



December 6, 2012

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



Attention: Jeff Patten

Subject: Categorical Exclusion
ROCKER-EB CLIMBING LANE
IM 15-2(104)123
Control Number: 7289

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 Alignment and Grade Review Report (AGRR) dated September 14, 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).

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>UNK</u>
1. This proposed project would have (a) significant environmental impact(s) as-defined under <u>23 CFR 771.117(a)</u> .	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. This proposed project involves (an) unusual circumstance(s) as described under <u>23 CFR 771.117(b)</u> .	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>UNK</u>
1. The context or degree of the Right-of-Way action would have (a) substantial social, economic, or environmental effect(s).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. There is a high rate of residential growth in this proposed project's area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. There is a high rate of commercial growth in this proposed project's area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Work would be on and/or within approximately 1.6 kilometers (1± mile) of an Indian Reservation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. There are parks, recreational, or other properties acquired/improved under <i>Section 6(f)</i> of the 1965 <i>National Land & Water Conservation Fund Act</i> (16 USC 460L, <i>et seq.</i>) on or adjacent to proposed the project area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The use of such <i>Section 6(f)</i> sites would be documented and compensated with the appropriate agencies. (<i>e.g.</i> : MDFWP, local entities, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 <i>Section 106</i> of the <i>National Historic Preservation Act</i> (16 USC 470, <i>et seq.</i>) by the State Historic Preservation Office (SHPO), which would be affected by this proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. There are parks, recreation sites, school grounds, wildlife refuges, historic sites, historic bridges, or irrigation that might be considered under <i>Section 4(f)</i> of the 1966 <i>US DEPARTMENT OF TRANSPORTATION Act</i> (49 USC 303) on or adjacent to the project area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a. The proposed project would not impact the site(s), so a 4(f) evaluation is not necessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. De minimis finding(s) is/are necessary for this project.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. "Nationwide" Programmatic <i>Section 4(f)</i> Evaluation forms for these sites are attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. This proposed project requires a full (<i>i.e.</i> : DRAFT & FINAL) <i>Section 4(f)</i> Evaluation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. The activity would involve work in a streambed, wetland, and/or other waterbody(ies) considered as "waters of the United States" or similar (<i>e.g.</i> : "state waters").	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>UNK</u>
1. Conditions set forth in <i>Section 10</i> of the <i>Rivers and Harbors Act</i> (33 USC 403) and/or <i>Section 404</i> under <u>33 CFR Parts 320-330</u> of the <i>Clean Water Act</i> (33 USC 1251-1376) would be met.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. A 124SPA Stream Protection Authorization would be obtained from the MDFWP?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. There is a delineated floodplain in the proposed project area under FEMA's Floodplain Management criteria.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The water surface at the 100-year flood limit elevation would exceed floodplain management criteria due to an encroachment by the proposed project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Tribal Water Permit would be required.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The designated National Wild & Scenic River systems in Montana are:				
a. Middle Fork of the Flathead River (headwaters to South Fork confluence).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. North Fork of the Flathead River (Canadian Border to Middle Fork confluence).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. South Fork of the Flathead River (headwaters to Hungry Horse Reservoir).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Missouri River (Fort Benton to Charles M. Russell National Wildlife Refuge).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In accordance with <i>Section 7</i> of the <i>Wild and Scenic Rivers Act</i> (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).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>UNK</u>
C. This is a "Type I" action as defined under <u>23 CFR 772.5(h)</u> , 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. If yes, are there potential noise impacts?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. A Noise Analysis would be completed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. There would be compliance with the provisions of both <u>23 CFR 772</u> for FHWA's Noise Impact analyses and MDT's Noise Policy.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. There would be substantial changes in access control involved with this proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, would they result in extensive economic and/or social impacts on the affected locations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Adverse effects to through-traffic dependant businesses would be avoided or minimized.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Interference to local events(e.g.: festivals) would be minimized to all possible extent.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Substantial controversy associated with this pending action would be avoided.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 <i>CERCLA</i> or <i>CECRA</i>) site(s) are currently on and/or adjacent to this proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All reasonable measures would be taken to avoid and/or minimize substantial impacts from same.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G. The Montana Pollutant Discharge Elimination System's conditions (<u>ARM 16.20.1314</u>), including temporary erosion control features for construction would be met.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Permanent desirable vegetation with an approved seeding mixture would be established on exposed areas.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>UNK</u>
I. Documentation of an "invasive species" review to comply with both EO #13112 and the <i>County Noxious Weed Control Act</i> (7-22-21, MCA), including directions as specified by the county(ies) wherein its intended work would be done.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. There are "Prime" or "Prime if Irrigated" Farmlands designated by the Natural Resources Conservation Service on or adjacent to the proposed project area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the proposed work would affect Important Farmlands, then an AD-1006 Farmland Conversion Impact Rating form would be completed in accordance with the <i>Farmland Protection Policy Act</i> (7 USC 4201, <i>et seq.</i>).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
K. Features for the <i>Americans with Disabilities Act</i> (PL 101-336) compliance would be included.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
L. A written Public Involvement Plan, would be completed in accordance with MDT's Public Involvement Handbook.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. This proposed project complies with the <i>Clean Air Act's Section 176(c)</i> (42 USC 7521(a), as amended) under the provisions of <u>40 CFR 81.327</u> as it's either in a Montana air quality:				
A. "Unclassifiable"/attainment area. This proposed project is <u>not</u> covered under the EPA's September 15, 1997 Final Rule on air quality conformity.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Is this proposed project in a "Class I Air Shed" (Indian Reservations) under <u>40 CFR 52.1382(c)(3)</u> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Federally listed Threatened or Endangered (T/E) Species:				
A. There are recorded occurrences, and/or critical habitat in this proposed project's vicinity.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Would this proposed project result in a "jeopardy" opinion (under <u>50 CFR 402</u>) from the Fish & Wildlife Service on any Federally listed T/E Species?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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: 12/6/2012
Barry Brosten - Butte District Project Development Engineer
MDT Environmental Services Bureau

