



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001



January 22, 2015

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FHWA
MONTANA DIVISION

Kevin L. McLaury
Division Administrator
Federal Highway Administration
585 Shepard Way, Suite 2
Helena, MT 59601-9785

Attention: Jeff Patten

Subject: Categorical Exclusion
RARUS/SILVER BOW CR STRUCTURES
IM-15-2(112)124
Control Number: 7659000

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 September 9, 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). | <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 23 CFR 771.117(b). | <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 <i>1965 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 checked="" 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 <i>1966 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 checked="" 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 checked="" 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 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. 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. A 124SPA Stream Protection Authorization would be obtained from the MDFWP? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 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 type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1. If yes, are there potential noise impacts? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. A Noise Analysis would be completed. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| All reasonable measures would be taken to avoid and/or minimize substantial impacts from same. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 type="checkbox"/> | <input checked="" 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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: 1-22-15
Barry Brosten - Butte District Project Development Engineer
MDT Environmental Services Bureau

Concur Heidi Bruner, Date: 1/23/15
Heidi Bruner, P.E. - Engineering Section Supervisor
MDT Environmental Services Bureau

Concur Jeffery G. Patten, Date: 1-27-15
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 |
| Lesly Tribelhorn | Highway Engineer (acting) |
| Kent Barnes | Bridge Engineer |
| Tom Martin | Chief, Environmental Services Bureau |
| Robert Stapley | Right-of-Way Bureau Chief |
| Suzy Price | Contract Plans Bureau Chief |
| Lisa Hurley | Fiscal Programming Section Supervisor |
| Tom Erving | Fiscal Programming Section |
| Barry Brosten | Environmental Services |
| Environmental Services File | |
| Montana Legislative Branch Environmental Quality Council (EQC) | |



Memorandum

To: Kent Barnes, PE
 Bridge Engineer

From: David Johnson, PE
 Bridge Design Engineer

Date: September 9, 2011

Subject: IM 15-2(112)125
 Rarus/Silverbow Cr Structures
 UPN 7659000
 Work Type 221 – Bridge Replacement with no Added Capacity

Please approve the attached Preliminary Field Review Report.

Approved Kent Barnes Date 9/9/11
 Kent Barnes
 Bridge 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 | Lynn Zanto, Rail, Transit, & Planning Division Administrator |
| Kent Barnes, Bridge Engineer | Jake Goettle, Construction Engineering Services Bureau |
| Tom Martin, Environmental Services Bureau Chief | Matt Strizich, Materials Engineer |
| Roy Peterson, Traffic and Safety Engineer | Jon Swartz, Maintenance Administrator (PFR or SOW only) |
| Robert Stapley, Right-of-Way Bureau Chief | FHWA - Operations Engineer (full oversight) |
| Paul Ferry, Highways Engineer | |

cc:

- | | |
|--|-------------------------------|
| Dawn Stratton, Fiscal Programming Section | Dan Dennehy, Butte Silver Bow |
| Bryan Miller, Project Design Manager, Butte District | Master File |
| Damian Krings, Road Design Engineer | |

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, District Materials Lab |
| Bonnie Gundrum, Env. Resources Section Supervisor | Kam Wrigg, District Maintenance Chief |
| Deb Wambach, District Biologist | Steven Giard, R/W Utilities Section |
| Barry Brosten, District Project Development Engineer | David Hoerning, R/W Engineering Manager |
| Danielle Bolan, Traffic Engineer | Greg Pizzini, Acquisition Manager |
| LeRoy Mosoba, District Traffic Project Engineer | Joe Zody, R/W Access Management Section Manager |
| Kraig McLeod, Safety Engineer | Paul Johnson, Project Analysis Bureau |
| 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 |
| Pat McCann, District Geotechnical Manager | Mark Keeffe, Bicycle/Pedestrian Coordinator |
| Bryce Larsen, Supervisor, Photogrammetry & Survey | Wayne Noem, Secondary Roads Engineer |
| Marty Beatty, Engineering Information Services | Scott Bunton, Engineering Cost Analyst |
| Paul Grant, Public Involvement Officer | Becky Duke, Traffic Data Collection Section Supervisor (WIM) |
| Jean Riley, Planner | Dave Hand, Maintenance Division Operations Manager (RWIS) |
| Dawn Stratton, Fiscal Programming | Alyce Fisher, Fiscal Programming |

