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

Timothy W. Reardon, Director
Brian Schweitzer, Governor

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ENVIRONMENTAL

April 6, 2012

Kevin L. McLaury
Division Administrator
Federal Highway Administration
585 Shepard Way
Helena, MT 59601-9785

MASTER FILE
COPY

Attention: Jeff Patten

Subject: Categorical Exclusion
W OF CHESTNUT - SLIDE REPAIR
IM 90-6(134)316
Control Number: 7465000

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 Preliminary Field Review Report (PFRR) dated January 30, 2012 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 shaded 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.	☒			

	YES	NO	N/A	UNK
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.	☐	☒	☐	☐
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. The proposed project would not impact the site(s), so a 4(f) evaluation is not necessary.	☐	☐	☒	☐
b. De minimis finding(s) is/are necessary for this project.	☐	☐	☒	☐
c. "Nationwide" Programmatic *Section 4(f)* Evaluation forms for these sites are attached.	☐	☐	☒	☐
d. 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").	☒	☐	☐	☐

	YES	NO	N/A	UNK
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 Authorization 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.	☐	☒	☐	☐
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).	☐	■	☒	☐

	YES	NO	N/A	UNK
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.	☐	☒	☐	☐
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.	☒	☐	☐	☐

	YES	NO	N/A	UNK
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.

Barry Brosten, Date: 4/6/12
Barry Brosten - Butte District Project Development Engineer
MDT Environmental Services Bureau

Concur Heidy Bruner, Date: 4/9/12
Heidy Bruner, P.E. - Engineering Section Supervisor
MDT Environmental Services Bureau

Concur Jeffrey A Paber, Date: 4/13/12
Federal Highway Administration

MDT attempts to provide accommodation for any known disability that may interfere with a person participating in any service, program or activity of the Dept. Alternative accessible formats of this information will be provided upon request. For further information, call 406-444-7228 or TTY (800-335-7592), or call Montana Relay at 711.

Attachment: PFRR

Copy (w/o attach.):	Jeff Ebert	Butte District Administrator
	Paul Ferry	Highway Engineer
	Kent Barnes	Bridge Engineer
	Tom Martin	Chief, Environmental Services Bureau
	Robert Stapley	Right-of-Way Bureau Chief
	Suzy Price	Contract Plans Bureau Chief
	Nicole Pallister	Fiscal Programming Section Supervisor
	Tom Erving	Fiscal Programming Section
	Tim Conway	Consultant Design Engineer
	Barry Brosten	Environmental Services
	Environmental Services File	
	Montana Legislative Branch Environmental Quality Council (EQC)	

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

Memorandum

To: Paul Ferry, PE
Highways Engineer

From: Damian Krings, PE Signed 1/30/12
Road Design Engineer

Date: January 30, 2012

Subject: IM 90-6(134)316
W. of Chestnut – Slide Repair
UPN 7465000
Work Type 310-Roadway & Roadside Safety Improvements

Please approve the attached Preliminary Field Review Report.

Approved Signed by Paul Ferry 1/31/12 Date _____
Paul Ferry, P.E.
Highways Engineer

We are requesting comments from those on the distribution list. We will assume their concurrence if we receive no comments within two weeks of the approval date.

Distribution:
Jeff Ebert, District Administrator
Kent Barnes, Bridge Engineer
Paul Ferry, Highways Engineer
Roy Peterson, Traffic and Safety Engineer
Robert Stapley, Right-of-Way Bureau Chief
Tom Martin, Environmental Services Bureau Chief
Lynn Zanto, Rail, Transit, & Planning Division Administrator
Jake Goettle, Construction Engineering Services Bureau
Matt Strizich, Materials Engineer
Jon Swartz, Maintenance Administrator

cc:
Dawn Stratton, Fiscal Programming Section
Scott Keller, Project Design Manager
Damian Krings, Road Design Engineer
Jeff Patten, FHWA – Operations Manager
Scott Helm, Geotechnical Operations Manager
Master File

