MDT
Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001
Timothy W. Reardon, Director
Brian Schweitzer, Governor

April 13, 2012

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FHWA
MONTANA DIVISION

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

MASTER FILE
COPY

Attention: Jeff Patten

Subject: Categorical Exclusion
BIG HOLE PASS
STPS 278-1(28)31
Control Number: 7466000

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/Scope of Work Report dated May 5, 2011 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: 4/13/12
Barry Brosten - Butte District Project Development Engineer
MDT Environmental Services Bureau

Concur Heidy Bruner, Date: 4/16/12
Heidy Bruner, P.E. - Engineering Section Supervisor
MDT Environmental Services Bureau

Concur Jeffrey A Patten, Date: 4/23/12
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/SOW

Copy (w/o attach.):	Jeff Ebert	Butte District Administrator
	Paul Ferry	Highway Engineer
	Scott Helm	Geotechnical Operations Manager
	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
	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

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Memorandum

To: Distribution

From: Matt Strizich, P.E.
Materials Engineer

Date: May 5, 2011

Subject: **STPS 278-1(28)31**
Big Hole Pass
CN 7466000
WT=310 Roadway and Roadside Safety Improvements

Attached is the Preliminary Field Review Report/Scope of Work Report which was approved on May 5th, 2011. We request that those on the distribution review this report and submit your concurrence within two weeks of the approval date.

Your comments and recommendations are also requested if you do not concur or concur subject to certain conditions. When all personnel on the distribution list have concurred, and the environmental documentation is approved, we will submit this report to the Preconstruction Engineer for approval.

I recommend approval:
Approved _____ Date _____

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

cc:
Dawn Stratton, Fiscal Programming Section
Scott Helm, Project Manager, Geotech
Damian Krings, Road Design Engineer
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 Project Engineer
Kraig McLeod, Safety Engineer
Bryan Miller, Bridge
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
Jake Goettle, Construction Bureau – VA Engineer
Joe Walsh, Acting District Preconstruction
Dustin Rouse, Acting District Projects Engineer
Casey Ballard, District Materials Lab
Kam Wrigg, District Maintenance Chief
Walt Scott, R/W Utilities Section Supervisor
David Hoerning, R/W Engineering Manager
Greg Pizzini, Acquisition Manager
Joe Zody, R/W Access Management Section Manager
Paul Johnson, Project Analysis Bureau
Sue Sillick, Research Section Supervisor
Alyce Fisher, Fiscal Programming
Dawn Stratton, Fiscal Programming
Wayne Noem, Secondary Roads Engineer

Steve Keller, Maintenance Division Operations Manager (RWIS)

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

Memorandum

To: Matt Strizich, P.E.
Materials Engineer

From: Scott Helm, P.G.
Geotechnical Operations Manager

Date: May 5, 2011

Subject: **STPS 278-1(28)31**
Big Hole Pass
CN 7466000
WT=310 Roadway and Roadside Safety Improvements

Please approve the attached Preliminary Field Review Report/Scope of Work Report.

Approved _____ Date 5/5/11
Matt Strizich, P.E.
Materials Engineer

The same report is also being distributed under a separate cover as a Scope of Work Report for comments and approval recommendations.

cc (w/attach.):
Damian Krings, P.E., Road Design Engineer
Scott Helm, P.G. Geotechnical Operations Manager
Pat McCann, P.E. District Geotechnical Manager
Materials Bureau File

Introduction

On September 10th, 2010 the Geotechnical Section was contacted regarding a slide on Secondary 278 in Beaverhead County. An initial site assessment was conducted by Scott Helm, Geotechnical Section and Deb Wambach of Environmental Services on September 21st. Surficial sloughing was originally observed at the site in June of that year, and additional erosion has occurred since that time, generally during significant precipitation events. The additional erosion has encroached into the drainage at the base of the fill slope, which is an ephemeral tributary to Divide Creek. Fencing at the base of the fill has also been damaged, however a new fence line has been established with more separation from the base of the fill and slide debris. Additional details of the site assessment can be found in the Geotechnical Initial Site Assessment Report (Activity 460) from Scott Helm, P.G, to Jeff Ebert P.E., dated October 13th, 2010. As a result of the report it was determined a project would be nominated for the slide repair.