Preliminary Field Review Report

IM 15-2(112)125 Rarus/Silverbow Cr Structures
Project Manager: Bryan Miller

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Introduction

The Preliminary Field Review was held on July 14, 2011 with the following people in attendance:

| | |
|-----------------|-----------------------------------|
| Jeff Ebert | Butte District Administrator |
| Jim Davies | Butte District Road Area Engineer |
| Joe Walsh | Butte District Projects Engineer |
| Deborah Wambach | Butte District Biologist |
| Mark French | Road Design |
| Kevin Mueller | Butte – Road Design |
| Walt Ludlow | District Hydraulics Engineer |
| Pat McCann | District Geotechnical Engineer |
| Dustin Rouse | Engineering Services Supervisor |
| Tracy Stoner | Bridge Design |

Proposed Scope of Work

The proposed project has been nominated from the Butte Interstate Traffic Study Project IM 0002(627) CN: 5098 to replace the functionally obsolete I-15 bridges between RP 124.4 and 125.2 and improve horizontal curvature of I-15. The project will include four new structures, grading, gravel, plant mix surfacing, seal & cover, guardrail, pavement markings and updated signing.

Purpose and Need

The purpose of the project is to address interstate deficiencies and improve interstate safety.

Project Location and Limits

The project is located in Silver Bow County on Interstate Route 15. The project begins at RP- 124.4 in Sec. 15, T3N, R8W and extends east to RP- 125.5 in Sec. 23, T3N, R8W. The project is on the west end of the Butte Urban limits. The project length is 1.1 miles. The project extends from the limits of project IM 15-2(100)124, Neversweat Bridge Removal UPN 7291000 to the beginning of project IM 15-2(81)125, Butte Area Structures UPN 4291.

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

This segment of I-15/I-90 is within rolling terrain with curvilinear horizontal geometry in the urban interstate segment of Butte. The existing embankment slopes are high and steep with long guardrail runs. The existing pavement is concrete pavement with a 0.16 ft asphalt overlay placed in 2006. The roadway width varies from 38 feet to 28 feet across the bridges. Fill slopes under the bridges were constructed at 1½:1 in some locations to avoid constraints.

| Structure | Feature Crossed | Rdwy Width ft | Total Length ft | Sufficiency Rating | Structure Status |
|-----------------|--------------------------|---------------|-----------------|--------------------|----------------------|
| I00015124+06901 | Local, Rarus RR | 28 | 301 | 76.3 | Func Obs - Elg Rehab |
| I00015124+08262 | Local, Rarus RR | 28 | 321 | 76.2 | Func Obs - Elg Rehab |
| I00015124+08701 | Silverbow Cr, Mt West RR | 28 | 442 | 77.2 | Func Obs - Elg Rehab |
| I00015125+00842 | Silverbow Cr, Mt West RR | 28 | 489 | 77.2 | Func Obs - Elg Rehab |

Preliminary Field Review Report

The bridges are Functionally Obsolete due to the narrow bridge width. These bridges are vulnerable to damage and collapse during an earthquake and vulnerable to railroad impacts due to substandard clearances. In addition, the Silver Bow Creek, Mt Western RR structures cross the RR and creek at a severe skew making widening impracticable. Due to the existing structure type and geometry, widening and retrofit of the structures is not practical or economically feasible.

I00015124+06901 Local, Rarus RR

I00015124+08262 Local, Rarus RR

These structures are on a tangent segment of roadway that span over South Excelsior Avenue, Patriot RR and Santa Claus road respectively. The bridges received an asphalt overlay and rail revision in 2006. The bridges are on a constant grade. The superstructure consist of prestressed concrete girders with a concrete deck. The substructure consist of concrete caps, columns and spread footings.