Concur Heidy Bruner, Date: 12/6/12.
Heidy Bruner, P.E. - Engineering Section Supervisor
MDT Environmental Services Bureau

Concur Jeffery G. Patten, Date: 12/10/12
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: AGRR

Copy (w/o attach.): Jeff Ebert Butte District Administrator
Paul Ferry Highway 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
Barry Brosten Environmental Services
Environmental Services File
Montana Legislative Branch Environmental Quality Council (EQC)



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

Memorandum

To: Distribution

From: Paul Ferry, PE
 Highways Engineer

Date: September 14, 2012

Subject: IM 15-2(104)123
 Rocker-EB Climbing Lane
 CN: 7289000
 Work Type 140 Reconstruction-Without Added Capacity

The Alignment & Grade/Scope of Work Report for this project has been released on September 14, 2012. We request that those on the distribution review this report and submit your concurrence within two weeks of the above date.

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

I recommend approval:

Approved _____ Date _____

Distribution:

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

cc:

Dawn Stratton, Fiscal Programming Section	Damian Krings, Road Design Engineer
Joe Walsh Project Design Manager, Butte District	Master file

e-copies:

Jim Walther, Engineering, Preconstruction Engineer	Jake Goettle, Construction Bureau – VA Engineer
Lesly Tribelhorn, Highways Design Engineer	Dustin Rouse, District Preconstruction
Mark Goodman, Hydraulics Engineer	Joe Walsh, District Projects Engineer
Walt Ludlow, District Hydraulics Engineer	Casey Ballard, Butte District Materials Lab
Bonnie Gundrum, Env. Resources Section Supervisor	Kam Wrigg, Butte District Maintenance Chief
Deb Wambach, District Biologist	Phillip Inman, Utilities Engineering Manager
Barry Brosten, District Project Development Engineer	David Hoerning, R/W Engineering Manager
Danielle Bolan, Traffic Engineer	Greg Pizzini, Acquisition Manager
Leroy Wosoba, District Traffic Project Engineer	Joe Zody, R/W Access Management Section Manager
Kraig McLeod, Safety Engineer	Paul Johnson, Project Analysis Bureau
Nathan Haddick, Bridge Area Engineer, Butte District	Sue Sillick, Research Section Supervisor
Matt Strizich, Materials Engineer	Duane Williams, Motor Carrier Services Division Administrator
Daniel Hill, Pavement Analysis Engineer	Alice Flesch, ADA Coordinator
Patrick McCann, District Geotechnical Manager	Mark Keeffe, Bicycle/Pedestrian Coordinator
Bryce Larsen, Supervisor, Photogrammetry & Survey	Wayne Noem, Secondary Roads Engineer
Marty Beatty, Engineering Information Services	Becky Duke, Traffic Data Collection Section Supervisor (WIM)
Paul Grant, Public Involvement Officer	Dave Hand, Maintenance Division Operations Manager (RWIS)
Jean Riley, Planner	Alyce Fisher, Fiscal Programming
Dawn Stratton, Fiscal Programming	Marisa Mailand, Road Log Manager
Scott Bunton, Engineering Cost Analyst	Bill Rabey, Environmental

Alignment & Grade/Scope of Work Report

IM 15-2(104)123 Rocker EB Climbing lane
Project Manager: Joe Walsh

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Introduction

An Alignment and Grade Review was held on July 24, 2012 for the above noted project.

