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Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Jim Lynch, Director
Brian Schweitzer, Governor

August 1, 2006

Janice W. Brown
Division Administrator
Federal Highway Administration
585 Shepard Way
Helena, MT 59601-9785

Subject: NH 8-1(28)23
Guardrail/Erosion – MacDonald Pass
CN 5136

This is to request approval of this proposed project as a Categorical Exclusion (CE) under the provisions of 23 CFR 771.117(d), and the Programmatic Agreement as signed by the MONTANA DEPARTMENT OF TRANSPORTATION (MDT) and the FHWA on April 12, 2001. A Copy of its Alignment and Grade Review Report (6/15/06) is attached. This proposed action also qualifies as a CE under ARM 18.2.261 (Sections **75-1-103** and **75-1-201, MCA**).

The following form provides the documentation required to demonstrate that all of the conditions are satisfied to qualify for a Programmatic Categorical Exclusion Approval (PCE) as initially agreed by the (former) MONTANA DEPARTMENT OF HIGHWAYS (MDOH) and the FHWA on December 6, 1989. (Note: An "**X**" in the "N/A" column is "Not Applicable" to, while one in the "UNK" column is "Unknown" at the present time for this proposed project.)

NOTE: A response in a box will require additional documentation for a Categorical Exclusion request in accordance with 23 CFR 771.117(d).

	YES	NO	N/A	UNK
1. This proposed project would have (a) significant environmental impact(s) as-defined under 23 CFR 771.117(a).	☐	☒	☐	☐
2. This proposed project involves (an) unusual circumstance(s) as described under 23 CFR 771.117(b).	☐	☒	☐	☐
3. This proposed project involves one (or more) of the following situations where:				
A. Right-of-Way, easements, and/or construction permits would be required.	☒	☐	☐	☐
1. The context or degree of the Right-of-Way action would have (a) substantial social, economic, or environmental effect(s).	☐	☒	☐	☐
2. There is a high rate of residential growth in this proposed project's area.	☐	☒	☐	☐
3. There is a high rate of commercial growth in this proposed project's area.	☐	☒	☐	☐
4. Work would be on and/or within approximately 1.6 kilometers (1± mile) of an Indian Reservation.	☐	☒	☐	☐

	YES	NO	N/A	UNK
5. There are parks, recreational, or other properties acquired/improved under *Section 6(f)* of the *1965 National Land & Water Conservation Fund Act* (**16 USC 460L**, *et seq.*) on or adjacent to proposed the project area.	☐	☒	☐	☐
The use of such *Section 6(f)* sites would be documented and compensated with the appropriate agencies. (*e.g.*.. MDFWP, local entities, etc.).	☐	☐	☒	☐
6. Are there any sites either on, or eligible for the National Register of Historic Places with concurrence in determination of eligibility or effect under *Section 106* of the *National Historic Preservation Act* (**16 USC 470**, *et seq.*) by the State Historic Preservation Office (SHPO), which would be affected by this proposed project.	☐	☒	☐	☐
7. There are parks, recreation sites, school grounds, wildlife refuges, historic sites, historic bridges, or irrigation that might be considered under *Section 4(f)* of the 1966 *US DEPARTMENT OF TRANSPORTATION Act* (**49 USC 303**) on or adjacent to the project area.	☐	☒	☐	☐
a. "Nationwide" Programmatic *Section 4(f)* Evaluation forms for these sites are attached.	☐	☐	☒	☐
b. This proposed project requires a full (*i.e.*: DRAFT & FINAL) *Section 4(f)* Evaluation.	☐	☐	☒	☐
B. The activity would involve work in a streambed, wetland, and/or other waterbody(ies) considered as "waters of the United States" or similar (*e.g.*: "state waters").	☒	☐	☐	☐
1. Conditions set forth in *Section 10* of the *Rivers and Harbors Act* (**33 USC 403**) and/or *Section 404* under 33 CFR Parts 320-330 of the *Clean Water Act* (33 USC 1251-1376) would be met.	☒	☐	☐	☐
2. Impacts in wetlands, including but not limited to those referenced under Executive Order (E.O.) #11990, and their proposed mitigation would be coordinated with the US Army Corps of Engineers and other Resource Agencies (Federal, State and Tribal) as required for permitting	☒	☐	☐	☐
3. A 124SPA Stream Protection permit would be obtained from the MDFWP?	☒	☐	☐	☐
4. There is a delineated floodplain in the proposed project area under FEMA's Floodplain Management criteria.	☐	☒	☐	☐
The water surface at the 100-year flood limit elevation would exceed floodplain management criteria due to an encroachment by the proposed project.	☐	☐	☒	☐
5. Tribal Water Permit would be required.	☐	☒	☐	☐
6. Work would be required in, across, and/or adjacent to a river which is a component of, or proposed for inclusion in Montana's Wild and/or Scenic Rivers system as published by the US Department of Agriculture, or the US Department of the Interior.	☐	☒	☐	☐

