources Conservation Service. Explain rationale:
 - Non-tidal drainage or irrigation ditches excavated on dry land. Explain rationale: no connection to waters of the US
 - Other (explain):

DATA REVIEWED FOR JURISDICTIONAL DETERMINATION (mark all that apply):

- Maps, plans, plots or plat submitted by or on behalf of the applicant.
- Data sheets prepared/submitted by or on behalf of the applicant.
- This office concurs with the delineation report, dated July 22, 2004, prepared by (company): David Evans and Associates, Inc.
- This office does not concur with the delineation report, dated _____, prepared by (company): _____
- Data sheets prepared by the Corps.
 - Corps' navigable waters' studies:
 - U.S. Geological Survey Hydrologic Atlas:
 - U.S. Geological Survey 7.5 Minute Topographic maps:
 - U.S. Geological Survey 7.5 Minute Historic quadrangles:
 - U.S. Geological Survey 15 Minute Historic quadrangles:
 - USDA Natural Resources Conservation Service Soil Survey:
 - National wetlands inventory maps:
 - State/Local wetland inventory maps:
 - FEMA/FIRM maps (Map Name & Date):
 - 100-year Floodplain Elevation is: _____ (NGVD)
 - Aerial Photographs (Name & Date):
 - Other photographs (Date): July 22, 2004
 - Advanced Identification Wetland maps:
 - Site visit/determination conducted on:
 - Applicable/supporting case law:
 - Other information (please specify):

²The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.

Non-jurisdictional Waters

Ditch A (NJA)	NJB	NJC	NJD
NJG	Wall Ditch	NJH	NJI
NJK	NJL	NJM	NJN
NJO	NJP	NJQ	NJS
NJR	NJT	NJW	NJAA
NJBB	NJCC	NJDD	NJEE
NJFF	NJGG	NJKK	NJMM
NJPP	NJQQ	NJSS	NJVV
NJRR	NJTT	NJUJ	NJWW
Lynn Ditch	NJAAA	NJZZ	NJBBB
NJCCC	NJKKKK	NJIII	NJJJJ
NJKKK	NJOOO	NJPPP	NJUUU
NJAAAA	NJYYY	NJDDD	NJEEE
NJFFF	Crest Ditch	NJGGG	NJHHH
NJNNN	NJMMM	NJRRR	NJSSS
NJTTT	NJVVV	NJWWW	NJQQQ
NJXXX	NJZZZ	NJCCC	NJDDDD
NJFFFF	NJBBBB	NJEEE	NJGGGG
NJNJHHHH	Wagnor Ditch		



U.S. ARMY CORPS OF ENGINEERS

HELENA REGULATORY OFFICE

10 WEST 15TH STREET, SUITE 2200

HELENA, MONTANA 59626

REPLY TO
ATTENTION OF:

July 25, 2002

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

Subject: Corps File Number 2002-90-343
Belfry - North
F STPP 72-1(1)10, MDT Control Number 1016

Ms. Debra Perkins-Smith – Project Manager
David Evans and Associates Inc.
1331 17th Street, Suite 900
Denver, Colorado 80202

Dear Ms. Perkins-Smith:

This letter is a response to a request that the US Army Corps of Engineers (Corps) be a Cooperating Agency for the Montana Department of Transportation (MDT) project listed above. We recognize that a reply was requested by July 15, 2002, and we appreciate your acceptance of this late response.

Under the authority of Section 404 of the Clean Water Act, Department of the Army permits are required for the discharge of fill material below the ordinary high water mark of our Nation's rivers, streams, lakes or wetlands.

Pursuant to the National Environmental Policy Act, the Corps agrees to be a Cooperating Agency. Our participation as a Cooperating Agency will be limited to reviewing and commenting on project features that may affect Waters of the United States. This will be in addition to our regulatory and permitting responsibilities.

Todd Tillinger of this office will be the Corps' project manager. He may be reached by phone at (406) 441-1375 or by e-mail at todd.n.tillinger@usace.army.mil. Please reference Corps File Number 2002-90-343.

Sincerely,

Allan Steinle
Montana Program Manager

REC'D JUL 31 2002



REC'D NOV 19 2002

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Billings Field Office
P.O. Box 36800
5001 Southgate Drive
Billings, Montana 59107
<http://www.mt.blm.gov/bifo/>

2821 (480)

November 15, 2002

Debra Perkins-Smith
Project Manager for Belfry-North
David Evans and Associates, Inc.
1331 17th Street, Suite 900
Denver, Colorado 80202

Dear Ms. Perkins-Smith:

This is in response to your letter dated November 1, 2002 regarding the Belfry-North project for the re-construction of Montana Highway 72. According to the Montana Department of Transportation's alignment alternatives plan, three of the alternatives under consideration would involve the potential use of public lands. This being the case, we would certainly want to be considered a Cooperating Agency.

Please keep us advised of any environmental documentation needs and any future public meetings.

If you have any questions, please contact Tom Carroll, Realty Specialist, at 406-896-5242.

Sincerely,

Sandra S. Brooks
Sandra S. Brooks
Field Manager



United States Department of the Interior

FISH AND WILDLIFE SERVICE

RECEIVED

SEP 29 2004

ENVIRONMENTAL

ECOLOGICAL SERVICES
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

MASTER FILE COPY

M.44 MDT (I

REC'D OCT 05 2004 October 27, 2004

Paul Sturm
Montana Department of Transportation
Environmental Services
2701 Prospect Avenue
P.O. Box 201001
Helena, Montana 59620 001

Dear Mr. Sturm

This is in response to your letter dated August 23, 2004, regarding Montana Department of Transportation's proposed Belfry - North project (STPP 72-1(1)10; Control No. 1016). The project is located on Montana Highway 72 in Carbon County and would entail the full reconstruction of 11.1 miles of MT 72 from the intersection of Montana Secondary Highway 308 in the town of Belfry, to the intersection of U.S. Highway 310 near Bridger, Montana. Construction activities would primarily include road widening, curve straightening, bridge and culvert replacement, and roadway realignment. The project would parallel the Clarks Fork of the Yellowstone River and cross the river twice. Your letter transmitted the Biological Resources Report (BRR), which includes the biological assessment for this project, to the U.S. Fish and Wildlife Service (Service) and requested that the Service concur with its determinations of effect for threatened and endangered species with regard to this proposed project. The Service's Montana Field Office received your request on August 24, 2004.

The listed species considered in your BRR included the threatened bald eagle (*Haliaeetus leucocephalus*), endangered black-footed ferret (*Mustela nigripes*), and non-essential experimental gray wolf (*Canis lupus*). The Service believes that the activities associated with the proposed project, as described in the BRR dated July 22, 2004, would not have the potential to cause an adverse effect to listed species nor to jeopardize the continued existence of non-essential experimental populations. Therefore, we concur with your determination that this project would not be likely to adversely affect bald eagles and formal consultation is not required. The Service bases its concurrence on information displayed in the BRR. We also acknowledge your conclusion that this project would have no effect on black-footed ferrets or gray wolves.

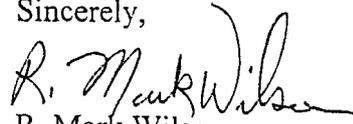
This concludes informal consultation pursuant to regulations 50 CFR §402.13 implementing the Endangered Species Act of 1973, as amended (Act). This project should be re-analyzed if new

Consultant Design	
Date	Initial
Routing	
Bureau Chief	
Consultant Plans Eng	
Design Supervisor	
CTFP Foreman	
<i>Delaney</i>	
<i>David Evans</i>	
<i>Dewey</i>	
<i>Bruce Barrett</i>	
<i>File</i>	

information reveals effects of the action that may affect threatened or endangered species, or if the project is modified in a manner that causes an effect not considered in this consultation.