e-copies:
Jim Walther, Engineering, Preconstruction Engineer
Lesly Tribelhorn, Highways Design Engineer
Mark Goodman, Hydraulics Engineer
Walt Ludlow, District Hydraulics Engineer
Bonnie Gundrum, Env. Resources Section Supervisor
Deb Wambach, District Biologist
Barry Brosten, District Project Development Engineer
Danielle Bolan, Traffic Engineer
LeRoy Wosoba, District Traffic Engineer
Kraig McLeod, Safety Engineer
Nathan Haddick, Bridge Area Engineer
Matt Strizich, Materials Engineer
Daniel Hill, Pavement Analysis Engineer
Pat McCann, District Geotechnical Manager
Bryce Larsen, Supervisor, Photogrammetry & Survey
Marty Beatty, Engineering Information Services
Paul Grant, Public Involvement Officer
Jean Riley, Planner
Dawn Stratton, Fiscal Programming
Jake Goettle, Construction Bureau – VA Engineer
Dustin Rouse, District Preconstruction
Joe Walsh, District Projects Engineer
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Kyle DeMars, Bozeman Division Maintenance Chief
Zach Cunningham, District Right of Way Supervisor
Alyce Fisher, Fiscal Programming
Gino Liva, District Construction
Alice Flesch, ADA Coordinator
Mark Keefe, Bicycle/Pedestrian Coordinator

Introduction

The field review for the subject project was held in the Bozeman Conference Room on Tuesday, December 13, 2011 with the following personnel in attendance:

Dustin Rouse	Butte District Preconstruction	MDT-Butte (Via Polycom)
Pat McCann	Geotechnical Section	MDT - Helena
Dave Cunningham	Geotechnical Section	MDT - Helena
Deb Wambach	Environmental Services Bureau	MDT - Helena
Phil Johnson	Environmental Services Bureau	MDT - Helena
Scott Keller	MSU Design Unit	MDT – Bozeman
Steve Felix	Maintenance	MDT – Bozeman
Bill Pierce	Maintenance	MDT – Bozeman

Proposed Scope of Work

The proposed project has been nominated to reduce the risk of future mudslides and debris flows reaching the Interstate. It will also improve the drainage characteristics and help reduce sediment from leaving the MDT right-of-way and impacting the Rocky Creek waterway. This will be achieved through a variety of methods as described in the Major Design Features – Geotechnical and Hydraulic Features portion of this report.

Purpose and Need

During the late spring and early summer months the drainage area above our Interstate cut slope is subject to high volume water events due to upstream springs and snowmelt. The drainage area consists of shallow bedrock with a thin covering of soil on steep slopes with approximately a 10-20 % slope gradient. Existing trees and plants cannot establish a deep root system in the shallow soil and are washed down the existing drainage and out onto the cut slope north of the Interstate. These high flow events have occurred periodically since the Interstate was constructed with the last major mudslide/debris flow event occurring in June, 2010.

Should a major mudslide/debris flow event close the roadway, this portion of Interstate 90 has no frontage roads, and a parallel detour route that could carry Interstate traffic would need to be sought. Because of the mountains and Yellowstone Park, there is no feasible detour route to the South. A North detour route would require Eastbound traffic to exit at Three Forks, travel on US 287 (N-8) to Townsend and then use US 12 (P-14) to South of White Sulphur Springs, then South on US 89 (P-59) to the Mission Interchange on I-90, East of Livingston. Westbound traffic would use the same route in the opposite direction. This detour length is about 130 miles and would add a minimum of 80 miles to the Interstate traveler's trip.

Project Location and Limits

This project is located on Interstate 90, between reference posts 316.0 and 316.5 in Gallatin County approximately 6 miles East of Bozeman. Stationing runs from West to East, with the 1963 as-built stationing from project I-IG 90-6(2)309 being used.

Work Zone Safety and Mobility

At this time, Level 2 construction zone impacts are anticipated for this project as defined in the Work Zone Safety and Mobility (WZSM) guidance. The plans package will include a Transportation Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP). A limited Transportation Operations (TO) component and a limited Public Information (PI) component are also anticipated to address possible wide load detours. These components will be addressed in more detail as the design progresses. These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

Physical Characteristics

This section of Interstate was constructed in 1963 under project number I-IG 90-6(2)309 and the surfacing was reconstructed in 1995 with a cement stabilized base under 7.8 inches of new plant mix surfacing The Eastbound and Westbound sections of roadway are separated by a concrete median barrier rail. Each of the Eastbound and Westbound sections of roadway consists of a 4 foot median, two 12-foot driving lanes, and a 6 foot outside shoulder, for a total top finished width of 34 feet. The existing roadway surfacing will not be impacted by this project.