	YES	NO	N/A	UNK
The designated National Wild & Scenic River systems in Montana are:				
a. Middle Fork of the Flathead River (headwaters to South Fork confluence).	☐	☐	☐	☐
b. North Fork of the Flathead River (Canadian Border to Middle Fork confluence).	☐	☐	☐	☐
c. South Fork of the Flathead River (headwaters to Hungry Horse Reservoir).	☐	☐	☐	☐
d. Missouri River (Fort Benton to Charles M. Russell National Wildlife Refuge).	☐	☐	☐	☐
In accordance with *Section 7* of the *Wild and Scenic Rivers Act* (**16 USC 1271 – 1287**), this work would be coordinated and documented with either the Flathead National Forest (Flathead River), or US Bureau of Land Management (Missouri River).	☐	☐	☒	☐
C. This is a "Type I" action as defined under 23 CFR 772.5(h), which typically consists of highway construction on a new location or the physical alteration of an existing route which substantially changes its horizontal or vertical alignments or increases the number of through-traffic lanes.	☐	☒	☐	☐
1. If yes, are there potential noise impacts?	☐	☐	☒	☐
2. A Noise Analysis would be completed.	☐	☐	☒	☐
3. There would be compliance with the provisions of both 23 CFR 772 for FHWA's Noise Impact analyses and MDT's Noise Policy.	☒	☐	☐	☐
D. There would be substantial changes in access control involved with this proposed project.	☐	☒	☐	☐
If yes, would they result in extensive economic and/or social impacts on the affected locations?	☐	☐	☒	☐
E. The use of a temporary road, detour, or ramp closure having the following conditions when the action(s) associated with such facilities:				
1. Provisions would be made for access by local traffic, and be posted for same.	☒	☐	☐	☐
2. Adverse effects to through-traffic dependant businesses would be avoided or minimized.	☒	☐	☐	☐
3. Interference to local events(*e.g.*: festivals) would be minimized to all possible extent.	☒	☐	☐	☐
4. Substantial controversy associated with this pending action would be avoided.	☒	☐	☐	☐
F. Hazardous wastes /substances, as defined by the US Environmental Protection Agency (EPA) and/or the Montana Department of Environmental Quality (MDEQ), and/or (a) listed "Superfund" (under *CERCLA* or *CECRA*) site(s) are currently on and/or adjacent to this proposed project.	☐	☒	☐	☐