I00015124+08701 Silverbow Cr, MT West RR

I00015125+00842 Silverbow Cr, MT West RR

These structures are built on a transition from a spiral to a curve segment of roadway with a maximum super of 0.07. The structures cross over Silver Bow creek and the BNSF RR respectively. The bridges received an asphalt overlay and rail revision in 2006. Both bridges are on a sag vertical curve. The superstructure consist of prestressed concrete and riveted steel girders with a concrete deck. The substructure consist of concrete caps, columns and spread footings.

Traffic Data

| | |
|----------------------------|--------------------------|
| a. current AADT 2011, | 12,400 |
| b. letting date AADT 2015, | 13,710 |
| c. design year AADT 2035, | 22,690 |
| d. DHV, | 2380 |
| e. percent of trucks, | 16.4% |
| f. ESAL, | 1372 (flexible Pavement) |
| g. ESAL, | 2122 (Rigid Pavement) |
| h. AGR, | 2.6% |

Crash Analysis

The crash analysis encompasses crashes coded to Interstate 15 from reference point 124+0.400 to reference point 125+0.200 and also Interstate 90 from reference point 221+0.500 to reference point 224+0.000, for the dates January 1, 2006 through December 31, 2010. A summary of the crashes involving the structures follows:

I00015124+0690 1 & 2 Rarus Railway

There were 11 recorded crashes involving the Rarus Railway structures during the five year study period. The majority of crashes occurred at night during icy pavement conditions. There were seven crashes associated with the northbound structure. All seven of these crashes were single-vehicle crashes due to loss of control either on the approaches (2 crashes) or the bridge deck itself (5 crashes) and striking the bridge rail and or approach rail. The crashes resulted in one injury crash and 6 property damage only crashes.

There were four crashes associated with the southbound structure. All four of these crashes were single-vehicle crashes due to loss of control either on the approaches (3 crashes) or the bridge deck itself (1 crash) and striking the bridge rail and or approach rail. The crashes resulted in one injury crash and 3 property damage only crashes.

The section from reference point 124.1 to reference point 124.5, area was identified as a crash cluster location in 2008. No feasible countermeasures to address a specific crash trend were identified. Single vehicle, out of control on icy pavement conditions is the most common type of crash.

Preliminary Field Review Report

I00015124+08701 1 & 2 Silverbow Creek

There were 20 recorded crashes involving the Silverbow structures during the 5-year study period. The majority of crashes also occurred at night during icy, snowy or slushy pavement conditions. There were 4 crashes associated with the northbound structure. All four of these crashes were single-vehicle crashes due to loss of control either on the approaches (3 crashes) or the bridge deck itself (1 crash) and striking the bridge rail and or approach rail. The crashes resulted in one injury crash and 3 property damage only crashes.

There were 16 recorded crashes associated with the southbound structure. The majority of the crashes 15 out of 16 were single-vehicle crashes due to loss of control either on the approaches (8 crashes) or the bridge deck itself (7 crashes) and striking the bridge rail and or approach rail. The remaining crash involved a vehicle being sideswiped during a passing maneuver. The crashes resulted in two injury crashes and 14 property damage only crashes.

To address the crashes within this area, Safety Engineering recommends investigating the feasibility of applying a high friction overlay to increase the skid resistance of the pavement as well as providing lighting to address the crashes occurring at night.