A 24 inch RCP cross drain was installed in 1963 at station 382+85 with a drop inlet in the left (North side) ditch. The inlet captures water flowing to the West in the Westbound ditch and also provides an inlet for water coming down the concrete drain chute perpendicular to the roadway at station 382+85. The 2:1 cut slope north of the drop inlet is benched with an approximately 30 foot wide horizontal bench halfway up the cut slope. The portion of the slope below the bench has a three-foot wide, flat-bottomed concrete drain chute leading to the drop inlet. The portion of the slope above the bench is a v-shaped natural drainage chute that has eroded the loose soil and rock down to stable bedrock. This location was photographed from south of the Interstate in 2010 and is shown below.

Traffic Data

The 2011 traffic data is as follows:

2011 AADT = 15,260 Present
2012 AADT = 15,710 Letting Year
2032 AADT = 28,440 Design Year
DHV = 3130
T = 13.0 %
EAL = 1192
AGR = 3.0%

Crash Analysis
A crash analysis was not performed due to the intent of this project.

Major Design Features

a. **Design Speed.** The design speed for this section of Interstate in mountainous terrain is 50 mph.

b. **Horizontal Alignment**. This short section of roadway is tangent.

c. **Vertical Alignment**. The first section of roadway is rising from west to east on a tangent grade of +3.53%. There is a 2000 foot vertical curve at station 380+30 that has an incoming grade of +3.53% and an outgoing grade of -0.826%. The vertical alignment will be unaffected by this project.

d. **Typical Sections and Surfacing**. The surfacing will not be affected by this project so the existing typical sections and surfacing will remain unchanged.

e. **Geotechnical and Hydraulic Features**. This project consists of numerous proposed geotechnical and hydraulic features which will be listed by starting at the source of the drainage north of the Interstate fencing and working down:

1. **Upstream Erosion Control and Stabilization**
This area is north of the existing right-of-way fence and consists of the drainage area upstream of the drain chute. The area consists of shallow bedrock with a thin layer of soil. The existing vegetation consists of scattered large trees, a few smaller trees, some brush species, and grasses. The vegetation cannot establish a deep root system and is susceptible to washouts and sloughing during spring runoff and high volume storm events. The drainage historically dries up by late summer. The area is used for cattle grazing and there are established livestock trails in the drainage. A primitive access trail for the overhead telephone line parallels the interstate and contributes some overland flow to the drainage from the west. At the confluence of the access trail drainage ditch and the main drainage there is an existing scarp. The existing head cut at this location is approximately 8 to 10 feet vertically and is approximately 20-25 feet wide. The drainage channel upstream from the scarp is moderately vegetated with grasses and some scattered brush.

The recommended design for this area is to strategically place 3-5 improved areas within the drainage at and above the existing head cut location. These improved areas will consist of an under drain system, a mechanically stabilized surface matting, and carefully selected tree, brush, and grass plantings with the intent of physically anchoring the soil and vegetation in place. The under drains will consist of 4 inch perforated pipe and aggregate backfill in a geotextile sock that will help to minimize overland flow and soil saturation. A commercially available reinforcement matting (similar to chain link fencing) will be held in place with the use of launched soil nails that will be anchored into the underlying shallow bedrock. The size and location of these improved areas will be determined in cooperation with the MDT Geotechnical Section.

Traditional riprap chutes and other hard armoring options were reviewed at this site. Due to the remote location, these options were not considered economically or environmentally feasible. The improved areas, as described above, can be constructed using small equipment with minimal imported construction materials. The improved areas will have a natural, undisturbed final appearance and will not require long-term maintenance. It is anticipated that the equipment and construction materials can access the site via the primitive telephone access trail. The disturbance to the access trail and drainage should be temporary with seeding and other

vegetation quickly erasing the construction foot print. If approved by the landowner, the improved areas could be fenced to prevent cattle grazing and promote vegetation growth.