		YES	NO	N/A	UNK
	All reasonable measures would be taken to avoid and/or minimize substantial impacts from same.	☒	☐	☐	☐
G.	The Montana Pollutant Discharge Elimination System's conditions (ARM 16.20.1314), including temporary erosion control features for construction would be met.	☒	☐	☐	☐
H.	Permanent desirable vegetation with an approved seeding mixture would be established on exposed areas.	☒	☐	☐	☐
I.	Documentation of an "invasive species" review to comply with both EO #13112 and the *County Noxious Weed Control Act* (7-22-21, MCA), including directions as specified by the county(ies) wherein its intended work would be done.	☒	☐	☐	☐
J.	There are "Prime" or "Prime if Irrigated" Farmlands designated by the Natural Resources Conservation Service on or adjacent to the proposed project area.	☒	☐	☐	☐
	If the proposed work would affect Important Farmlands, then an AD-1006 Farmland Conversion Impact Rating form would be completed in accordance with the *Farmland Protection Policy Act* (**7 USC 4201**, *et seq.*).	☒	☐	☐	☐
K.	Features for the *Americans with Disabilities Act* (PL 101-336) compliance would be included.	☐	☐	☒	☐
L.	A written Public Involvement Plan, would be completed in accordance with MDT's Public Involvement Handbook.	☒	☐	☐	☐
4.	This proposed project complies with the *Clean Air Act*'s *Section 176(c)* (**42 USC 7521(a)**, as amended) under the provisions of 40 CFR 81.327 as it's either in a Montana air quality:				
A.	"Unclassifiable"/attainment area. This proposed project is not covered under the EPA's September 15, 1997 Final Rule on air quality conformity.	☒	☐	☐	☐
	and/or				
B.	"Nonattainment" area. However, this type of proposed project is either exempted from the conformity determination requirements (under EPA's September 15, 1997 Final Rule), or a conformity determination would be documented in coordination with the responsible agencies: (Metropolitan Planning Organizations, MDEQ's Air Quality Division, etc.).	☐	☐	☒	☐
C.	Is this proposed project in a "Class I Air Shed" (Indian Reservations) under 40 CFR 52.1382(c)(3)?	☐	☒	☐	☐
5.	Federally listed Threatened or Endangered (T/E) Species:				
A.	There are recorded occurrences, and/or critical habitat in this proposed project's vicinity.	☒	☐	☐	☐
B.	Would this proposed project result in a "jeopardy" opinion (under 50 CFR 402) from the Fish & Wildlife Service on any Federally listed T/E Species?	☐	☒	☐	☐

The proposed project would not induce significant land use changes, nor promote unplanned growth. There would be no significant effects on access to adjacent property, nor to present traffic patterns.

This proposed project would not create disproportionately high and/or adverse impacts on the health or environment of minority and/or low-income populations (EO #12898). It also complies with the provisions of *Title VI* of the *Civil Rights Act* of 1964 (**42 USC 2000d**) under the FHWA's regulations (23 CFR 200).

In accordance with the provisions of 23 CFR 771.117(a), this pending action would not cause any significant individual, secondary, or cumulative environmental impacts. Therefore, the FHWA's concurrence is requested that this proposed project is properly classified as a Categorical Exclusion.

_____, Date: 8/1/06
Thomas G. Gocksch P.E.
Project Development Engineer
MDT Environmental Services Bureau

Concur _____, Date: 8/7/06
Tom Hansen, P.E. - Engineering Section Supervisor
Environmental Services Bureau

Concur _____, Date: 9-16-06
Federal Highway Administration

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Attachments

cc: Jeffrey M. Ebert, P.E. - District Administrator-Butte
Paul R. Ferry, P.E. - Highway Engineer
John H. Horton - MDT Right-of-Way Bureau Chief
Suzy Althof - MDT Contract Plans Section Supervisor
David W. Jensen, Supervisor - MDT Fiscal Programming Section
Jean A. Riley, P.E., Chief - Environmental Services Bureau
Tom Gocksch P.E. – Environmental Services Bureau
Deb Wambach – Environmental Services Bureau
✓Environmental Quality Council

Lewis & Clark County
P.O. Box 1724
Helena, MT 59624-1724

Powell County Courthouse
409 Missouri Ave.
Deer Lodge, MT 59722-1084

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Montana Department of Transportation
PO Box 201001
Helena, MT 59620-1001

Memorandum

To: Paul Ferry, P.E.
Highways Engineer

From: Damian Krings, P.E.
Road Design Engineer

Date: June 15, 2006

Subject: **NH 8-1(28)23**
Guardrail/Erosion-MacDonald Pass
CN 5136
Work Type 310

We request that you approve the **Alignment and Grade Review Report** for the subject project.