If you have questions about this letter or your responsibilities under the Act, please contact Scott Jackson at (406)449-5225, extension 201.

Sincerely,

A handwritten signature in black ink that reads "R. Mark Wilson". The signature is written in a cursive style with a large, looped "W".

R. Mark Wilson

Field Supervisor

Copy to Todd Tillinger, COE, Helena, MT
 Lou Hanebury, FWS, Billings, 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

M.17 FHWA (I)

July 25, 2002

Debra Perkins-Smith
David Evans and Associates, Inc.
1331 17th Street, Suite 900
Denver, Colorado 80202

Dear Ms. Perkins-Smith:

This is in response to your recent letter regarding a proposal by the Montana Department of Transportation to reconstruct Montana Highway P-72 between Belfry and Bridger in Carbon County, Montana (F STPP 72-1(1)10; Control No. 1016). Your letter requested information the U.S. Fish and Wildlife Service (Service) may have pertaining to threatened and endangered (T/E) species that may occur in the vicinity of the proposed project. Your letter also requested that the Service be a Cooperating Agency with regards to this project. In addition, you asked for information on any Service resources that would be protected by Section 4(f) of the 1966 Department of Transportation Act. These comments have been 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 section 7(c) of the Act, the Service has determined that the following threatened, endangered, proposed, and candidate species may be present in the project area:

Listed Species

bald eagle (*Haliaeetus leucocephalus*); threatened

black-footed ferret (*Mustela nigripes*); endangered

gray wolf (*Canis lupus*); non-essential experimental

Proposed Species

mountain plover (*Charadrius montanus*); proposed as threatened

Expected Occurrence

spring or fall migrant; winter resident; nesting

potential occurrence associated with prairie dog complexes

transient

Expected Occurrence

potential occurrence in shortgrass prairie habitat

Candidate SpeciesExpected Occurrenceblack-tailed prairie dog (*Cynomys ludovicianus*)

potential occurrence in shortgrass prairie habitat

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 threatened and endangered 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 section 102 of NEPA and incorporated into the NEPA documents. We recommend that biological assessments include the following:

- 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.

The experimental population area for wolves for the Yellowstone region includes the entire State of Wyoming, a portion of southeastern Idaho east of Interstate 15, and a portion of Montana east of Interstate 15 and south of the Missouri River. Therefore, this proposed project lies within the Yellowstone experimental population area. Wolves designated as nonessential experimental that are not within units of the National Park or National Wildlife Refuge systems, but are within the boundaries of the nonessential experimental population area, are treated as proposed species for section 7 purposes. As such, Federal agencies are only required to confer with the Service when they determine that an action they authorize fund or carry out "is likely to jeopardize the continued existence" of the species.

Pursuant to section 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 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 Section 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 shall 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. Criteria and techniques for raptor-proofing are available from several sources, including those outlined in the publication, "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996." A copy of this report 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).

Your letter does not mention whether wetlands might be impacted by the proposed construction project. If so, Corps of Engineers (Corps) Section 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.

This office is not aware of any Service-owned or administered lands, or other resources protected under Section 4(f) of the 1966 Department of Transportation Act that may occur near, or be impacted by, the proposed project.

The Service agrees to be a Cooperating Agency, pursuant to the National Environmental Policy Act, for this project. As such, the Service will review and respond to documents required for compliance with the Endangered Species Act, and the Fish and Wildlife Coordination Act.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Brent Esmoil", written in a cursive style.

Brent Esmoil
Acting Field Supervisor

Copy to: FWS-ES; Billings Suboffice



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Fish and Wildlife Enhancement
Federal Building, U.S. Courthouse
301 South Park
P. O. Drawer 10023
Helena, Montana 59626

IN REPLY REFER TO:

FWE-61130-Billings
M.44 (Belfrey-North)

Ms. Edrie L. Vinson
Montana Department of Transportation
2701 Prospect Avenue
Helena, Montana 59620

Date Recd. Per MAIL F

Info	
30 Precor	<input checked="" type="checkbox"/>
30 Assist	<input checked="" type="checkbox"/>
30 Offic	<input type="checkbox"/>
31 Safel	<input type="checkbox"/>
32 Road	<input checked="" type="checkbox"/>
33 Envi	<input type="checkbox"/>
34 HyJ.	<input type="checkbox"/>
35 Surv	<input type="checkbox"/>
36 Traf	<input type="checkbox"/>
37 Tra	<input type="checkbox"/>
39 Con	<input type="checkbox"/>
File	<input checked="" type="checkbox"/>

Dear Ms. Vinson:

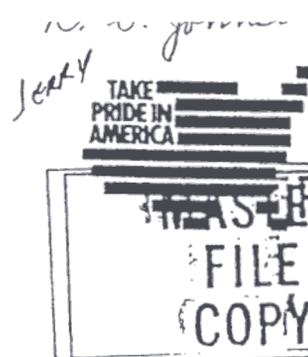
This responds to your June 10, 1992 letter concerning Montana Department of Transportation Project F 72-1(1)10, Belfrey - North (P.M.S. Control # 1016), which requested identification of the threatened and endangered species that should be considered in connection with this project. Your letter also requested other comments we may have.

The Federally-listed endangered and threatened species which occur or may occur within the project area are the bald eagle (Haliaeetus leucocephalus), peregrine falcon (Falco peregrinus), and black-footed ferret (Mustela nigripes). Pursuant to Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), the Federal Highway Administration, as the responsible Federal agency, must determine if the proposed actions may affect these listed species and if so, initiate formal consultation with the Fish and Wildlife Service (Service). In order to determine if formal consultation is required, the Service recommends the responsible agency prepare a biological assessment for construction projects requiring an environmental impact statement (refer to Section 402.12, 50 CFR, Part 402, June 3, 1986), or an equivalent analysis for other projects, in accordance with Section 402.14, 50 CFR, part 402. 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 threatened and endangered 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 (see Section 402.02 50 CFR, Part 402),
6. Coordination/mitigation measures that will reduce/eliminate adverse impacts to threatened and endangered species,

JUN 24 1992

ENVIRONMENTAL BUREAU



June 22, 1992

cc: R.R. Ventura
✓ D.S. Johnson

7. The expected status of threatened and endangered species in the future (short and long term during and after project completion),
8. A determination of the project affects for listed species,
9. A determination of "is likely to jeopardize" or "is not likely to jeopardize" for proposed species, and
10. Documentation of the basis of all conclusions, such as the data considered, citation of literature and personal contacts used in developing the assessment.

If it is determined that the proposed project is likely to adversely affect any listed species, formal consultation should be initiated with this office.

Section 9 of ESA prohibits knowingly taking listed species, which includes harm, harassment, capture, or collection activities, except when specifically permitted by the U.S. Fish and Wildlife Service. Please also be apprised of the potential application of the Migratory Bird Treaty Act of 1918 (MBTA), as amended, 16 U.S.C. 703 et seq; and the Bald Eagle Protection Act of 1940 (BEPA), as amended, 16 U.S.C. 668 et seq; to your project. The MBTA does not require intent to "take" to be proven and does not allow for "take," except as permitted by regulations. Section 703 of the MBTA provides: "Unless and except as permitted by regulations...it shall be unlawful at any time, by any means or in any manner, to...take, capture, kill, or attempt to take, capture, or kill, possess... any migratory bird, or any part, nest, or eggs of any such bird...." The BEPA prohibits knowingly taking, or taking with wanton disregard for the consequences of such an activity, any bald or golden eagles or their body parts, nest, or eggs, which includes collection, molestation, disturbance, or killing activities.