Proposed Scope of Work

Several conventional options were considered for slope repair at the site.

- Flattening the slope and reestablishing vegetation would be the simplest option for repairing the embankment, however this would cut off the ephemeral drainage at the toe of the fill and extend beyond our current Right of Way limits, which would greatly increase project cost and would likely require extensive stream mitigation.

- Repairing the slope while maintaining the existing slope ratio could be accomplished by creating a riprap buttress at the toe, and extending riprap and permanent erosion control geotextile up to reinforce the face of the embankment. This option would require approximately 4500 cubic yards of Class II and Class III riprap and 4500 square yards geotextile. Given the relatively remote location and difficulty in riprap placement for a slope of this height and steepness, total project cost was deemed prohibitive.

- Additional repair means, such as retaining walls were also deemed cost prohibitive and were eliminated from consideration.

Launched soil nails in combination with reinforcement matting and planting have been determined to be a viable alternative for slope repair at this site. This technique has the advantage of relatively rapid, low impact, construction methods.

Launched soil nailing is a technique developed for the reinforcement of locally unstable soil masses. The nails are steel or fiberglass rods installed to reinforce or strengthen the existing ground. 20 foot (6.5 m) soil nails are inserted using high-pressure air (2400 psi, up to 360 fps velocity) by a launcher mounted on a hydraulic excavator. The soil nails reinforce the locally unstable soil mass by transferring the nail's tensile and shear resistance through the failure plane of the sliding soil. The nail maintains the resisting force because they are anchored beyond the slip plane. Hollow core perforated nails can also be used as drainage elements, in addition to the slope reinforcement application.

Launched soil nails are a proprietary system that has not been previously used by MDT, therefore it has been decided to develop the slope repair as an *MDT Experimental Project*. Project involvement by the Research Management Section is discussed later in this report. Additional information regarding Experimental Projects can be found at -http://mdtinfo.mdt.mt.gov/research/projects/exp_overview.shtml

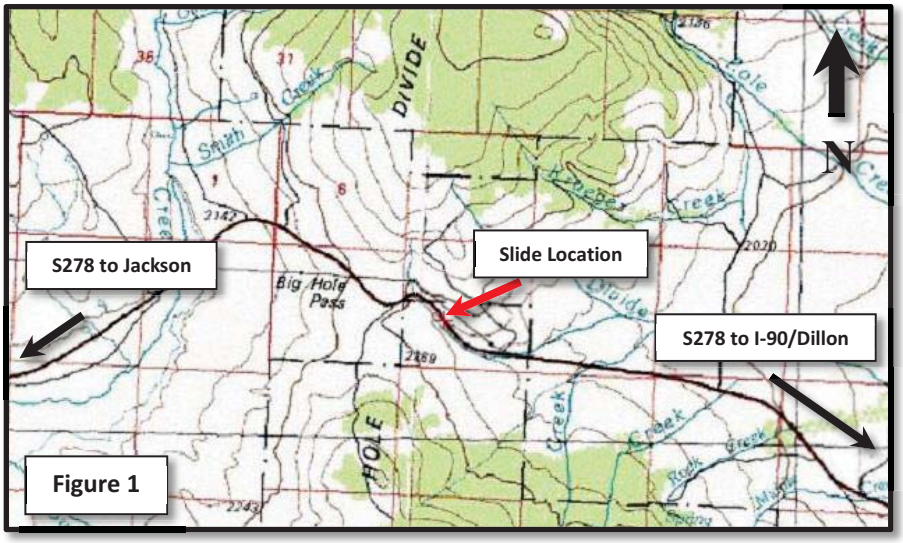
Limited preliminary survey, project development, and site investigation will be the responsibility of MDT. Final design and construction will be the responsibility of the launched soil nail contractor.