Major Design Features

- a. **Design Speed.** The design speed for this project is 60 mph based on MDT standards for Interstate system roads in rolling terrain. The posted speed for cars and light trucks is 65 mph and 65 mph for heavy trucks.
- b. **Horizontal Alignment.** The existing horizontal alignment appears to meet current MDT design guides for 60 mph. Changes in the horizontal alignment will be considered to improve the geometry for the proposed bridges over Silver Bow creek and BNSF that are currently on a spiral and curve. A tangent alignment over bridges is desirable. Ending or beginning a curve on a bridge is of concern as the deck of a bridge can frost faster than the adjacent roadway; it also complicates bridge design and construction. When horizontal curvature is unavoidable, the limits of the bridge should fall entirely within the body of the flattest practical curve. Horizontal curves that begin or end near a bridge should ideally be located so that no part of the super elevation transition and tangent run out extends onto the bridge. A uniform deck section across the entire bridge (either fully super elevated or normal crown) is preferred.
- c. **Vertical Alignment.** The existing vertical grades appear to meet current guidelines for a 60 mph design speed. The existing grades will be adjusted to maintain minimum clearance over the railroads, accommodate the new superstructure depth and consider longitudinal drainage of the bridge decks.
- d. **Typical Sections and Surfacing.** The typical section for both EB and WB will consist of a 38' width with a 4' left shoulder, two 12' traffic lanes and a 10' right shoulder. The existing surfacing consist of PCCP with an asphalt overlay. The Surfacing Design Section will provide a surfacing section for the project .
- e. **Geotechnical Considerations.** Geotechnical information including bore logs and a foundation report will be required for the design of bridge foundations. The existing embankment under the bridges in some places is 1½:1. The design may consider perpetuating much of the existing embankment depending on Geotechnical recommendations. The existing bridge foundations are all spread footings. Geotechnical drilling will need to be coordinated with the Solid and Hazardous Waste Section to evaluate this potential and ensure proper procedures and methods are in place if hazardous materials are encountered.
- f. **Hydraulics.** A narrative drainage report will be required for the Patriot and BNSF railroads for the new structures crossing over these railroads. Silver Bow Creek runs parallel to the BNSF railway under the Interstate. The required Railroad vertical clearance will provide

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- more than adequate free board under the Interstate. As-built plans show extensive riprap placed before the DEQ remediation. This riprap will need to be verified. A Hyd. 1 survey will be required. Refer to the Hydraulics Study Report for more information prepared by the Hydraulics Section.
- g. **Bridges.** The four interstate bridges will be replaced to provide a roadway width of 38'. The new structures will be designed with the potential for future widening of the interstate. The project will consider eliminating the access under the interstate to Grizzly Trail road to reduce the required length and cost of the new structures. Access to Grizzly Trail will be maintained from the west end. Butte Silver Bow has a proposed future trail along Silver Bow Creek that will need to be included under the new structures or in a separate pedestrian box culvert.
 - h. **Traffic.** New signing, pavement markings and delineation will be included in this project.
 - i. **Pedestrian/Bicycle/ADA.** No pedestrian/bicycle features will be included on the Interstate. Coordination with Butte Silver Bow will be required to determine if any future pedestrian/bicycle facilities will be accommodated and where they will be located crossing the interstate.
 - j. **Miscellaneous Features.** A weigh in motion sensor in the pavement near the end of the project exist and will require coordination with MCS with respect to utilities and traffic control. The sensor will need to be located by survey. The project will consider eliminating the access under the interstate to Grizzly Trail Road to reduce the required length and cost of the new structures. Access to Grizzly Trail will be maintained from the west end.
 - k. **Context Sensitive Design Issues.** No Context Sensitive Design Issues have been identified.

Other Projects

IM 15-2(104)123 Rocker_EB Climbing Lane UPN: 7289000

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

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

Design Exceptions

No design exceptions are anticipated for this project.

Right-of-Way

This interstate segment has a split alignment with land owned by private inholdings between the NB and SB lanes. Arco Environmental Remediation appears to be the primary landowner. The existing right-of-way widths vary throughout the project. Additional right-of-way may be required to improve the alignment of the bridges over Silver Bow Creek and the BNSF RR.

Cold-In-Place Recycle (for mill & overlay projects only)

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

Access Control

This roadway is a controlled access facility. The project will consider eliminating the access under the interstate to Grizzly Trail Road to reduce the required length and cost of the new structures. Access to Grizzly Trail will be maintained from the west end.

Intelligent Transportation Systems (ITS) Features

ITS will not be pursued on this project.

Experimental Features

No experimental features are proposed at this time.

