



Montana Department of Transportation

2701 Prospect Avenue  
PO Box 201001  
Helena MT 59620-1001

Jim Lynch, Director  
Brian Schweitzer, Governor

County FLATHEAD

July 18, 2005

**RECEIVED**

JUL 20 2005

LEGISLATIVE ENVIRONMENTAL  
POLICY OFFICE

To Whom It May Concern:

Subject: Cooperating Agency Environmental Documentation

As a Cooperating Agency under the provisions of 23 CFR 771.111 the Montana Department of Transportation (MDT) is providing you a copy of this project's environmental documentation.

This environmental documentation complies with the provisions of 23 CFR 771.117(a) and (d) for categorically excluding this proposed project from further National Environmental Policy Act (NEPA) (42 U.S.C. 4321, et seq.) documentation requirements. The attached also complies with the provisions of 75-1-103 and 75-1-201, MCA (see ARM 18.2.237 and 18.2.261, MEPA "Actions that qualify for a Categorical Exclusion" as applicable to the MDT).

If you have any questions concerning the attached environmental documentation please call the MDT Environmental Services Division at (406) 444-7228.

Sincerely,

Jean A. Riley, P.E.  
Bureau Chief  
Environmental Services Division

S:\ADMIN\48\_GEN\_CORRESP\MAILINGS\COOP AGENCY LTR.DOC\UCTUS93-JCTUS2\_CN4860

Attachment



Montana Department of Transportation

2701 Prospect Avenue  
PO Box 201001  
Helena MT 59620-1001

Jim Lynch, Director  
Brian Schweitzer, Governor

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July 5, 2005

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JUL 12 2005

ENVIRONMENTAL

JUL 12 2005  
FHWA  
MONTANA DIVISION

Janice W. Brown  
Division Administrator  
Federal Highway Administration  
2880 Skyway Drive  
Helena, MT 59602-1230

MASTER FILE  
COPY

Subject: STPS 548 -1(8)4  
Jct US 93 - Jct US2  
Control Number: 4860

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. Copies of its Preliminary Field Review Report (PFR) and Project Location Map are attached. This proposed action also qualifies as a CE under ARM 18.2.261 (Sections 75-1-103 and 75-1-201, MCA).

This project was originally approved as a Statewide Programmatic Categorical Exclusion under Pavement Preservation on October 6, 2003. Changes to the original scope of work have subsequently changed that original determination and a Programmatic Categorical Exclusion (PCE) has been prepared and is part of this document. A copy of the modified Preliminary Field Review/Scope of Work (PFR/SOW) is attached.

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

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

		YES	NO	N/A	UNK
1.	This proposed project would have (a) significant environmental impact(s) as defined under <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:				

Environmental Services  
Phone: (406) 444-7228  
Fax: (406) 444-7245

Web Page: [www.mdt.state.mt.us](http://www.mdt.state.mt.us)  
Road Report: (800) 226-7623  
TTY: (800) 335-7592

		<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>UNK</u>
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"/>
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 &amp; Water Conservation Fund Act (16 USC 460L, 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. (e.g.: 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 (16 USC 470, et seq.)</i> by the State Historic Preservation Office (SHPO), which this would affect 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 (49 USC 303)</i> on or adjacent to the project area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a.	"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"/>
b.	This proposed project requires a full (i.e.: 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 water body(ies) considered as "waters of the United States" or similar (e.g.: "state waters").	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		YES	NO	N/A	UNK
1.	Conditions set forth in <i>Section 10</i> of the <i>Rivers and Harbors Act (33 USC 403)</i> and/or <i>Section 404</i> under <u>33 CFR Parts 320-330</u> of the <i>Clean Water Act (33 USC 1251-1376)</i> would be met.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.	Impacts in wetlands, including but not limited to those referenced under Executive Order (EO) #11990, and their proposed mitigation would be coordinated with the Montana Inter-Agency Wetland Group.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.	A 124SPA Stream Protection permit 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 checked="" type="checkbox"/>	<input 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 checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>
c.	South Fork of the Flathead River (headwaters to Hungry Horse Reservoir).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Missouri River (Fort Benton to Charles M. Russell National Wildlife Refuge).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	In accordance with <i>Section 7</i> of the <i>Wild and Scenic Rivers Act (16 USC 1271 - 1287)</i> , 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"/>

		YES	NO	N/A	UNK
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 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 it.	<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"/>

		YES	NO	N/A	UNK
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 type="checkbox"/>	<input checked="" 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, et seq.).	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 40 CFR 81.327 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.	"No attainment" 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 40 CFR 52.1382(c)(3)?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<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.