Purpose and Need

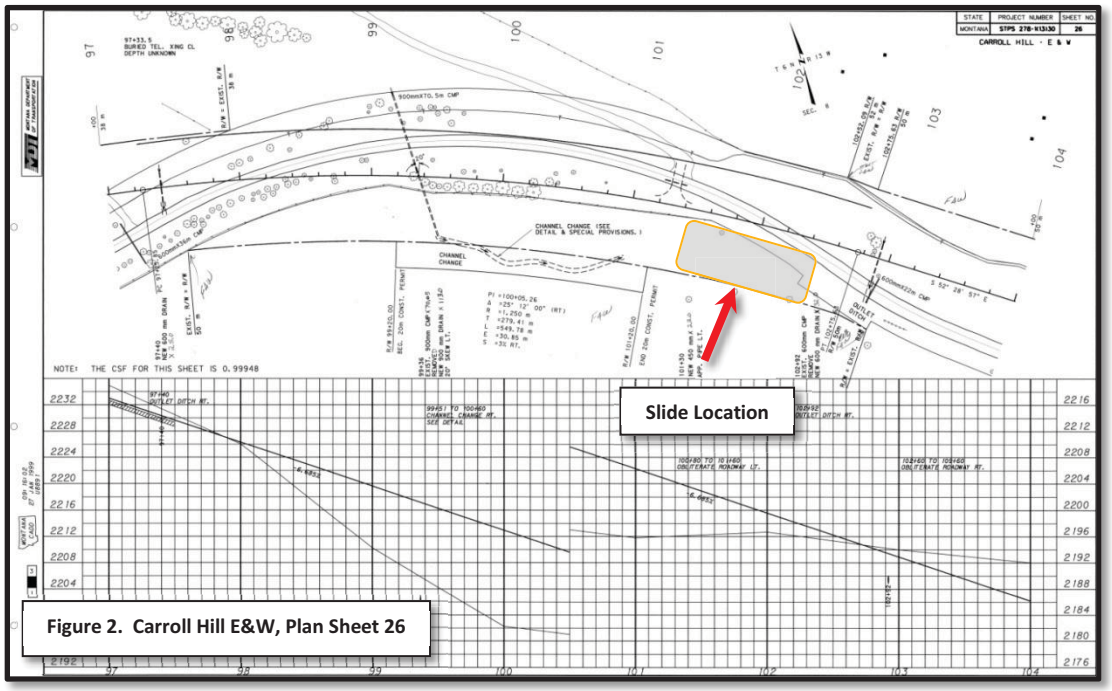
If left unrepaired, it is likely planar erosion will continue, and head cut towards the PTW, eventually failing the roadway.

Project Location and Limits

The slide is located on Secondary 278 at approximately MP 31.7 in Township 6 South, Range 13 West, Section 8. (State Plane Coordinates N126654, E307923) (Figure 1).



The affected area is on a south facing fill slope constructed during the Carroll Hill E & W (STPS 278-1(9)30, UPN 2580) project in 2000. Project stationing for the slide is approximately 101+00 to 102+40, project centerline right (Figure 2).



Physical Characteristics
The project was last reconstructed in 2000 under project STPS 278-1(13)30. The location is rural and the terrain is mountainous. The project borders private property.

Traffic Data
Traffic data is not required on this slide repair project.

Crash Analysis
Accident history is not required on this slide repair project.

Major Design Features

a. **Design Speed.** NA
b. **Horizontal Alignment**. NA
c. **Vertical Alignment**. NA
d. **Typical Sections and Surfacing**. NA
e. **Geotechnical Considerations**. All major project features are associated with slide mitigation at this site. The Geotechnical Section will serve as the project development and design lead, and work with Research Management in construction oversight and monitoring of this *Experimental Project.*
f. **Hydraulics**. The Hydraulics Section has provided preliminary recommendations via email (March 9, 2011). No changes to existing hydraulic features are anticipated. Ensuring drainage grades and clearing existing culverts will be included in the project. Involvement with development of the stream mitigation plan is expected.
g. **Bridges.** NA
h. **Traffic.** NA
i. **Pedestrian/Bicycle/ADA**. NA
j. **Miscellaneous Features**. Replacement of the Right of Way fencing damaged by the slide will be required.
k. **Context Sensitive Design Issues**. NA

Other Projects
It is not anticipated that this project will be tied to any other adjacent project.