2. **Existing Drainage Chute and Cut Slope Above Bench**
The existing drain chute above the bench has eroded the soil and loose rock layer and has stabilized on the bedrock. No improvements are anticipated for this area as there still are previously placed geotextile fabric and seeding improvements visible on the slopes adjacent to the drain chute.

3. **Cut Slope Bench Improvements**
There are several improvements recommended on the bench itself. Some type of debris barrier or debris fence is to be installed on the bench directly below the upper drain chute. The intent of the barrier is catch any large debris that makes its way down the upper drain chute and keep it from entering the lower concrete drain chute. If a large debris event occurs in the future, it will most likely require Maintenance forces to bring an excavator up on the bench to remove the debris. This can be accomplished by bringing the excavator in from the east side of the bench from the existing right-of-way. Preliminary discussions focused on constructing a permanent equipment access road to the bench. After further review and discussions, this permanent access road option was dropped. If needed, equipment will access the bench via the existing slopes from the east.

   Geo-composite under drains have been proposed for draining the bench should debris block the lower concrete drain chute during a high flow event. These under drains could outlet to both the east and west of the lower concrete drain chute. The intent is to keep the bench from becoming saturated and possible unstable during a high flow event similar to what happened in 2010. The Geotechnical Section will review the survey data and make final recommendations on the location and lengths of the under drains.

4. **Existing Concrete Drainage Chute and Cut Slope Below Bench**
The existing concrete drainage chute has performed well and will be used with no modifications. The cut slopes adjacent to the concrete drainage chute have been previously stabilized with geotextile mats and seeding and will receive no additional improvements in conjunction with this project.

5. **Interstate Inlet and Cross Drain Improvements**
The existing inlet structure at station 382+85 has functioned reasonably well over the years and it is proposed that no changes will be made to the inlet structure. There have been previous discussions about placing some type of debris barrier at this inlet. Those options have been dropped as they would potentially provide marginal assistance with debris capture and would potentially become clear zone hazards as this inlet is located close to the westbound driving lane.

   The existing 24 inch RCP cross drain was installed nearly 50 years ago and has seen some deterioration with the joints and the culvert outlet. A cured-in-place liner is proposed for the entire length of the culvert. The advantage of using the cured-in-place liner verses a conventional culvert replacement is that the roadway surface does not have to be disturbed and the traffic control is limited to the edges of the roadway.

   The existing Interstate westbound drainage ditch has a fair amount of debris and sanding material that has accumulated over the years. This material should be removed and the ditch template re-established and re-vegetated to improve the hydraulic characteristics of the ditch and to prevent the sediment from reaching the next Interstate cross drainage culvert at approximately

station 353 + 30.

6. **Outlet Improvements**
The existing outlet at station 382+85 provides minimal sediment containment. It is proposed to build a conventional sediment trap just south of the culvert outlet. This will allow sediment to be removed prior to leaving the MDT right-of-way and will help keep sediment from reaching Rocky Creek. The sediment trap will be designed so that Maintenance forces can periodically remove the accumulated sediment with a small front end loader.

f. **Hydraulics**. The existing 24 inch RCP cross drain at station 382+85 will be lined with a cured-in-place liner to prevent saturation of the roadway subgrade. A sediment trap is proposed on the outlet end of this culvert to catch sediment prior to reaching the railroad culvert and ultimately Rocky Creek. The Hydraulics Section will be consulted as needed to assist in the design of these two items.

g. **Bridges.** There are no bridges on this project.

h. **Traffic.** No alterations to any traffic elements are proposed.

i. **Pedestrian/Bicycle/ADA**. No changes to the existing pedestrian /bicycle/ADA features are proposed. No dedicated pedestrian or bicycle facilities exist.

j. **Miscellaneous Features**. Areas disturbed by equipment obtaining access to the proposed improvements will be re-vegetated to prevent erosion.

k. **Context Sensitive Design Issues**. No context sensitive design elements are proposed.

Other Projects
There are no projects that are currently under construction or will be in the near future that may affect this project.

Location Hydraulics Study Report
A Location Hydraulics Study Report is not needed. Recommendations will be reviewed with the Hydraulics Section as needed.

Design Exceptions
Due to the limited scope of work, no design exceptions are necessary.