Although a bald eagle nest is known to exist about two miles northeast of the northern end of the project, we do not foresee any substantive issues with the proposed project with regard to listed species. However, any power lines in the vicinity, if not properly constructed, could pose electrocution and line strike hazards to listed species and other migratory birds. To conserve any listed species and other migratory birds protected by Federal law, we urge that any power lines that may need to be modified or reconstructed as a result of the project be raptor-proofed following the criteria and techniques outlined in the Raptor Research Report No. 4, "Suggested Practices for Raptor Protection on Power Lines - The State of the Art in 1981". A copy may be obtained from:

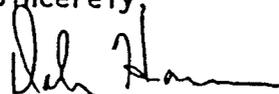
Jim Fitzpatrick, Treasurer
Raptor Research Foundation
Carpenter St. Croix Nature Center
12805 St. Croix Trail
Hastings, Minnesota 55033

The material accompanying your letter indicates that the project will have some impact on wetlands. Accordingly, we assume that a wetland inventory and impact assessment has or will be completed in accordance with the 1992,

"Interagency Memorandum of Understanding for the Conservation of Wetland Resources Associated with Highway Construction Projects in the State of Montana". We urge completion of any needed wetland mitigation in full accordance with that Memorandum of Understanding.

We appreciate your efforts to consider and conserve fish and wildlife resources, including threatened and endangered species. If you have questions regarding this letter, please contact Mr. Gary Wood of my staff (406) 657-6750.

Sincerely,



Dale R. Harms
State Supervisor
Montana State Office

JGW/jf

cc: Suboffice Coordinator, USFWS, Fish & Wildlife Enhancement (Billings, MT)

"Take Pride in America"

Jim Fitzpatrick, Treasurer
Raptor Research Foundation
Carpenter St. Croix Nature Center
12805 St. Croix Trail
Hastings, Minnesota 55033.

The information accompanying the Notice suggests there is a potential for the project to adversely impact wetland habitats. We assume that a wetland inventory and impact assessment has or will be completed in accordance with the 1989, "Interagency Memorandum of Understanding: Management and Mitigation of Highway Construction Impacts to Wetlands in the State of Montana". We urge completion of any needed wetland mitigation in full accordance with that Memorandum of Understanding.

We appreciate your efforts to consider fish and wildlife resources, including threatened and endangered species. If you have questions regarding this letter, please contact Mr. Gary Wood of our Billings Suboffice (406) 657-6750

Sincerely,


Kemper McMaster
Field Supervisor
Montana/Wyoming Field Office

cc: Duane C. Lewis, Federal Highway Administration (Helena, MT)
✓ Jeff Ryan, Montana Department of Highways (Helena, MT)
Jeff Herbert, Montana Dept. of Fish, Wildlife & Parks (Helena, MT)
Ken Chrest, Montana Dept. of Fish, Wildlife & Parks (Helena, MT)
Jack Thomas, Montana Dept. of Health, Water Quality Bureau (Helena, MT)
Steve Potts, Environmental Protection Agency (Helena, MT)
John Peters, Environmental Protection Agency (Denver, CO)
Suboffice Coordinator, USFWS, Fish & Wildlife Enhancement (Billings, MT)

JGW/dc

"Take Pride in America"



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Ecological Services
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101-1396

IN REPLY REFER TO:

ES-61410

April 2, 1986

Mr. Stephen C. Kologi, P.E.
Chief, Preconstruction Bureau
Department of Highways
2701 Prospect
Helena, Montana 59620

Dear Mr. Kologi:

We have reviewed your letter and accompanying map of the proposed development of a Federal Aid Project on Montana Highway 72 from Belfry northeasterly to the junction of U.S. 310, a distance of about 11 miles (F-72-1(1)10 Belfry North).

The project will provide for upgrading the road to modern standards by improving the vertical and horizontal alignment. Realignment along the westerly edge of Belfry and near the second crossing of the Clark's Fork of the Yellowstone River will be necessary.

The proposed project has the potential to impact the Clarks Fork of the Yellowstone River since there are two stream crossings. Some items that should be considered during planning of the project include: 1) wetlands should be avoided if at all practical; 2) wetlands which are unavoidable should be classified and the loss quantified; 3) planning should provide for mitigation for any wetlands lost; 4) encroachment into permanent or intermittent stream drainages should be kept to an absolute minimum; 5) new drainage structures, if needed, should be designed to assure that they will have no affect on adjacent wetlands, fish passage, surface water run-off patterns, or on surface ground water levels adjacent to the highway; and 5) fill placed in gullies, swales, or other "low" areas which function in carrying overland flow during storm events should be immediately seeded to reduce erosion.

We appreciate the opportunity to comment on the project in the early planning stages.

Sincerely,


John G. Wood
Field Supervisor
Ecological Services



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Endangered Species, Field Office
Federal Bldg., U.S. Courthouse
301 South Park
P.O. Box 10023
Helena, Montana 59626

Date Recd. Preconst.		MAIL ROUTE	Attach	Initial
Act	Info			
		39		
		✓ 20 Eng. Specialties		
		21 Contract Plans		
		✓ 32 Loc. Road Design		
		✓ 33 Environment		
		24 Hydraulic		
		25 Surfacing Design		
		28 Traffic		
	March 21	Publ 91810		
		33 Photogrammetry		
		59 Consultant Design		
		<i>W. G. Brewster</i>		
		File		

IN REPLY REFER TO:

M.17(I)
Belfry North (F72-1(1)10)

Mr. Stephen C. Kologi, P.E.
Chief - Preconstruction Bureau
Department of Highways
2701 Prospect
Helena, Montana 59620

Dear Mr. Kologi:

We have reviewed your information request for the Belfry-North Project (F72-1(1)10) and sent a copy to our Ecological Services Division in Billings, Montana for their input.

Endangered species which may occur in this area include the bald eagle, peregrine falcon and black-footed ferret. Ferrets are considered dependent upon prairie dogs for food and shelter. If prairie dog towns will be disturbed by the project then ferret surveys are recommended within one year of construction following Fish & Wildlife Services ferret survey guidelines in effect at that time.

Currently, no bald eagles or peregrines' are known to be nesting in the project area.

Since this project may occur several years from now, we encourage you to contact us during final project planning for updated listing information on endangered species and current breeding status of listed species that may occur in the project area.

Please contact us when your plans are nearing completion and if you determine that this project may affect listed species. Thank you for your efforts to conserve listed species and for early involvement in your project planning.

Sincerely,

Wayne G. Brewster

Wayne G. Brewster
Field Supervisor
Endangered Species

cc: ES, Billings

United States Department of Agriculture



Natural Resources Conservation Service
Federal Building, Room 443
10 East Babcock Street
Bozeman, Montana 59715-4704

REC'D JUL 10 2002

FILE COPY

July 1, 2002

Debra Perkins-Smith
David Evans and Associates, Inc.
1331 17th Street, Suite 900
Denver, CO 80202

Subject: F STPP 72-1(1)10 CN 1016
Belfry-North Environmental Assessment and Design
Cooperating Agency Request

Dear Ms. Perkins-Smith:

Thank you for your letter of May 31, 2002, inviting the Natural Resources Conservation Service (NRCS) to participate as a Cooperating Agency on the above referenced highway improvement project. As you may be aware, the enactment of the 2002 Farm Bill in addition to emergency drought assistance and ongoing conservation programs have placed particularly strong demands on NRCS technical assistance resources at this time. Due to the requirements of meeting our workload, we therefore are **not** requesting to become a Cooperating Agency on this project.

NRCS does continue to advocate for interagency coordination and requests to be kept informed of the progress of the study, coordination meetings, and draft environmental documents on an informal basis. We will comment and/or participate when appropriate and as time allows. Any such information should be sent to Ray McPhail, District Conservationist, in the NRCS Joliet Field Office, P.O. Box 510, Joliet, Montana 59041-0229.

Please continue to coordinate the identification of Important Farmlands and completion of the AD-1006, Farmland Conversion Impact Rating Form, if necessary, through Mr. McPhail. Thank you again for your correspondence and the opportunity to participate in this project.