  
\_\_\_\_\_, Date: 7/15/05  
Thomas L. Hansen, P.E., Supervisor  
Environmental Engineering Section  
MDT Environmental Services

Concur   
\_\_\_\_\_, Date: 7/11/05  
Federal Highway Administration

s:projects/missoula/4860/4860ENENPCE Reeval Programmatic FHWA.doc

Attachments

cc: Dwane Kailey, P.E. ----- Missoula District Engineer  
Paul Ferry, P.E. ----- Highway Engineer  
John H. Horton ----- Right-of-Way Bureau Chief  
Suzy Althof ----- Contract Plans Section Supervisor  
David W. Jensen ----- Fiscal Programming Section Supervisor  
Jean Riley, P.E. ----- Environmental Services Bureau Chief  
Susan Kilcrease ----- Missoula Environmental Services



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

Memorandum

To: Joel M. Marshik, PE  
Chief Engineer, Engineering Division

From: Carl S. Peil, PE  
Preconstruction Engineer

Date: January 14, 2004

Subject: STPS 548-1(8)4  
Jct. US 93 – Jct. US 2  
UPN 4860  
Work Type 181 Resurfacing – Asphalt (Scheduled Maintenance)  
411 - Traffic Signals & Lighting

A copy of the combined Preliminary Field Review/Scope of Work Report is attached, along with approvals from Loran Frazier, Mark Wissinger, Kent Barnes, Dave Hill, Gary Larson (for Pat Saindon), and Jim Stevenson (for John Blacker). We did not receive specific concurrence from Traffic Engineering, but the attached emails from Don Dusek and Steve Keller indicate concurrence with the major traffic engineering items – the three lane configuration and signal revision. We assumed the concurrence of Joe Kolman, and John Horton.

Since the report was distributed, Public Affairs distributed a news release to the local media. We also held a public informational meeting on May 29, 2003. The public generally favored the lane reconfiguration that provides a 3.6 m two-way –left –turn lane, two 3.3-meter driving lanes, and a 1.5 m shoulder on each side, with a shoulder stripe. We also received correspondence that pedestrians should be addressed.

We considered extending the sidewalk on both north and south sides so that it is full length for the entire project. This would entail new sidewalk from RP 5.82 to RP 6.50 on the south side, and from RP 4.00 to 5.82 on the north side. The District provided topog that led us to drop the sidewalk extension on the south side due to the numerous conflicts (nine telephone poles, seven telephone pedestals, 23 mailboxes, a sewer standpipe, and a railroad stop signal/arm).

On the north side, we propose to extend the sidewalk from the radius point on the north leg of Highway 93 to the end of the curb radius on the east side of the Whitefish Stage Road intersection at RP 5.011. This signalized intersection already has a pedestrian push button signal standard in the northeast corner, and pedestrian push buttons on the signal pole in the northwest corner. The new sidewalk will tie into the 143.6 meters of sidewalk installed in 2003 on the approaches to the Stillwater River bridge (RP 4.28) under Project BH 0002(646), D1 – Seismic Rehab [3843].

There is approximately 107 meters of guardrail that begins 65± meters east of the Hwy 93/Reserve Drive junction, extends around the intersection radius, and ends about 7.6 meters north of the radius point. The face of rail is flush with the face of curb. We propose to remove the rail, replace the curb, build a 1.52-m sidewalk, and reset the rail behind the sidewalk.

The conflicts will include a total of 13 sprinkler heads on either side of the approach to the Semitool complex at RP 4.68. The landscaping was installed before MDT assumed maintenance of the route in July 2000. It is questionable whether Semitool secured an encroachment permit for the sprinklers. District Maintenance should contact Semitool to inform them the sprinklers will have to be relocated behind the new sidewalk.

There was also a request at the public meeting to install a protected left turn phase for eastbound traffic at the signalized intersection of Reserve Drive and LaSalle Road (US 2). Long queues form as left-turners wait for an opening. The queues block ingress and egress to several commercial approaches near the intersection.

Traffic Engineering reviewed the request and determined the geometry of the intersection lends itself to a left-turn/through lane, and a right-turn only lane. This reflects how motorists are now operating at the intersection: The travel lane is used as a left-turn/through lane, and the shoulder is used as a right-turn lane.