Right-of-Way
The existing right-of-way varies from 100 to 370 feet north of the Interstate. The existing right-of-way where the drainage comes down the cut slope at station 385+85 is 370 feet and the right-of-way fence is located parallel to the centerline at this location. At this time, it is anticipated that the work north of the right-of-way fence to stabilize the drainage will be completed with a construction permit. As the design progresses, a meeting will be held with the landowner and MDT right-of-way, geotechnical, and design personnel to determine the correct type of agreement for this work.

It is believed that all the work outside the existing right-of-way and North of the Interstate will be confined to the property owned by the Schmidt Family Trust in Section 19, T2S, R7E. The proposed sediment trap at station 382+50 south of the interstate should be able to be built within the existing MDT right-of-way limits. A construction permit may be required from Montana Rail Link if additional drainage modifications are needed beyond the existing right-of-way limits.

Access Control
No changes to the full access control are anticipated. Access breaks are not anticipated at this point in time as the contractor can obtain access through the private property to the east and north of the project.

Intelligent Transportation Systems (ITS) Features
No ITS solutions are proposed.

Experimental Features
No experimental features have been identified.

Utilities/Railroads
An overhead telephone line parallels the Interstate on the north side approximately 450 feet from centerline. The telephone poles are adjacent to the drainage where the slides have occurred but appear to be outside the affected area.

Montana Rail Link (MRL) operates a single track south of the Interstate in this area. A construction permit may be required from MRL for minor drainage modifications. A fiber optic line parallels the railroad and should not be impacted by this project.

Survey
The topographic field survey was completed in late December, 2011 using state-plane monumentation from the Trail Creek Interstate Bridge project (CN 5021) built in 2004. At this time no additional survey is anticipated.

Public Involvement
The project will have Level A public involvement which includes a news release explaining the project and a Departmental point of contact.

Environmental Considerations
The initial review did not identify any significant environmental impacts. It is anticipated that a programmatic categorical exclusion will be appropriate for this project. A Biological Assessment and consultation will be required to evaluate potential effects to threatened and endangered species. It is anticipated that the project will not affect any hazardous waste sites or areas of cultural significance. MDT Environmental Services personnel will conduct the appropriate environmental studies including a Biological Resource Report, Biological Assessment, and a Cultural Resource Survey. A CWA 404 permit and SPA 124 authorization are anticipated for the project. Coordination with the landowner and possibly the USFS regarding the proposed features and potential fencing schemes to protect reestablished vegetation is required.

Energy Savings/Eco-Friendly Considerations
No energy savings considerations have been identified. The improved areas in the upper drainage area north of the Interstate right-of-way are much more eco-friendly than conventional riprap drainage chutes. The construction methods used with the small equipment will greatly reduce the environmental impacts as compared to traditional construction methods.

Traffic Control
A Transportation Management Plan (TMP) consisting of a Traffic Control Plan (TCP), a limited Transportation Operations (TO) component and a limited Public Information (PI) component is appropriate for this project.

Traffic will be maintained on the roadway during construction. The majority of the work will be north of the existing roadway, above the cut slope and will not impact the driving public. Several minor operations, such as the culvert lining and sediment basin construction, will be adjacent to the roadway and will most likely require a lane closure for a few days while the work is completed.

Project Management

The plans package will be developed by the MSU Design Unit with coordination from the Geotechnical Section. The Design Project Manager will be Scott Keller. This project is not under full FHWA oversight.

Preliminary Cost Estimate

The preliminary project cost estimate is summarized as follows:

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Slope Anchoring System	316,667		
Debris Fence on Bench	40,000		
Culvert Lining	25,000		
Sediment Basin	15,000		
Traffic Control	20,000		
Subtotal	416, 667		
Mobilization (20%)	83,333		
Subtotal	500,000		
Contingencies (20%)	100,000		
Total CN	**$600,000**	**$11,480**	**$ 670,427**
CE (10%)	**$60,000**	**$1,147**	**$ 67,042**
TOTAL CN+CE	**$660,000**	**$ 12, 627**	**$ 737,469**

Note: IDC is calculated at 9.64% for FY 2012.