A handwritten signature in black ink, appearing to read "D. White".

DAVE WHITE
State Conservationist

cc:

David Heilig, ASTC, Headwaters Natural Resource Team, NRCS, Bozeman, MT
Martin A. Jiminez, SRC, NRCS, Bozeman, MT
Tom Pick, Water Quality Specialist, NRCS, Bozeman, MT
Ray McPhail, DC, NRCS, Joliet, MT



Joliet Field Office, PO Drawer J, Joliet, MT 59041

(406) 962-3641

6 2002

June 3, 2002

To: Debra Perkins-Smith
Subject: Belfry-North Environmental Assessment and Design
Response to information request

Enclosed is a map showing farmland of prime and unique and statewide importance status. As the map is somewhat dated there will actually be some (green) prime and unique that is really supposed to be (yellow) of statewide importance. For the purposes of road construction both are noteworthy.

There are some minor technical considerations that are putting some previously designated prime and unique into statewide importance.

Sincerely,
A. Ray McPhail
District Conservationist

Enclosed is an application
for SPAR24 Stream Protection
Act for your convenience.

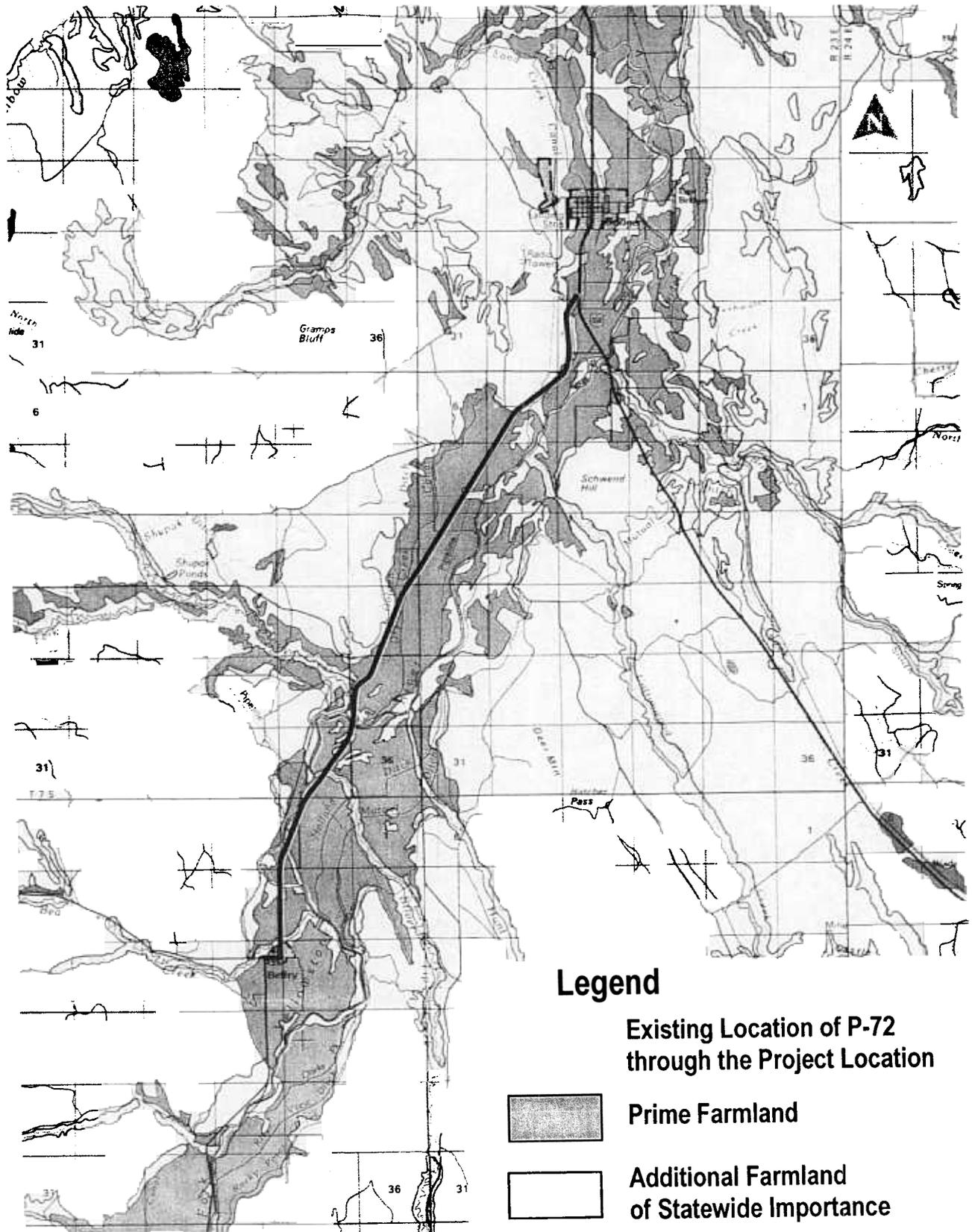


Figure ?. Farmland of Statewide Importance



FILE COPY

Judy Martz, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.state.mt.us

July 12, 2002

Ms. Debra Perkins-Smith, AICP
David Evans and Associates, Inc.
1331 17th Street, Suite 900
Denver, CO 80202

RE F STPP 72-1(1)10 CN 1016
Belfry-North Environmental Assessment and Design Cooperating Agency Request

Dear Ms. Perkins-Smith:

The Montana Department of Environmental Quality (DEQ) has received your request to be a cooperating agency for the referenced environmental assessment (EA). DEQ agrees to be a cooperating agency.

Please continue to work with Jeff Ryan on water quality and wetlands issues. For review of the draft EA and any other assistance DEQ might be able to provide, please write or call me at 406-444-3276 (FAX 406-444-1374) or ghallsten@state.mt.us.

Sincerely,

Greg Hallsten
MEPA Unit Supervisor
Permitting and Compliance Division

FILE COPY

c: Jeff Ryan, Water Protection Bureau, DEQ

FILE COPY

REC'D JUL 15 2002

MPOT 0000-0013



DAVID EVANS
AND ASSOCIATES INC

REC'D OCT 17 2003

RECEIVED
OCT 14 2003
STATE PARKS
DIVISION

October 10, 2003

Walter W. Timmerman
Recreation Bureau Chief
Montana Fish, Wildlife & Parks
1420 East Sixth Avenue, P.O. Box 200701
Helena, MT 59620

**SUBJECT: BELFRY-NORTH EA AND DESIGN, MDT F STPP 72-1(1)10 CN 1016.
DETERMINATION OF 6(F) PROPERTIES IN PROJECT CORRIDOR**

Dear Mr. Timmerman:

David Evans and Associates is under contract with Montana Department of Transportation to prepare an environmental assessment for the reconstruction of 11.1 miles of P-72 between the towns of Belfry and Bridger in Carbon County, Montana.

Thank you for the MFWP Land & Water Conservation Fund (LWCF) information list provided by your office on March 20, 2003. On April 10, 2003 you added the Bridger Bend FAS site to the information list. We have reviewed this information and have concluded that none of the Carbon County LWCF properties listed are located within the Belfry-North study area.

If you concur with the findings that there are no 6(f) LWCF properties in the corridor, please sign below and return this letter to David Evans and Associates, Inc. to be included in the environmental assessment documentation.

Sincerely,
DAVID EVANS AND ASSOCIATES, INC.

Sandra Dowling
Sandra Dowling
Project Planner and Administrator

We concur with the findings that there are no LWCF properties adjacent to or potentially affected by the proposed project on P-72.