Approved _____ Date 6-19-06
Paul Ferry, P.E.
Highways Engineer

We are requesting comments from those individuals on the distribution list. We will assume their concurrence, if no comments are received within **two weeks** from the approval date.

Distribution: (all with attachments)

Jeff Ebert	Butte D.A.	Walt Scott	Utilities
Mick Johnson	Great Falls D.A.	Dwane Kailey	Missoula
Damian Krings	Road Design Engineer		
Mark Goodman	Hydraulics		
Mac McArthur	Constructic		
Matt Strizich	Materials		
Kent Barnes	Bridge		
Sandy Straehl	Planning		
Jean Riley	Environmen		

Cc: Dave Jensen, Fiscal Prog
Highways File, w/attachn

ALIGNMENT AND GRADE REVIEW REPORT

The Alignment and Grade Review for the subject project was held June 6, 2006. Comments received from the review have been included in this report. The following attended the review:

Jim Davies	Road Design – Helena
Chris Jain	Road Design – Helena
Roger Schultz	Road Design – Helena (Attended Office Review Only)
Walt Ludlow	Hydraulics – Helena
Kam Wrigg	Maintenance – Helena
Tony Strainer	Maintenance – MacDonald Pass
Deb Wambach	Environmental – Helena
Joe Radonich	Environmental – Helena
Joe Olsen	Butte DESS – Butte
Jeff Ebert	Butte District Administrator – Butte
Tom McCormick	Construction – Bozeman
Zach Cunningham	Right-of-Way – Butte
Jim Flynn	Construction – Helena
Dan Williams	Maintenance – Helena (Attended Office Review Only)

Scope of Work

This project was nominated to replace guardrail and install erosion protection measures in the ditches for the section of National Highway Route 8/US 12 from reference point (RP) 23.2± to RP 34.2±. Work will include:

- Replacing the guardrail on the west side of MacDonald pass
- Replacing the existing bituminous curb on the west side of the pass with concrete curb
- Installing concrete curb on the east side of the pass
- Installing plant mix lined ditches at several locations on both the east and west sides of the pass
- Installing a retaining wall for inlet protection at three locations on the west side of the pass
- Exposing and extending the cross drain culvert at STA 445+97
- Placing riprap for ditch and outfall protection at multiple locations
- Installing sediment catchment basins @ 7 locations.

Project Location and Limits

LOCATION: Powell County, T 9 N, R 6 W, sections 5, 4, 3, 2; Lewis and Clark County, T 9 N, R 6 W, section 1; T 10 N, R 6 W, section 36; T 10 N, R 5 E, sections 31, 29, and 32 on National Highway Route 8/US 12.

LIMITS: Project begins at RP 23.2±, English as-built station 35+91.48, extends easterly about 11.0 miles and ends at RP 34.2±, English as-built station 606+25.63.

Physical Characteristics

This project is in rural mountainous terrain consisting mainly of forestland. The Powell County – Lewis and Clark County line is at RP 27.627, which is also the location of the Missoula – Great Falls financial district boundary. The w-beam guardrail on the west side of the pass, from RP 23± to RP 27.3±, is from the original construction in 1973 and the guardrail on the east side of the pass, from RP 27.3± to RP 34.2±, was replaced in 1997. There is a Road Weather Information System installation at RP 27.9. The project enters the Helena National Forest at RP 26.678 and exits at RP 31.655. Some sections of the ditches are lined with plant mix.

Horizontal Alignment

There are no proposed changes to the horizontal alignment.

Vertical Alignment

No work will be done to the vertical alignment with this guardrail and erosion protection project.

Surfacing and Typical Section

There are no proposed changes to the existing pavement.

Grading

There is no Grading associated with the existing roadway itself. Most of the grading will consist of preparing and reshaping the ditches that will be paved and excavating the eight different areas identified for settling basins. The ditch work will be covered by motor grader hours, and the settling basin excavation will be unclassified excavation.