Utilities/Railroads

Coordination with the Patriot and BNSF RR will be required for the new structures over these railways.

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Early coordination with the RR's to determine if there are any planned changes that may affect our proposed project will be beneficial. The new Bridge Size, Type and Locations will need to consider the existing RR R/W and clearance requirement to the tracks.

Several large water supply lines pass under the interstate near the bridges and will need to be located.

Survey

A complete location survey will be requested. The survey will cover the project area and 150 feet beyond the right-of-way fence. Survey data will be required to set vertical clearances between Patriot and BNSF rails and MDT beams. A high degree of accuracy will be required for rail elevations. This will require a survey run with a digital level and closed loop for rail elevations. A Phase 1 S.U.E. survey will be requested. Butte District Materials will complete a soil survey.

Public Involvement

Level B will be appropriate for this project.

Level B

1. News release explaining the project and including a department point of contact. Alternatively, contact with a newspaper or papers serving the area to develop a story and graphics that explain and illustrate the proposal. Radio and TV contacts.
2. Personal contacts with local government officials, interest groups.
3. Personal contacts with adjacent landowners explaining final design.
4. Construction notification and information during construction.

Environmental Considerations

A categorical exclusion will most likely be prepared for this project. The project is within the Silver Bow Creek superfund site see [Montana Department of Environmental Quality \(DEQ\) - Silver Bow Creek](#). DEQ initiated cleanup activities in this reach of Silver Bow Creek in 1999 by removing streamside tailings to a local repository and reconstructing the stream channel and completed remediation by the end of 2003. The stream directly under the bridges is straight while meanders were created as part of the remediation up and down stream. Any disturbance to the stream or stream banks will require coordination with DEQ. Contact Joel Chavez, DEQ for superfund information. Three of the existing bridge foundations within the stream appear to extend below the existing riprap. Leaving these foundations in place with minimal disturbance to Silver Bow Creek should be considered.

A SPA 124 Notification to MFWP and a CWA 404 permit from USACOE are required. Consultation with USFWS regarding bull trout will be required.

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

Currently, Energy Savings and Eco-Friendly Considerations have not been identified.

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

Traffic issues that will require special consideration are as follows:

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Maintain on the interstate at least one 12 foot traffic lane in each direction during Phase I construction and at least one 16 foot lane in each direction during Phase II. Utilize the west crossovers created with the Butte Area Structures project and the crossovers that will be constructed for the Neversweat RR bridge removal project.

Through traffic will be maintained during construction utilizing median cross-overs. Phase I will include the EB lanes while phase II will include the WB lanes. Cross overs

The City Center on ramp of I-115 will be closed when two way traffic is on the EB lanes. During the grading operations for the crossover ramps, the ramps may be closed for a short period of time with the approval of the engineer. For ramp closures, provide appropriate advance warning of the ramp closure and appropriate guidance information to direct traffic to optional exit/entrance locations.

Wide Loads: During Phase I construction, I-15 northbound and I-90 eastbound wide loads over 10' will take City Center Exit 124 onto I-115 to Montana Street and back to the interstate at exit 126. I-15 southbound and I-90 westbound wide loads over 10' will take exit 126 onto Montana Street to I-115 back to the interstate at exit 124. This detour has a 14'2" height restriction. Oversized loads that cannot use the detour due to height restrictions will be scheduled to pass through the construction zone. During Phase II construction, a minimum 16 foot lane will be maintained in each direction and will not require a wide load detour.

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

Project Management

The Bridge Bureau will manage the preconstruction phase of this project with Butte District completing the road design. The project design manager is Bryan Miller. The preconstruction engineering portion of the project is not under full FHWA oversight while the construction of the project will be under full FHWA oversight.