[Signature]
Name
RECREATION BUREAU CHIEF
Title (MFWP)
October 14, 2003
Date

Copies: dps; msw; sfd; file
Attachments/Enclosures: none
Initials: sfd
File Name: P:\MDOT0013\Admin\Letters\MFWP 6(f).doc



REC'D JUL 01 2002

2300 Lake Elmo Drive
Billings MT 59105
June 27, 2002

Debra Perkins-Smith, Project Manager
David Evans and Associates
1331 17th Street, Suite 900
Denver, CO 80202

Dear Ms. Perkins-Smith:

I am writing this letter in response to a request for fisheries information pertaining to the road reconstruction project between Belfry and Bridger, MT. The Clarks Fork of the Yellowstone between Bridger and Belfry sustains a wild population of rainbow trout, brown trout, a few cutthroat trout and mountain whitefish, among other fish species. This reach of river contains mainly rearing habitat for juvenile and adult fish with some spawning areas; however, spawning activity is likely limited in this reach of river. Bear and Silver Tip Creeks near the project area are small, often turbid streams that contain mostly minnow and sucker fish species.

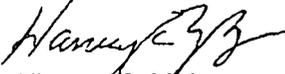
Rainbow trout spawn in the spring (mid-April) and eggs incubate in the gravel until early July. Brown trout and whitefish spawn in the fall (mid-October) and their eggs incubate in stream gravels until mid spring (late April). Construction activities that would result in an increase of fine sediments into the stream can cause reduced egg and juvenile survival and should be avoided, except when absolutely necessary (i.e., bridge replacement). Activities that will cause increased sediment input to the river or any disturbance to the streambed or banks should be limited to the time period between July 15th and October 15th to reduce the risk of adversely affecting spawning trout. This time period generally coincides with the lowest annual stream flows, which should facilitate construction work in and around rivers and creeks.

To the best of my knowledge, the major impacts that may occur to the fisheries in the vicinity of this project will occur at the two bridge crossings across the Clarks Fork and the bridges across Bear and Silver Tip Creeks. All of these bridges currently have adequate spans to allow for unrestricted fish passage. I would suggest that they be replaced with similar or longer bridges. Bridges that span the floodplain cause the least disturbance to fish habitat and stream hydrology, and they reduce the risk of flood damage to the bridge and surrounding properties.

Public access at the two bridges over the Clarks Fork currently is limited, and these reconstruction projects will present an opportunity to enhance access to the river. Fish, Wildlife and Parks is very interested in working together to ensure that access at these two sites is maintained and enhanced for future recreational use of Montana's rivers and streams.

We look forward to working with you during the 124 permitting process for bridge replacements and other projects that may affect the stream bed or banks. If you have any questions, please contact Jim Olsen at 406-322-1162.

Sincerely,


Harvey E. Nyberg
Regional Supervisor

cc: Jim Olsen
Jim Darling

Recd. Preconst. 6-24-92

D. S. Johnson

Montana Department of Fish, Wildlife & Parks

RECEIVED

JUN 23 1992

ENVIRONMENTAL BUREAU

<input checked="" type="checkbox"/>	30 Preconst Engr
<input checked="" type="checkbox"/>	31 Assistant
<input checked="" type="checkbox"/>	32 Office Mgr
<input checked="" type="checkbox"/>	31 Safety Mgmt.
<input checked="" type="checkbox"/>	32 Road Design
<input checked="" type="checkbox"/>	33 Environment
<input checked="" type="checkbox"/>	34 Survey & Mapping
<input checked="" type="checkbox"/>	36 Traffic Eng.
<input checked="" type="checkbox"/>	37 Traffic Operations
<input checked="" type="checkbox"/>	39 Consultant Den.
<input type="checkbox"/>	File



2300 Lake Elmo Drive
Billings, MT 59105
June 15, 1992

cc: ✓ D. S. Johnson
R. R. Ventura

F72
Belfry-N.

Erdie L. Vinson, Chief
Environmental & Hazardous Waste Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, MT 59620-9726

Dear Mr. Vinson:

We received five requests for information in rapid succession from your office. To speed the review process, we are replying to all five in this letter.

IR 90-(119)400
Merrill-Columbus Canal Pipe
Control No. 1435

This project involves an irrigation ditch that is dry much of the year. We have no comments.

F78-2(11)46
Pratten-Pike - 9th St's, Columbus
(C #1500)

In the project area, the Yellowstone River supports a rainbow-brown trout fishery with heavy use by anglers. Care should be taken not to impact this important resource.

F91-1(5)0
Big Timber I-90 Business Logs
(C #1507)

In the project area, the Boulder River supports an important rainbow-brown trout fishery enjoyed by many anglers. Care should be taken not to impact this fishery.

S-R5 308-1(1)6
Bear Creek - East & West
(P.M.S. C #0288)

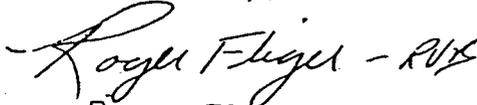
Bear Creek supports only minnows, but it flows through very erosive soils before entering the Clarks Fork, which has trout and whitefish. Care should be taken to minimize increases to Bear Creek's sediment load.

✓ F72-1(1)10
Belfry-North
(P.M.S. C#1016)

The Clarks Fork River in this area has a trout-whitefish fishery that is limited by marginal flows and high sediment load. Road and bridge construction should follow procedures designed to minimize the amount of sediment entering the river.

We anticipate no impacts from the proposed projects upon wildlife habitat.

Sincerely,

 - RVH
Roger Fliger
Supervisor

RF/pk

c: Ken Chrest
Jim Darling
Charlie Eustace

DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION
BILLINGS WATER RESOURCES REGIONAL OFFICE



JUDY MARTZ, GOVERNOR

AIRPORT BUSINESS PARK
1371 RIMTOP DRIVE

STATE OF MONTANA

(406) 247-4415
(406) 247-4416 (FAX)

BILLINGS, MONTANA 59105-1978

REC'D DEC 14 2002

December 12, 2002

FILE COPY

David Evans & Assoc.
1331 17th St. Suite 900
Denver, CO. 80202

Dear Sirs

Comments in reference to the Belfry-North EA design highway project. In checking our ownership map, it appears our agency does not have any land leases along this corridor. I noticed where there are private irrigation canals within this route. We would like to point out you will need to be in communication with those canal operators in order to insure their projects are not negatively impact by any construction with in their canal easement of the highway. Concerns that first come to mind is protecting the existing grade and size of these structures so as not to interfere with the movement of irrigation water down the canal. Frequently when a new highway is being constructed the existing grade on our canals are not protected and we will see additional ditch loss within in the canal at that specific point. DOT and the contractors are very reluctant to return to the scene and correct a problem which they created. I specifically request that this be monitored during construction of any highway reconstruction project.

Thank you for giving us the opportunity to respond to your project. We would also like a copy of the EA when it is finished.

Sincerely,

A handwritten signature in black ink, appearing to read "Keith Kerbel".

Keith Kerbel, Manager
Billings Water Resources



TED SCHWINDEN, GOVERNOR

1520 EAST SIXTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-6699

HELENA, MONTANA 59620

Act	Info	MAIL ROUTE	Attach	Initial
		30		
	<input checked="" type="checkbox"/>	31 Eng. Specialties		
	<input checked="" type="checkbox"/>	32 Contract Plans		
	<input checked="" type="checkbox"/>	32 Loc. Road Design		
	<input checked="" type="checkbox"/>	33 Environment		
	<input checked="" type="checkbox"/>	34 Hydraulic		
		35 Surfacing Design		
		36 Traffic		
		37 Pub. Hearing		
		38 Photogrammetry		
		39 Consultant Design		
		<i>V. [Signature]</i>		
	<input checked="" type="checkbox"/>	File		

March 28, 1986

Mr. Stephen C. Kologi, P.E.
Chief, Preconstruction Bureau
Montana Department of Highways
2701 Prospect
Helena, MT 59620

RE: F 72-1(1)10
Belfry--North

Dear Mr. Kologi:

You recently requested information pertaining to the referenced project.