Sanding material behind the guardrail on the west side of the pass will be removed and disposed of when the guardrail is removed during replacement.

Some reshaping will also be required where instead of paving the ditch, the fill slope from the shoulder to the ditch bottom will be paved and the ditch bottom will be lined with riprap.

Minor grading at the Frontier Town approach will be necessary to complete plant-mix lined ditch installation and re-direct the ditch to the approach culvert.

Hydraulics

The following details the hydraulic improvements to be completed:

- Plant mix lined ditches will be installed at several new locations on the north side of the road, on both sides of the pass. Plant mix lined ditches will allow Maintenance to remove sanding material from the ditches more easily, while maintaining the designed ditch bottom.
- Riprap lined ditches with a paved apron, from the shoulder to the ditch bottom, will be constructed in a few locations where there is continuous and extensive erosion of the fill on the inside of a superelevated curve.
- Existing bituminous curb on the west side of the pass will be replaced with concrete curb and will be tied to the existing embankment protectors.

- Concrete curb will be installed on the east side of the pass and will be tied to the existing embankment protectors.
- Bituminous curb may need to be used when tying the new concrete curb to the existing embankment protectors because of the difficulty in working around the existing guardrail posts.
- Some of the existing embankment protectors will need to be cleaned or replaced.
- It was decided at the review to consider modifying the existing inlet covers on the west side of the pass instead of just replacing them because of the potential cost savings.
- Riprap will be placed in some ditches to prevent further erosion and lower water velocities.
- Settling basins will be constructed at seven locations identified during the field reviews.
- Debris walls using salvaged guardrail will be constructed to prevent the eroding slope from continuing to cover the inlets at three locations.
- Ditch blocks will be considered as per the Hydraulic recommendations to reduce the amount of flow bypassing the inlets which will help in reducing flow velocities and erosion in the ditches.
- Check dams will be constructed in some of the ditches upstream of the drop inlets to reduce flow velocities and encourage sediment dropout.
- The cross drain culvert at RP 31.65± will be excavated and extended to expose the outlet end on the south side of the highway. The culvert outlet is buried and is believed to end approximately at the face of the existing guardrail on the south side of the highway. The culvert will be extended as necessary.
- The following culverts are going to be replaced or lined with a culvert liner because of excessive abrasion and corrosion:
    - STA 189+65
    - STA 195+00
    - STA 200+00
    - STA 206+40
    - STA 210+00
    - STA 213+00
    - STA 217+00
    - STA 221+60
    - STA 230+60

  Hydraulics will make the determination to replace or line each culvert. Several of the culverts have drop inlets with underdrains tied to them that will need to be perpetuated. Lining the culverts will eliminate the need to trench across the highway, however it is more expensive.

In areas where the existing guardrail will remain in place, new concrete curbing can be placed using slip forms under the guardrail without disturbing the existing guardrail or posts. This has been done in the Glendive District. Concrete curb was chosen at the request of Maintenance. Concrete curb has also been chosen during construction over bituminous curb by contractors in the past in the Glendive District and completed as a no-cost change order.

Bridges

There are no bridges within the project limits.

Traffic Data

2003 ADT =	2,620	Present
2004 ADT =	2,670	Letting Date
2024 ADT =	3,970	Design (Future)
DHV =	520	
D =		%
T =	12.1	%
EAL =	208	
AGR =	2.0	%

Accident History

The following information is summarized from Safety Management's memo dated July 6, 2004:

The analysis is for National Highway 8, reference posts 23.0 to 31.9, for the dates January 1, 1993 through December 31, 2002.