Design Exceptions
No design exceptions are anticipated for this project.

Right-of-Way
There will be right of way involvement to the extent of determining ownership and property boundaries. No new right of way is anticipated, however it is highly probably construction permits will be needed.

Access Control
There will be no changes to access control with this project.

Utilities/Railroads
Existing utility locations will need to be established, however no relocation or other major utility involvement is expected. Sensors and power/data cable for the MDT Big Hole Pass RWIS site are located at the project site. Exact location and layout will need to be established to avoid and/or minimize impacts.

Intelligent Transportation Systems (ITS) Features
ITS features are not included with this project.

Survey
Survey will be required for the project. The area of the slide will need to be cross sectioned at close intervals. A separate survey request in more detail will be forthcoming to the District Construction Forces.

Public Involvement
It is anticipated this project will have Level A public involvement, which will included a news release explaining the project and including a department point of contact.

Environmental Considerations
A Programmatic Categorical Exception is anticipated for this project. An ephemeral tributary to Divide Creek runs along the toe of the fill slope. The channel is narrow, shallow, and heavily impacted by grazing pressure. Some material from the slide has sloughed into the channel. Minor work to grade and remove some of the sloughed material, reshape the channel as necessary, re-vegetate, plant and stabilize the banks is proposed. Survey should pick up the channel approximately 300 feet up and downstream of the affected area, and include the affected area. A SWPPP may be required, as the affected area is approximately one acre in size. A SPA 124 notification and CWA 404 permit are likely required depending on proposed work within the ephemeral drainage. Additional stream mitigation is not anticipated at this time.

Experimental Features
Research Management will document the installation for best practice and any constructions concerns germane to the performance of the product. Semi-annual inspections will report on slope integrity and any other measurable outcomes. Additional site inspections may supplement the semi-annual visits based on need.

Construction Documentation: Will include information specific to the installation events of the launched soil nail process.

Post Construction Documentation: Will entail semi-annual inspections of the active zone slope restoration for evidence of slope movement or visual indication of nail shifting.

Evaluation Schedule: Research will monitor performance for a minimum period of five years annually, with every year up to ten years (informally). This is in accordance with the Department's "Experimental Project Procedures". Delivery of a construction/installation report, interim, annual or semi-annual reports is required as well as a final project report (responsibility of Research). A web page will be dedicated to display all reporting from the project.

Traffic Control
A traffic control plan will be developed as the design of the project progresses and will contain the following:

- The Traffic Control Plan (TCP) will include lane closures during construction. All signing and delineation will be performed in conformance with the Manual of uniform Traffic Control Devices (MUTCD).

Project Management

The Geotech section will be responsible for the plans and Scott Helm is the Project Design Manager for the project. This project is not under full FHWA oversight.

Preliminary Cost Estimate

PFR Estimate	Estimated Cost	Inflation (INF) (from PPMS)	TOTAL Costs IDC *w/o INF* (from PPMS)
Soil Nailing	$485,000		
Regrading Slope, Drainage, & Stream Mitigation	$125,000		
Traffic Control	$30,000		
Subtotal	**$640,000**		
Mobilization (10%)	$64,000		
Subtotal	**$704,000**		
Contingencies (5%)	$35,000		
Total CN	**$739,000**	**0**	**855,776**
CE (1%)	**$7,000**	**0**	**8,558**
TOTAL CN + CE	**$746,000**	**0**	**864,334**

Ready Date

It is anticipated the ready date will be July 11, 2011 and will be set once OPX2 overrides have been completed