It appears that this project will involve floodplains designated on both the Clarks Fork Yellowstone River and Bear Creek. Therefore, a floodplain development permit will have to be obtained from the Carbon County planner.

It also appears that this project may affect irrigation facilities. For information on the water rights that may be involved, please contact Keith Kerbel of our Water Rights Field Office at 1537 Avenue D, Suite 352, in Billings (phone 657-2105).

Thank you for the opportunity to comment.

Sincerely,

Carole I. Massman

CAROLE I. MASSMAN
ADMINISTRATIVE OFFICER

CM/mo

cc: Ron Guse
Keith Kerbel
Rich Brasch
John Hamill



MONTANA
**Natural Heritage
Program**

JUN 10 2002

P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • fax 406.444.0581 • tel 406.444.3009 • <http://nris.state.mt.us>

June 6, 2002

Debra Perkins-Smith, AICP
David Evans & Associates Inc.
1331 17th Street, Suite 900
Denver, Colorado 80202

Dear Debra,

I am writing in response to your request for information on plant and animal species of concern in the vicinity of Belfry - North, CN 1016. We checked our databases for information in this general area and have enclosed 4 species of concern reports, organized by township, range and section, one map and explanatory material.

Please keep in mind the following when using and interpreting the enclosed information and maps:

- (1) These materials are the result of a search of our database for species of concern that occur in an area defined by the requested road segment with an additional one-mile buffer surrounding the requested area. This is done to provide you with a more inclusive set of records and to capture records that may be immediately adjacent to the requested area.
- (2) In the report, the term "precision" reflects the quality of the location information. S (second) precision is used when the location of the collection/observation is known within a three-second radius (approximately 10 acres); M (minute) precision is used when the location of the collection /observation is known within a one minute radius (approximately 1.5 miles); and G (general) precision is used when the location of the record/collection is known within a 5 mile radius or to a place name only. Some species locations outside the selection area have imprecisely-known locations and may actually occur within the selection area.
- (3) Location information for animals represents occupied breeding habitat; location information for plants represents known occurrences of plant species, and, like animals, has an implied range that may not be fully conveyed by the mapped data. Most locations are depicted as points, but some, especially those that cover large area, are depicted as polygons on the map. The approximate boundaries of these polygons are color-coded to help differentiate vertebrate classes and plants.
- (4) This report may include sensitive data, and is not intended for general distribution, publication or for use outside of your agency. In particular, public release of specific location information may jeopardize the welfare of threatened, endangered, or sensitive species or communities.
- (5) The accompanying map(s) display management status, which may differ from ownership. Also, this report may include data from privately owned lands, and approval by the landowner is advisable if specific location information is considered for distribution. Features shown on this map do not imply public access to any lands.
- (6) Additional biological data for the search area(s) may be available from other sources. We suggest you contact the U.S. Fish and Wildlife Service for any additional information on threatened and endangered species (406-449-5225). Also, significant gaps exist in the Heritage Program's fisheries data, and we suggest you contact the Montana Rivers Information System for information related to your area of interest (406-444-3345).

Electronic access to the Montana Natural Heritage Program is available at URL
<http://nris.state.mt.us/mtnhp/>

(7) The results of a data search by the Montana Natural Heritage Program reflect the current status of our data collection efforts. These results are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys, which may be required for environmental assessments.

We have a new data request system available via the internet. The URL is:

<http://nris.state.mt.us/reqapp/userMain.htm>

I've assigned your username: ~~penk01~~ *penk02*

And password: new02

You may wish to change the password as a security measure.

I hope the enclosed information is helpful to you. Please feel free to contact me at (406)-444-2817 or via my e-mail address, below, should you have any questions or require additional information.

Sincerely,



Martin P. Miller, Data Assistant
Montana Natural Heritage Program
(martinm@state.mt.us)

06-Jun-02

Montana Natural Heritage Program

Species of Special Concern: Belfry - North, CN 1016

Scientific Name: CYNOMYS LEUCURUS

Common Name: WHITE-TAILED PRAIRIE DOG

Global Rank: G4

Forest Service status: SENSITIVE

State Rank: S1

USFWS Endangered Species Act Status:

BLM Status: SPECIAL STATUS

Occurrence Type:

Species occurrence data:

1995: NO EVIDENCE OF COLONY SEEN.

Last observation: 1977-

Size (acres): 3

General site description:

ALONG ROAD OR NEAR CEMETARY.

Land owner/manager:

PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

NONE.

Information source:

FLATH, DENNIS L. MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS, WILDLIFE RESEARCH BUREAU, FWP BUILDING, MONTANA STATE UNIVERSITY CAMPUS, 1400 SOUTH 19TH STREET, BOZEMAN, MT 59717-0001. 406/944-6354.

Survey site name: BRIDGER-COLONY #6

County: CARBON

USGS quadrangle: BRIDGER

Precision: M

Elevation (ft): 3745

Location:

HWY 310 S. BRIDGER FOR 2.5 MI. GO TO BOSTIC (MOUNTAIN VIEW) CEMETARY, 1 MI. E. HIGHWAY.

Township\Range: Section: TRS comments:

007S023E

3

NE4

06-Jun-02

Montana Natural Heritage Program

Species of Special Concern: Belfry - North, CN 1016

Scientific Name: ASTRAGALUS GRAYI

Common Name: GRAY'S MILKVETCH

Global Rank: G4?

Forest Service status:

State Rank: S2

USFWS Endangered Species Act Status:

BLM Status:

Occurrence Type:

Species occurrence data:

IN FLOWER (1 JUNE 1976).

Last observation: 1976-06-01

Size (acres): 0

General site description:

ROADSIDE BANK WITH AGROPYRON SP. AND MELILOTUS SP.

Land owner/manager:

PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

NONE.

Information source:

BOTANIST, MONTANA NATURAL HERITAGE PROGRAM, 1515 EAST SIXTH AVENUE, HELENA, MT 59620-1800.

Survey site name: BRIDGER CREEK

County: CARBON

USGS quadrangle: HATCHER PASS

Precision: M

Elevation (ft): 3700

Location:

FIVE MILES SOUTH OF BRIDGER.

Township\Range:

007S023E

Section:

10

TRS comments:

NW4

06-Jun-02

Montana Natural Heritage Program

Species of Special Concern: Belfry - North, CN 1016

Scientific Name: CYNOMYS LEUCURUS

Common Name: WHITE-TAILED PRAIRIE DOG

Global Rank: G4

Forest Service status: SENSITIVE

State Rank: S1

USFWS Endangered Species Act Status:

BLM Status: SPECIAL STATUS

Occurrence Type:

Species occurrence data:

1995: NO SIGN OF COLONY; AREA IS IRRIGATED CROPLAND.

Last observation: 1977-

Size (acres): 3

General site description:

COLONY LOCATED NEAR MUTUAL DITCH.

Land owner/manager:

PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

1-3 ACRES ON PRIVATE LAND; SEE LAND OWNER AT SITE

Information source:

FLATH, DENNIS L. MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS, WILDLIFE RESEARCH BUREAU, FWP BUILDING, MONTANA STATE UNIVERSITY CAMPUS, 1400 SOUTH 19TH STREET, BOZEMAN, MT 59717-0001. 406/944-6354.

Survey site name: SILVER TIP CREEK-COLONY #14

County: CARBON

USGS quadrangle: HATCHER PASS

Precision: M

Elevation (ft): 3800

Location:

2 MI NE BELFRY ON HWY 308. EXIT HWY AND GO S AND E APPROX 2 MI.

Township\Range:

Section:

TRS comments:

008S022E

2

SW4

06-Jun-02

Montana Natural Heritage Program

Species of Special Concern: Belfry - North, CN 1016

Scientific Name: CYNOMYS LEUCURUS

Common Name: WHITE-TAILED PRAIRIE DOG

Global Rank: G4

Forest Service status: SENSITIVE

State Rank: S1

USFWS Endangered Species Act Status:

BLM Status: SPECIAL STATUS

Occurrence Type:

Species occurrence data:

1997: COLONY NO LONGER ACTIVE. 3-10 ACRES ON PRIVATE LAND. 1995: COLONY STILL ACTIVE, 3-4 ACRES IN FALLOW IRRIGATED FIELD.