Preliminary Cost Estimate

| | Estimated cost | Inflation (INF) (from PPMS) | TOTAL costs w/INF + IDC (from PPMS) |
|---------------------|----------------------------|--------------------------------|---|
| Road Work | 2,750,000 | | |
| New Structures | 8,500,000 | | |
| Remove Structures | 400,000 | | |
| Traffic Control | 800,000 | | |
| Subtotal | 12,450,000 | | |
| Mobilization (15%) | 1,868,000 | | |
| Subtotal | 14,318,000 | | |
| Contingencies (15%) | 2,148,000 | | |
| Total CN | <u>\$16,466,000</u> | <u>\$2,977,000</u> | <u>\$ 21,316,807</u> |
| CE (15%) | <u>\$2,470,000</u> | <u>\$447,000</u> | <u>\$ 3,197,650</u> |
| TOTAL CN+CE | <u>\$18,936,000</u> | <u>\$3,424,000</u> | <u>\$ 24,514,457</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 13.35% as of FY 2011.

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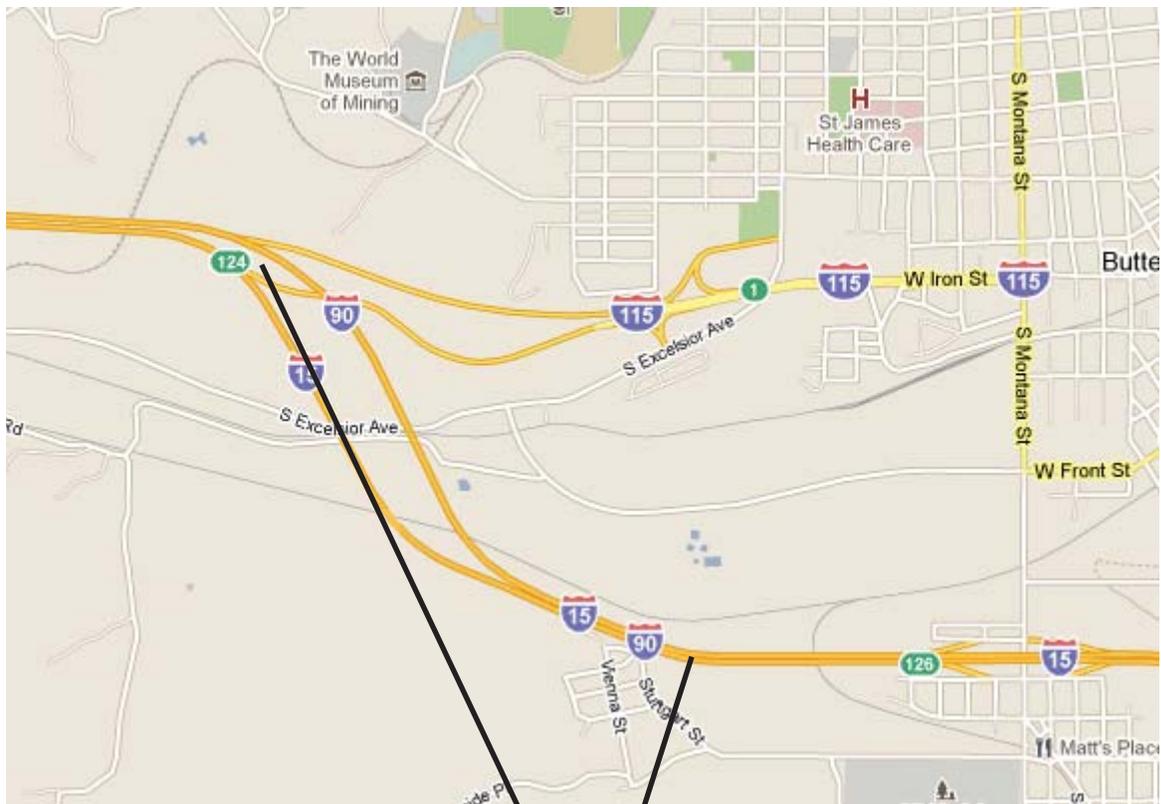
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Ready Date

A ready date will be established after over rides are complete. The estimated letting date is in 2015.

Site Map

The project site map is attached.



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UPN 7659000

RP 124.4 to 125.2

REV 9/30/10