In attendance were:

Joe Walsh – District Project Engineer – Butte
Dustin Rouse – District Preconstruction Engineer – Butte
Kevin Mueller – Road Design – Butte
Roy Wiant – Road Design – Butte
Jason Brazill – Road Design – Butte
Geno Liva – Constuction – Butte
Duane Liebel – Construction – Butte
Pat McCann – Geotechnical – Helena
Dave Cunningham – Geotechnical – Helena
Justin Crow – Right of Way Design – Butte
Ben Schendel – Hydraulics – Helena

Scope of Work

The proposed project has been nominated from the Butte Interstate Traffic Study Project IM 0002(627) CN: 5098 to provide a right climbing lane for eastbound/northbound traffic leaving the rocker interchange. The construction project will include 12' of widening, grading, gravel, plant mix surfacing, seal & cover, guardrail, pavement markings and updated signing. Seal and Cover treatment was recommended for disturbed areas.

Purpose and Need

The purpose of the project is to address safety concerns identified in the Butte Interstate Traffic Study. IM 0002(627) CN: 5098. The proposal is to provide a right climbing lane for eastbound truck traffic leaving the rocker interchange to gain speed before merging into interstate traffic.

Project Location and Limits

The project is located in Silver Bow County on Interstate Routes 15/90. The project begins at RP- 122.3 in Sec. 16, T3N, R8W and extends east to RP- 123.7 in Sec. 15, T3N, R8W. The project length is 1.4 miles.

Work Zone Safety and Mobility

This project is part of a high crash corridor identified in the CHSP. At this time, Level 1 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 Traffic Operations (TO) component and a limited Public Information (PI) component will also be included in the plans package. These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

Physical Characteristics

1. Existing surfacing information is provided below:

<u>From</u>	<u>To</u>	<u>Top Thickness</u> <u>(in)</u>	<u>Bottom</u> <u>Thickness in)</u>	<u>Top Width (ft)</u>
RP 120.7	RP 124.3	4.2	16.2	38 (EB & WB)

2. Existing Roadside Geometrics: The horizontal and vertical alignments will be perpetuated for this project. The current side slopes varies throughout the project area. The design criteria is mountainous in a rural area. The Rocker Interchange is a standard rural underpass type diamond configuration with stop controlled intersections. The interchange experiences a high volume of heavy

Alignment & Grade/Scope of Work Report

IM 15-2(104)123 Rocker EB Climbing lane
Project Manager: Joe Walsh

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truck traffic to two large truck stops. There is a weigh scale on the existing eastbound/northbound off ramp. Truck traffic leaving the Rocker Interchange heading eastbound/northbound on I-90/I-15 climb a steep 5% grade and merge into I-90/I-15 traffic before getting up to speed.

3. PvMS Index Numbers & Recommended Treatment for 2010:

Section	Ride	Rut	ACI	MCI	Construction	Maintenance
RP 120.7 to RP 124.3 LT	78.0	77.2	97.8	98.7	C AC Seal & Cover	M AC Seal & Cover
RP 120.7 to RP 124.3 RT	76.5	74.5	100.0	99.2	C AC Seal & Cover	M AC Seal & Cover

As-built Projects

I 15-2(22)123 U-1 Year 1969 (No vertical alignment available.)

I IG 15-2(16)126 Year 1973

Traffic Data

2010 AADT = 16,970 PRESENT

2014 AADT = 18,540 LETTING YEAR

2034 AADT = 28,810 DESIGN YEAR

DHV = 3,080

T = 11.6%

ESAL = 1123

AGR = 2.2%

Crash Analysis

ENGINEERING STUDY EVALUATION DATE: October 12, 2010

DESCRIPTION: ROCKER-EB CLIMBING LANE

ROUTE & MP: I-15 RP 122.5 TO 123.9/I-90 RP 220.538 TO 221.938

DATA TIME FRAME: 07/01/2000 TO 06/30/2010

STATEWIDE AVERAGE FOR RURAL INTERSTATE ROUTES STUDY AREA

ALL VEHICLES CRASH RATE:	<u>0.94¹⁾</u>	<u>1.29¹⁾</u>
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ALL VEHICLES SEVERITY INDEX:	<u>1.88²⁾</u>	<u>1.67²⁾</u>
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ALL VEHICLES SEVERITY RATE:	<u>1.76³⁾</u>	<u>2.15³⁾</u>
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TRUCK CRASH RATE RATE:	<u>0.58¹⁾*</u>	<u>0.93¹⁾</u>
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TRUCK SEVERITY INDEX:	<u>1.88²⁾*</u>	<u>3.67²⁾</u>
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TRUCK SEVERITY RATE:	<u>1.10³⁾*</u>	<u>3.42³⁾</u>
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Alignment & Grade/Scope of Work Report

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TRUCK CRASHES:	<u>7</u>
TOTAL RECORDED CRASHES:	<u>52</u>

¹⁾ Crash rates are defined as the number of crashes per million vehicle-miles.