ENGINEERING STUDY EVALUATION

DESCRIPTION: GUARDRAIL/EROSION – MACDONALD PASS

ROUTE & RP: N-8 RP 23.0 TO 31.9

DATA TIME FRAME: 1-1-1993 TO 12-31-2002

STATEWIDE AVERAGE FOR RURAL NON-INTERSTATE NHS STUDY AREA		
ALL VEHICLES ACCIDENT RATE:	1.31	2.42
ALL VEHICLES SEVERITY INDEX:	2.34	2.30
ALL VEHICLES SEVERITY RATE:	3.08	5.57
TRUCK ACCIDENT RATE:	1.15	1.32
TRUCK SEVERITY INDEX:	2.33	1.79
TRUCK SEVERITY RATE:	2.68	2.36
TRUCK ACCIDENTS:		14
TOTAL RECORDED ACCIDENTS:		198

I. VARIATIONS FROM AVERAGE OCCURRENCE:

- 50.0% icy/snowy/slushy (road conditions) vs. 24.3% for statewide rural non-interstate national highway systems
- 22.2% snow/blowing snow (weather condition) vs. 11.4% for statewide rural non-interstate national highway systems
- 17.2% guardrail face (first harmful event) vs. 3.3% for statewide rural non-interstate national highway systems
- 99.0% non-junction (junction related) vs. 71.8% for statewide rural non-interstate national highway systems

II. ACCIDENT CLUSTERS AND SAFETY PROJECTS:

An accident cluster was identified between reference posts 23.4 and 24.4 in the year 1997. No feasible countermeasures to address a specific accident trend were identified.

An accident cluster was identified between reference posts 23.6 and 24.1 in the year 2002. No feasible countermeasures to address a specific accident trend were identified.

An accident cluster was identified between reference posts 26.2 and 26.6 in the year 1999. The placement of a curve sign with a 55 M.P.H. advisory plate was recommended and implemented by MDT maintenance crew.

An accident cluster was identified between reference posts 26.6 and 27.1 in the year 2002. Eight of the thirteen recorded accidents took place when the road conditions were wet, snowy, or icy. The recommendation to continue monitoring the site was put forth.

An accident cluster was identified between reference posts 27.5 and 27.9 in the year 2001. Fourteen of the eighteen recorded accidents took place when vehicles were traveling Eastbound. Twelve of the eighteen recorded accidents took place when the road conditions were icy, snowy, or slushy. The placement of a new curve sign with a 55 M.P.H. advisory plate was recommended.

An accident cluster was identified between reference posts 27.9 and 28.1 in the year 2002. No feasible countermeasures to address a specific accident trend were identified.

An accident cluster was identified between reference posts 27.5 and 29.9 in the year 1999. No feasible countermeasures to address a specific accident trend were identified. In 2002, the installation of a curve sign with an advisory speed plate was recommended and the installation is pending.

An accident cluster was identified between reference posts 29.6 and 30.2 in the year 1993. No feasible countermeasures to address a specific accident trend were identified.

An accident cluster was identified between reference posts 29.8 and 30.4 in the year

2001. No feasible countermeasures to address a specific accident trend were identified.

An accident cluster was identified between reference posts 30.5 and 31.2 in the year 2002. No feasible countermeasures to address a specific accident trend were identified.

III. REMARKS:

The accident rate for this section is approximately 1.85 times greater than the statewide average for rural non-interstate national highway systems. The severity rate for this section is approximately 1.81 times greater than the statewide average for the rural non-interstate national highway system. This section of roadway had 198 recorded crashes between January 1, 1993 and December 31, 2002. Of these 198 accidents, 99 (50%) occurred when the road conditions were icy, snowy, or slushy.

Check drainage across highway in curves when snow banks are present.

With the extensive sanding on Mc Donald Pass, it is difficult to maintain and see the pavement markings, please let us know if an experimental installation of snow plow mountable reflectors in the pavement to delineate traffic lanes could be considered with this project.

The melting snow problem at one location is being addressed by regrading the ditch to properly drain an approach culvert and paving that ditch.

Traffic will investigate the possibility or installing centerline rumble strips.

The installation of chevrons on multiple corners is being considered.