Last observation: 1995

Size (acres): 10

General site description:

Land owner/manager:

PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

Information source:

FLATH, DENNIS L. MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS, WILDLIFE RESEARCH BUREAU, FWP BUILDING, MONTANA STATE UNIVERSITY CAMPUS, 1400 SOUTH 19TH STREET, BOZEMAN, MT 59717-0001. 406/944-6354.

Survey site name: HUNT CREEK-COLONY #15

County: CARBON

USGS quadrangle: HATCHER PASS

Precision: M

Elevation (ft): 3870

Location:

HWY 308 2 MI N. OF BELFRY. TAKE ACCESS ROAD DUE EAST 2 MI. ROAD WINDS AND ENDS AT BUILDINGS TO SE.

Township\Range:

008S023E

Section:

6

TRS comments:

SW4NW4

Montana Natural Heritage Program

P.O. Box 201800

1515 East Sixth Avenue

Helena, Montana 59620-1800

(406)444-3009

<http://nris.state.mt.us>

Explanation of Element Occurrence Reports

Since 1985, the Montana Natural Heritage Program (MTNHP) has been compiling and maintaining an inventory of the elements of biological diversity in Montana. This inventory includes plant species, animal species, plant communities, and other biological features that are rare, endemic, disjunct, threatened or endangered throughout their range in Montana, vulnerable to extirpation from Montana, or in need of further research.

Individual species, communities, or biological features are referred to as "elements." An "element occurrence" generally falls in one of the following categories:

Plants: A documented location of a plant population. In some instances, adjacent, spatially separated clusters are considered subpopulations and are grouped as one occurrence (e.g., the subpopulations occur in ecologically similar habitats, and are within approximately one air mile of one another).

Animals with limited mobility (most invertebrates, amphibians, reptiles, small mammals, most fish): The location of a specimen collection or of a verified sighting; assumed to represent a breeding population. Additional collections or sightings are often appended to the original record.

Mobile or migratory animals (most birds and larger mammals, some fish): Breeding areas (including nesting territories, dens and leks) and significant aggregation sites (winter feeding areas, staging grounds, or hibernacula).

Communities: All contiguous, high-quality habitat as defined by physical and biological features.

Other: Significant biological features not included in the above categories, such as bird rookeries, peatlands, or state champion trees.



The quantity and quality of data contained in MTNHP reports is dependent on the research and observations of the many individuals and organizations who contribute information to the program.

Please keep in mind that the absence of information for an area does not mean the absence of significant biological features. Reports produced by the Montana Natural Heritage Program summarize information known to the program at the time of a request. These reports are not intended as a final statement on the elements or areas being considered, nor are they a substitute for on-site surveys which may be required for environmental assessments.

As a user of MTNHP, your contributions of data are essential to maintaining the accuracy of our data bases. New or updated location information for all species of special concern is always welcome.

We encourage you to visit our website at <http://nris.state.mt.us/mtnhp/>. On-line tools include species lists, an electronic version of *Montana Bird Distribution*, and search capabilities by county, management unit, or USGS 7.5' quadrangle. Also available is the *Montana Rare Plant Field Guide*, which contains photos, high-quality diagnostic illustrations, and supporting information for over 300 rare plant species in Montana.

Certain codes and abbreviations are used in element occurrence reports. Although many of these are very straightforward, the following explanations should answer most questions.

Global Rank and State Rank

Taxa are evaluated and ranked by MTNHP on the basis of their global (range-wide) status, and their state-wide status according to a standardized procedure.

For each level of distribution, global and state, species are assigned a numeric rank ranging from 1 (critically imperiled) to 5 (demonstrably secure). For example, Clustered lady's-slipper (*Cypripedium fasciculatum*) is ranked G4 S2. That is, globally the species is apparently secure, while in Montana it is imperiled because of rarity, or because of other factors making it demonstrably vulnerable to extirpation.

Rank Definition

- 1 Critically imperiled because of extreme rarity, or because of some factor of its biology making it especially vulnerable to extirpation.
- 2 Imperiled because of rarity, or because of other factors demonstrably making it very vulnerable to extinction throughout its range.
- 3 Vulnerable because of rarity, or found in a restricted range even though it may be abundant at some of its locations.
- 4 Apparently secure, though it may be quite rare in parts of its range, especially at the periphery.
- 5 Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery.
- U Possibly in peril but status uncertain; more information needed.
- H Historical, known only from records over 50 years ago; may be rediscovered.
- X Believed to be extinct; historical records only.

Other Global and State Rank codes:

- T Rank for a subspecies or variety; appended to the global rank for the full species, e.g., G4T3.
- Q Taxonomic questions or problems involved; more information needed.
- ? Inexact or uncertain.
- Z Ranking not applicable.
- A Accidental in the state. Includes species (usually birds or butterflies) recorded very infrequently, hundreds or thousands of miles outside their usual range.
- B A state rank modifier indicating breeding status for a migratory species. Example: S1B, SZN = breeding occurrences for the species are ranked S1 (critically imperiled) in the state; non-breeding occurrences are not ranked in the state.
- # A modifier to SX or SH: the species has been reintroduced but the population is not yet established.

U. S. Fish And Wildlife Service Endangered Species Act Status

Abbreviations indicate the categories defined in the U.S. Fish and Wildlife Service Notice of Review and indicate the status of a taxon under the federal Endangered Species Act of 1973 (16 U.S.C.A. §1531-1543 (Supp. 1996)).

Note: the categories C2, 3B and 3C are no longer maintained by the U.S. Fish and Wildlife Service (61 FR 7596, Feb. 28, 1996).

Current categories are:

- LE listed endangered
- LT listed threatened
- PE proposed endangered
- PT proposed threatened
- C candidate: Substantial information exists in U.S. Fish and Wildlife files on biological vulnerability to support

proposals to list as threatened or endangered.

NL not listed or no designation (see below)

XN non-essential experimental population

A species can have more than one federal designation if the species' status varies within its range. In these instances, the Montana designation is listed first. Example: LELT = species is listed as endangered in Montana; elsewhere in its range it is listed as threatened.

U.S. Forest Service Status

The status of species on Forest Service lands as defined by the U.S. Forest Service manual (2670.22). These taxa are listed as such by the Regional Forester (Northern Region) on National Forests in Montana. Species are listed as:

T/E/P listed as Threatened (LT) or Endangered (LE) under the Endangered Species Act or proposed for listing (P), and known or suspected to occur on national forests.

S sensitive species, subspecies or variety, for which the Regional Forester has determined there is a concern for population viability rangewide or in the region.

Bureau of Land Management Status

The status of species on Bureau of Land Management land is defined by the BLM 6840 manual and designated by the Montana State Office of the BLM in 1996:

S sensitive species: proven to be imperiled in at least part of its range and documented to occur on BLM lands.

W watch species: either known to be imperiled and suspected to occur on BLM lands, suspected to be imperiled and documented on BLM lands, or needing further study for other reasons.

Other terms that may be used in this report

USGS quadrangle - Name of the 7.5-minute USGS topographic map(s) where the population is located.

Township, range, section, TRS comments - legal description of the centroid of the population and, if known, additional townships or sections. TRS locators may be based on unsurveyed townships; in such cases, the locators are derived from U. S. Forest Service visitor maps or from BLM surface management status maps. This is done for convenience in describing species locations; the information does not necessarily indicate legal boundaries.