²⁾ Severity index is defined as the ratio of the sum of fatal and incapacitating injury crashes times 8 plus the number of other injury crashes times 3 plus the number of property damage crashes to the total number of crashes.

³⁾ Severity rate is defined as the crash rate multiplied by the severity index.

* Statewide average truck crash rate, truck severity index, and truck severity rates are for the years 2004 through 2008.

I. VARIATIONS FROM AVERAGE OCCURRENCE:

- 63.5% dry road conditions vs. 53.1% statewide average for rural Interstate routes

II. HES CLUSTERS OR PROJECTS:

The section from reference point 122.1 to reference point 122.9 showed up as a crash cluster area. No feasible countermeasure to address specific crash trend was identified.

III. REMARKS:

The crash trends are single vehicle run off-the-road crashes. 36 of the 52 reported crashes were single vehicle run off-the-road crashes. 16 of the reported crashes cited guardrail as the first or most harmful event. 11 of the reported crashes cited overturn as the first or most harmful event. 7 of the reported crashes cited ditch or embankment as the first or most harmful event. *In addition to the truck climbing lane, the project will include slope flattening and guardrail removal.*

The eastbound section of the Interstate had 16 of 52 crashes reported as two vehicle collisions. 6 of these 16 crashes involved a truck. The records show 9 rear end collisions, 4 sideswipe same direction collisions, 2 right angle collisions and 1 head-on collision.

Upgrade signing, delineation, and pavement markings. *Traffic will provide updated signing, delineation, and pavement markings to be included in the project.*

Be aware of the high truck crash severity rate.

With the addition of the eastbound climbing lane, make sure to carry the climbing lane far enough so that trucks can gain the speed to merge back in the through lane. *Traffic and Road Design will coordinate to determine length. The climbing lane is approximately 5,900 feet, which includes the merge lane, to allow trucks gain speed.*

The District had requested a VMS for the Eastbound traffic to warn truckers that Homestake Pass was closed or other activities on Homestake Pass. Could the VMS be included under this project? (Note that Federal Motor Carrier Safety Administration had indicated that they could not fund the VMS.) *VMS will be considered with this project.*

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Major Design Features

Design Speed. The design speed for this project is 50 mph based on MDT standards for Interstate system roads in mountainous terrain. The posted speed for cars and light trucks is 65 mph and 65 mph for heavy trucks.

- a. **Horizontal Alignment.** The horizontal alignment will be perpetuated with this project.
- b. **Vertical Alignment.** The existing ramp has a maximum grade of 5%, and mainline 5.5%. This alignment will be perpetuated with this project.
- c. **Typical Sections and Surfacing.** The typical section for this project will provide for approximately 12 ft of widening in order to accommodate a 12 ft eastbound climbing lane. The new overall width of the EB lane will be 50 ft.
The surfacing recommendations are:
Plant Mix Bituminous Surfacing Grade S – 0.60'
Crushed Aggregate Course – 0.75'
The top 2.0' of the subgrade will be specified as A-1-a special borrow. This design is based on 1122 ESALs from traffic dated 10-15-2010.
Design R-Value = 30
The grade of Plant Mix and the PG Binder were determined as per Materials Bureau Policy dated April 7, 2005. The recommended PG Binder is 70-28. The recommended size of PMS aggregate is ¾". The recommended AC % is 6.1.
- d. **Pavement Removal.** Due to the thinness of the pavement at the shoulder, pavement will be removed from the existing ten foot shoulder. Because of construction sequencing use of removed pavement for fill may be problematic. Removed pavement from this project will be contractor disposal. The pavement is unsuitable to be used as RAP.
- e. **Grading.** There will be grading to widen the existing roadway by 12 feet. The fill and cut sections should approximately balance and it will be paid as Unclassified Excavation..
- f. **Slope Design.** Slope design for the project was discussed at a meeting held Friday, September 7, 2012 at 8:30am with Jeff Patten, Marcee Allen of FHWA, Paul Ferry, Dustin Rouse, Joe Walsh, Kevin Mueller and Roy Wiant of MDT. A decision was made to approve barn roof sections with 2:1 slopes after clear zone and approximately 28 feet of 6:1 recovery area. 3:1 slopes are preferred.
- g. **Geotechnical Considerations.** Geotech will review the project and provide recommendations for subgrade stabilization, slopes and other geotechnical concerns yet to be determined. There are rock cuts on the project.
- h. **Hydraulics.** Hydraulics will need to examine the project after the completion of a Hyd-1 survey, due to drainage pipe larger than 36 in.
- i. **Bridges.** There are no bridges on this project.
- j. **Traffic.** A right climbing lane will be constructed for eastbound traffic. This project will include new signing, extending and or moving a sign bridge, delineation, and pavement markings. Helena Traffic Design will design the geometric layout and provide details for inclusion to the plans.
- k. **Guardrail.** Guardrail will be installed for any hazards in the new clear zone. Guardrail will