Ready Date

This project is being fast-tracked to allow an August 23, 2012 letting as shown in the 2012 Tentative Construction Program. The Ready Date for this project is May 24, 2012.

Site Map

The project site map is attached.

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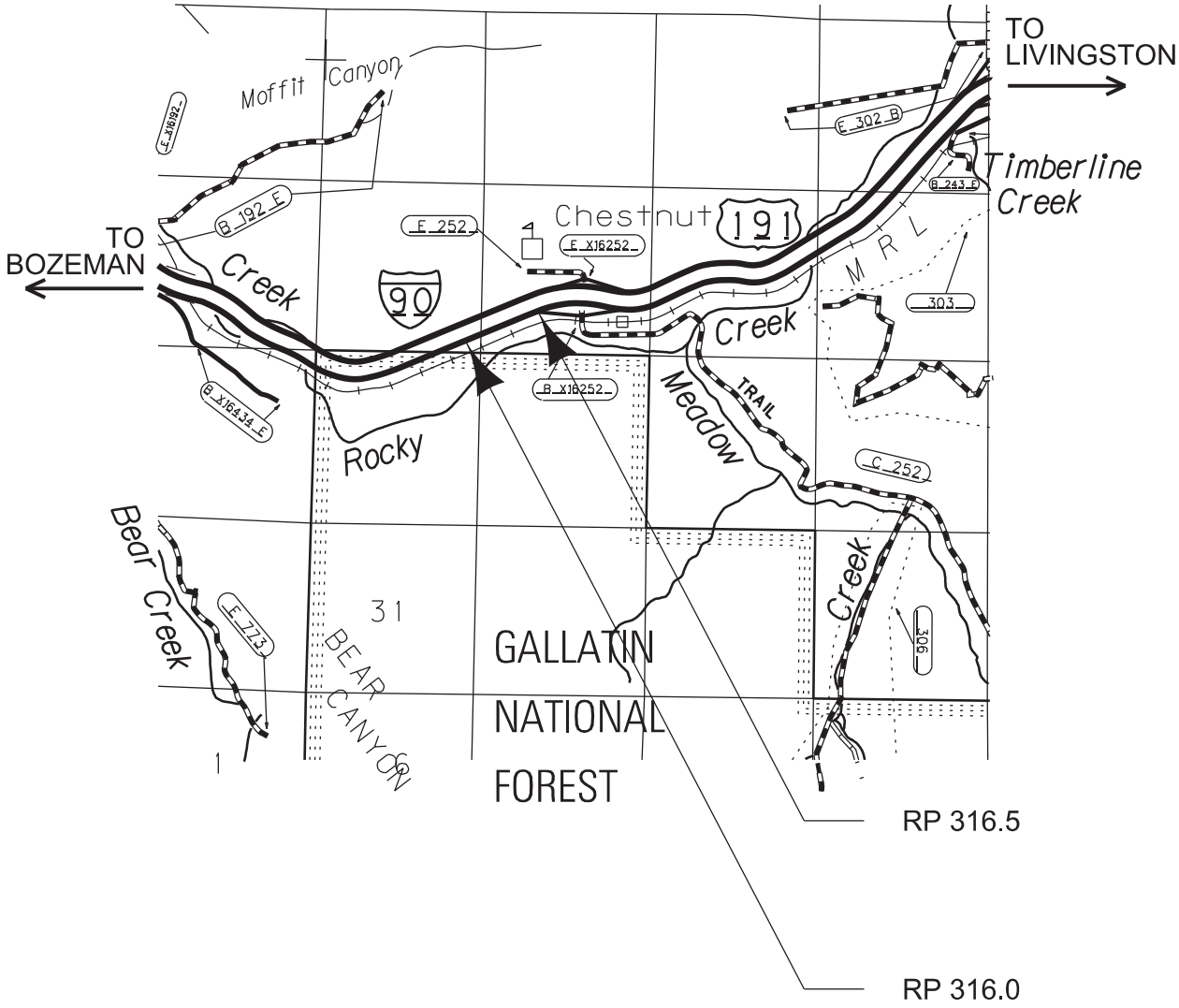
IM 90-6(134)316
W. OF CHESTNUT - SLIDE REPAIR
UPN 7465000
RP 316.0 TO RP 316.5