Precision - the level of location accuracy of the record.

S = accuracy of location is within an area of approximately 10 acres

M = accuracy of location is within a radius of approximately 1.5 miles

G = location is a place-name only, or within a radius of approximately 5 square miles.

Last observation: date the element was last observed extant at the site (not necessarily the date the site was last visited).

Land Owner/manager - the ownership or management of the land on which the element occurs. Areas are generally listed from smallest to largest. In most instances, this information is derived from U.S. Forest Service visitor maps or from BLM surface management status maps.

Please remember that this report is a summary of information. Additional data are available on most sites and species

If you have questions or need further assistance, please contact us either by phone at (406/444-0914), e-mail (mtnhp@nris.state.mt.us) or at the mailing address shown on the first page.

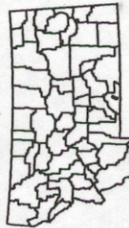
Montana Species of Concern Belfry - North CN 1016

Biological Data

- ▲ Animal
- Plant
- ⊕ Other
- Search Area

Land Status

- BLM
- BOR (BuRec)
- CoE & other DoD
- NPS
- USFS
- Other USDA
- USFWS
- BIA Trust
- Tribal
- State Trust
- DFWP
- University & Institutions
- County & City
- Plum Creek
- Private Conservation
- Other private
- Water



Species locations depicted outside the search area have imprecisely known locations and may actually occur within the search area.

Not all legend items may occur on map.

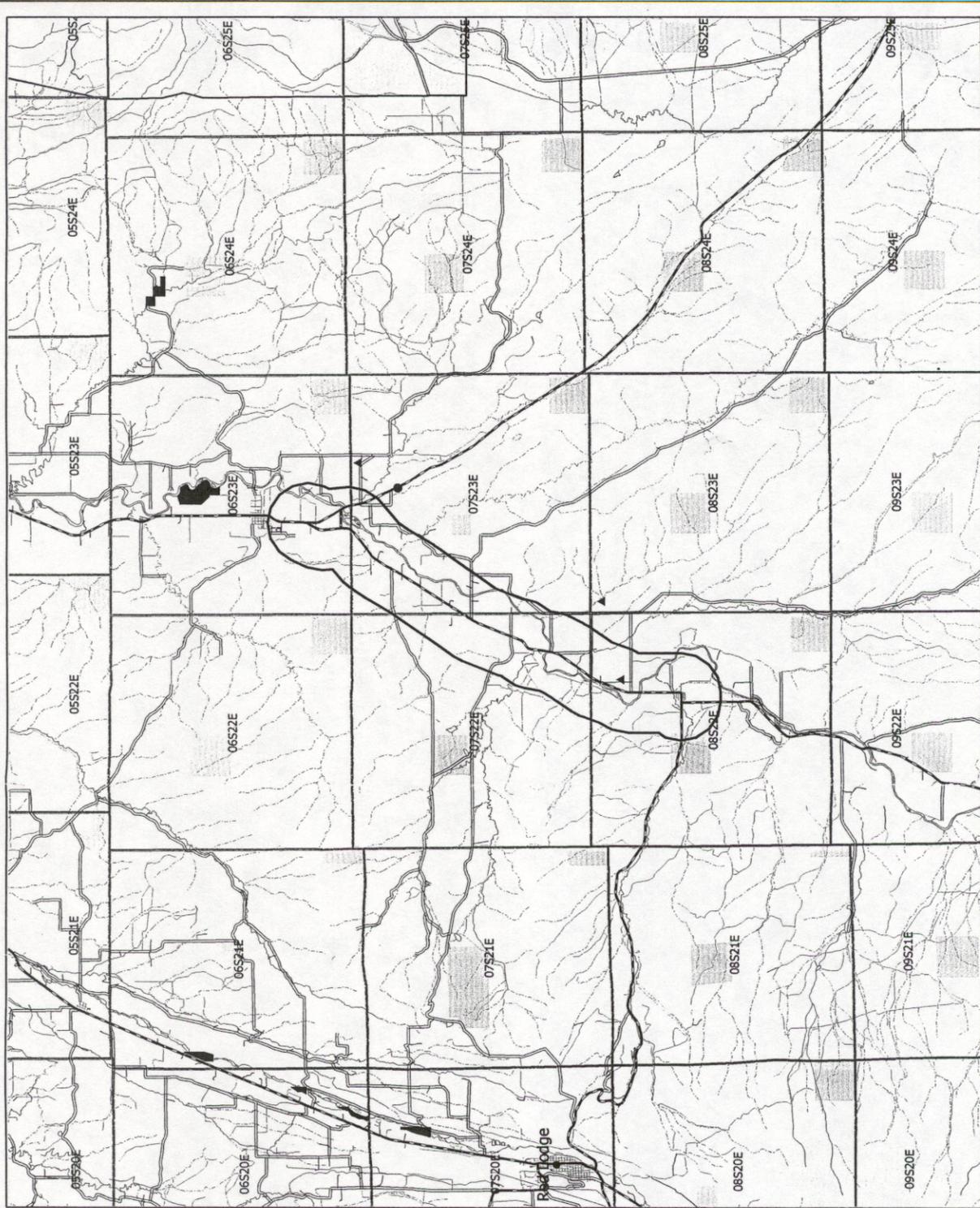
Features shown on this map do not imply public access to any lands.

This map displays management status, which may differ from ownership.

Refer to accompanying documentation for full explanation of map features.

MONTANA
Natural Heritage
Program

Natural Resource Information System
Helm, MT 59605-1400
PO Box 201800
(406) 443-3000 info@gnr.mt.us



June 06 2002
02prv10156



BOARD of COMMISSIONERS

COUNTY OF CARBON • STATE OF MONTANA

Post Office Box 887
Red Lodge, MT 59068

Phone: (406) 446-1595
Fax: (406) 446-2640

June 30, 2004

Debra Perkins-Smith
Consultant Project Manager
David Evans and Associates, Inc.
1331 Seventeenth Street, Suite 900
Denver, CO 80202

REC'D JUL 02 2004

**Subject: MT 72 BELFRY-North EA
F STPP 72-1(1)10 CN 1016
DRAFT EA FOR COOPERATING AGENCY REVIEW**

Ms. Perkins-Smith

After reviewing your EA for the Belfry Road, I concur with your plan with the following conditions:

Carbon County will not take on any new roads with the exception of that portion of State Highway 72 that lies within the town of Belfry proper, ending at Bearcreek Lane. Carbon County is not responsible for the construction or expense of extending Public or Private Roads to connect them with the new proposed road.

Carbon County will accept extensions of existing County Roads, which are necessary to connect with the realignment, based upon a County Review.

The County will not accept extensions of private roads as their responsibility.

Any portion of the existing Highway 72 that is not a part of the proposed realignment, will not be accepted by Carbon County without an individual review and approval of each separate portion.

Work with landowners to insure a private crossing where the stream, known as Bear Creek, intersects the existing Highway MT 72, just north of Belfry MT.

Carbon County will not accept any new bridges.

Respectfully


Albert H. Brown

Carbon County Commissioner

PO Box 887

Red Lodge MT 59068 Phone: (406) 446-1595

From: <JLandsmany@aol.com>
To: <dps@deainc.com>
Date: 5/7/04 9:09AM
Subject: (no subject)

May 7, 2004

Debra,

I had one incorrect letter in the address.....hope this works!
Jed

May 5, 2004

Hi Debra,

Belfry School District #3 is interested in being a co-operating agent regarding the "Belfry-North" highway project.

To the best of my knowledge, the "picnic area" across the street from the entrance to the elementary building is not a significant area. It is occasionally used by people passing through town.

Please call me if there is anything I can do to help you.

Jed L-Yakin
Superintendent, Belfry Schools