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be removed where slopes can be modified to provide recovery for errant vehicles.

- l. **Context Sensitive Design.** No Context Sensitive Design Issues are anticipated for this project
- m. **Miscellaneous Features.** No Miscellaneous Features are anticipated for this project.
- n. **Pedestrian/Bicycle/ADA.** 10 foot shoulder width will be perpetuated with this project.

Design Exceptions

There will be a design exception needed for the barn roof slopes.

Right-of-Way

The existing Right-of-Way is 100 feet parallel from the eastbound centerline. New Right-of-Way will be needed.

Utilities/Railroads

No railroad involvement on this project.

There are three overhead power crossings and one underground telephone crossing within the construction limits. A Phase 1 S.U.E. survey will be requested by Butte District Road Design. Utility conflicts will be determined upon completion of the design.

Cold-In-Place Recycle

Cold-in-place recycle will not be used for this project.

Maintenance Items

A pipe inventory will determine if pipes and the cattle guard will require cleaning. If cleaning is required maintenance will be given the choice of doing the cleaning themselves or having it done as part of the project.

Environmental Considerations

No SPA 124 Notification or CWA 404 permit is anticipated for this project.

The level of environmental documentation is expected to be a categorical exclusion.

The Protection of Aquatic Resources special provision will be included in bid package for this project.

An Initial Site Assessment (ISA) will be completed by the Hazardous Waste Section of the Environmental Services Bureau to evaluate hazardous materials/wastes, traffic noise and air issues.

Energy Savings/Eco-Friendly Considerations

The limited scope of this project does not provide opportunities to recycle or implement other energy saving/eco-friendly construction methods or materials.

Experimental Features

No experimental features will be used for this project.

Other Projects

IM 15-2(102)122 Rocker Interch Improvements CN: 7290000

IM 15-2(100)124 Neversweat RR-BR Removal CN: 7291000

Traffic Control

Traffic will be maintained on the roadway during construction. Appropriate traffic control devices and signing will be used throughout the project in accordance with the *Manual of Uniform Traffic Control Devices*.

A Transportation Management Plan (TMP) consisting of a Traffic Control Plan (TCP), a limited Traffic

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Operations (TO) component and possibly a limited Public Information (PI) component is appropriate for this project.

Traffic issues to be considered: Two lane traffic will be reduced to one lane during construction.

The PI component, if appropriate, will consist of dispersing construction information to local newspapers and the MDT Construction Road report.

Intelligent Transportation Systems (ITS) Features

ITS will not be pursued on this project.

Public Involvement

A news release was sent out on June 9, 2011. No comments were received.

Cost Estimate

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Road Work	2,420,000		
Traffic Control	50,000		
Subtotal	2,470,000		
Mobilization (10%)	247,000		
Subtotal	2,717,000		
Contingencies (25%)	679,250		
Total CN	<u>\$3,396,625</u>	<u>\$149,507</u>	<u>\$3,938,626</u>
CE (10%)	<u>\$339,625</u>	<u>\$14,950</u>	<u>\$393,861</u>
TOTAL CN+CE	<u>\$3,735,875</u>	<u>\$164,457</u>	<u>\$4,332,487</u>

Note: Inflation is calculated in PPMS to the letting date. If there is no letting date, the project is assumed to be inside the current TCP and is given a maximum of 5 years until letting. IDC is calculated at 11.08% as of FY 2012.

The estimated cost \$4,332,487 (CN+CE+INF+IDC) = \$3,610,405 per mile.

Project Management

The Butte District Road Design will develop the plans and Joe Walsh is the Project Design Manager. At this time this project is under full FHWA oversight.

Ready Date

The proposed ready date for this project is December 1, 2013 as listed in the 2011 TCP.

Site Map

The project site map is attached.