Miscellaneous Features

The existing guardrail on the west side of the pass will be replaced and the end treatments will be upgraded to optional terminal sections where necessary. Three ET-2000 terminal sections will be salvaged and reused on this project. All posts will be replaced. At four locations the guardrail terminates into the cut slope and this will continue to be the end treatment at these locations for the new guardrail. Much of the guardrail has been damaged from vehicle hits or snowplow contact. Any salvageable guardrail will be retained for use on this project. The plans package will be completed on the basis that no guardrail will be salvaged. The Construction Project Manager will determine which guardrail sections will be salvaged and reused on this project. Salvaged guardrail will be used to construct debris walls at three locations.

A few sections of guardrail at the Scenic Turnout on the east side of the pass will be further investigated to determine if they need to be pulled back in from the fill slope a few feet in order to provide adequate support for the posts.

The existing bituminous curbing will be removed and replaced with concrete curbing on the west side of the pass with a few exceptions as noted during the field review. A short section of curbing will not be put back right at the location of the water fountain. Another section of curbing will be shortened to end at its associated drop inlet.

Debris walls will be constructed at three locations to prevent eroded material from covering the inlets. The debris walls will consist of three new eight foot guardrail posts and six sections of salvaged guardrail for each wall. The salvaged guardrail sections will be stacked three high on both the highway and cut sides of the posts.

It was decided at the review to consider modifying the existing inlet covers on the west side of the pass instead of just replacing them because of the potential cost savings.

Settling basins will be constructed at seven locations identified during the field reviews.

Design Exceptions
No design exceptions are anticipated for this project.

Right-of-Way
Right-of-Way involvement will be required to obtain an easement for access to an inlet and a proposed settling basin at STA 452+50± to 456+00±. Construction permits may be needed at the locations of the proposed settling basins and the culvert replacement and liner locations.

Utilities
There is fiber optic present. Utilities will need to be located and shown on the construction plans because of the excavation and the ditch work required for the plant mix lined ditches.

Railroads
There is no railroad present within the project limits.

Environmental Considerations
BMP's, Best Management Practices, and/or erosion control should be used as appropriate to prevent any materials from entering stream or wetland areas located adjacent to the project area. No direct impacts to any streams and/or wetlands are anticipated. ~~No water quality permits are anticipated at this time, including CWA 404 permit and SPA 124 permit.~~ A SWPPP and associated erosion control plans will be required if greater than one acre of ground disturbance is proposed. A Biological Resources Report and Biological Assessment ~~will be~~ have been completed. A Categorical Exclusion will be prepared for this project.

Settling basins will be constructed at seven locations identified during the field reviews. Ditch blocks will be considered to reduce the amount of flow bypassing the inlets which will help in reducing flow velocities and erosion in the ditches. Check dams will be constructed in some of the ditches upstream of the drop inlets to reduce flow velocities and encourage sediment dropout. The settling basins, plant mix lined ditches, ditch blocks, and check dams are all being proposed to help reduce erosion and minimize the migration of the eroded material and road traction sanding material. The new curbing will help direct runoff to drop inlets and embankment protectors, further reducing erosion and sediment deposition on the fill slope side of the highway. These proposed improvements will make it easier for Maintenance to recover the sanding

↳ Water quality permits including a SPA 124 and CWA 404 will be required for work in live streams or other jurisdictional waters. No direct wetland impacts anticipated at this time

material and the eroded material, prior to it being sent though cross drains and down the fill slope. This practice will contribute to reducing the amount of potential sediment reaching streams at the bottom of the fill slope.

Environmental will provide any necessary environmental related special provisions.

Traffic Control

A traffic control plan will be developed as the design of the project progresses. Traffic will be maintained during construction activities throughout the project.
Appropriate traffic control devices and signing will be used throughout the project in accordance with the *Manual of Uniform Traffic Control Devices*.

Public Involvement

This will be Level A public involvement: a news release explaining the project and including a department point of contact.

Cost Estimate

Below is a summary of the preliminary cost estimate for this project:

	West Side of the Pass Missoula District Powell County	East Side of the Pass Great Falls District Lewis and Clark County
Guardrail	$ 223,000	$ -
Ditch Work	$ 89,000	$ 47,000
Culverts	$ 309,000	$ 8,000
Curbing	$ 66,000	$ 124,000
Other Work	$ 12,000	$ 4,000
Traffic Control (10%)	$ 69,900	$ 18,300
Subtotal	**$ 768,900**	**$ 201,300**
Mobilization (15%)	$ 115,300	$ 30,200
Subtotal	**$ 884,200**	**$ 231,500**
Contingencies (15%)	$ 132,600	$ 34,700
Subtotal	**$ 1,016,800**	**$ 266,200**
Inflation (3% per year x 2 years)	$ 61,900	$ 16,200
Total CN:	**$ 1,079,000**	**$ 282,000**
CE (15%)	**$ 161,900**	**$ 42,300**
Project Total CN:	**$ 1,361,000**	

This estimate does not include indirect costs.

Ready Date

The current ready date for Guardrail/Erosion Control – MacDonald Pass is September 2007.

AGR Comments

The following changes discussed during the AGR office review will be made to the sheets as noted:

Cost Estimate

- Asphalt pay items will be adjusted if Grade D asphalt is used.
- The debris walls will be shown as an item by themselves.
- 5000 units of Miscellaneous Work will be included.
- Temporary Erosion Control will be added or accounted for with additional Miscellaneous Work units if Erosion Control Plans aren't completed.

Plan Sheets

General

- Powell County work will be State funding.
- Lewis and Clark County work will be NH funding.
- Funding splits will be completed for the cost estimate and the plans
- The sanding material behind the guardrail on the west side of the pass will be removed and disposed of when the guardrail is removed to be replaced. A detail will be included in the plans to show this work. The reshaped area will be seeded.
- Summary frames will be updated to reflect field changes such as confirming the locations of the settling basins and the existing optional terminal sections.
- Mile posts will be shown on all plan sheets.
- Approach stationing will be corrected where necessary.
- Existing plant mix lined ditches will be shown on plans.
- A plan-view detail will be shown for each of the settling basins.
- "Remove Bituminous Curb" notes will be deleted from east side of pass.

Sheet 1

- The project number will be corrected to show state funded construction.

Sheet 2

- Unused sections will be deleted from the Table of Contents
- Temporary Erosion and Sediment Control note will be corrected.
- Clearing and Grubbing will be included in the unit price for Unclassified Excavation.

Sheet 3

- No changes.

Sheet 4

- Summary frames will be updated to reflect field changes to quantities and locations.
- Summary frames will be corrected for funding split
- Stationing typos will be corrected.

Sheet 5

- Summary frames will be updated to reflect field changes to quantities and locations.

Sheet 6

- A special will be written to instruct contractor how to construct the plant mix lined ditch.
- The existing plant mix lined ditches may be re-sealed.
- Removal of sanding material when re-establishing ditch bottoms will be tracked during construction for TMDL purposes.
- Guardrail will be installed on both sides of the debris walls.

Sheet 7

- No changes

Sheet 8

- A debris wall will be added at STA 144+50± LT.

Sheet 9

- The break in the guardrail will be connected at STA 170+50 RT at the location of the old water fountain and the ET-2000 will be reused.
- A debris wall will be added at STA 169+10± LT.
- A settling basin will be constructed at STA 184+00± RT.
- A settling basin will be constructed at STA 189+50± RT.
- A settling basin will be constructed at STA 201+00± LT.

Sheet 10

- No changes

Sheet 11

- The ditch will be paved to the Frontier Town approach culvert.

Sheet 12

- The inlet at STA 348+00± will be raised.
- A settling basin near STA 381+00± will be constructed.

Sheet 13

- No changes.

Sheet 14

- A settling basin near STA 435+00± will be constructed.
- A settling basin near STA 445+80± will be constructed.
- A settling basin near STA 453+50± will be constructed.

Sheet 15

- No changes.

Sheet 16

- No changes.

Cross Section Sheets

- No changes.

Special Provisions

- Special provisions will be developed for the plant mix lined ditches, settling basins, debris walls, culvert replacements and liners, and any other items as necessary.