Traffic Engineering determined a new controller and cabinet would be required. They also noted that trucks have hit the signal pole in the northwest quadrant, so the signal pole will have to be relocated, and the radius flattened to allow WB-20 truck movements with the revised lane configuration.

The radius revision and signal pole relocation will almost certainly require new right-of-way and relocation of at least one pole in the transmission line that parallels the north side of Reserve. The one pole is about two meters west of the signal pole and 2.5± meters behind the curb. Cadastral and topog survey will be required for this intersection.

We believe the additional project development time and increased construction costs are justified to address the operational problems identified at the Reserve Street/LaSalle Road intersection.

Environmental Services notified the FHWA on October 6, 2003 that the project is covered under the Statewide Programmatic Categorical Exclusion (PCE) for pavement preservation projects. However, due to the scope changes noted above, the environmental document will have to be revised because the project no longer meets the criteria for the PCE.

The project's ready date was recently moved to July 2004 to allow additional development time, and to allow letting in State FY 2005. The project will be sent out for re-overrides in OPX2.

We propose to construct the project under the State Funded Construction Secondary (SFCS) program. The increased construction cost renders the project not fundable in State FY 2004. The updated cost estimate is \$1,050,000, compared to the \$597,000 stated in the May 6, 2003 Scope of Work Report. The updated estimate includes 7% CE, and inflates to \$1,069,000 at a November 2004 letting date. *Note: costs coordinated w/District and Planning*

With your approval we will proceed with the design in accordance with the attached report and the comments herein.

Approved For Carl S. Peil  
Joel M. Marshik, PE  
Chief Engineer, Engineering Division

Date January 14, 2004

CSP:WMS:K:\MISSOULA-CREW\SCOPE-OF-WORK\4860SOWAPPRV.DOC

\* Attachments

Distribution

L. E. Frazier, Missoula \*  
K. Barnes, Materials  
J. P. Kolman, Bridge  
J. H. Horton, Right-of-Way  
D.J. Blacker, Maintenance  
S. Straehl, Planning\*  
D. Hill, Environmental  
M.A. Wissinger, Construction  
D.E. Williams, Traffic & Safety\*

Copy J. A. Walther, Engineering  
S. Rowell, EISS\*  
W. F. Scott, Utilities  
D. W. Jensen, Planning\* Admin  
P. A. Jomini  
M. A. Goodman  
D. P. Dusek  
R E. Williams\*  
Craig Genzlinger (FHWA)  
File\*



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

Memorandum

To: Carl S. Peil, PE  
Preconstruction Engineer

From: Ronald E. Williams, PE *REW*  
Road Design Engineer

Date: May 6, 2003

Subject: STPS 548-1(8)4  
Jct. US 93 – Jct. US 2  
UPN 4860  
Work Type 181 Resurfacing – Asphalt (Scheduled Maintenance)

**This is a combined Preliminary Field Review & Scope of Work Report**

We request that you approve attached the combined Preliminary Field Review/Scope of Work Report for the subject projects.

Approved *Carl S. Peil* Date 5-17-03  
Carl S. Peil, P.E.  
Preconstruction Engineer

We are requesting comments from those on the distribution. We will assume concurrence if no comments are received within two weeks of the report's distribution by Engineering Information Services Section. **The report is also being distributed under a separate cover as a Scope of Work Report for comments and approval.**

Distribution (all with attachment)

P. A. Jomini, Safety Management  
M. A. Goodman, Hydraulics  
D. P. Dusek, Traffic Engineering  
B. F. Juvan, EISS  
W. F. Scott, Utilities  
R. E. Williams, Road Design  
Craig Genslinger, (FHWA - HOP-MT)  
J. J. Moran, Geotechnical  
I. B. Ulberg, Right-of-Way

C. Strizich, Planning

Flathead County Commissioners  
800 South Main  
Kalispell, MT 59901-5400  
Attn: C. Johnson



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

Memorandum

To: Carl S. Peil, PE  
Preconstruction Engineer

From: Ronald E. Williams, PE   
Road Design Engineer

Date: May 6, 2003

Subject: STPS 548-1(8)4  
Jct. US 93 – Jct. US 2  
UPN 4860  
Work Type 181 Resurfacing – Asphalt (Scheduled Maintenance)

**Preliminary Field Review/Scope of Work Report**

An on-site field review and office review were held April 23, 2002. The following attended:

Dwane Kailey, Projects Engineer, MDT – Missoula.  
Bill Squires, P.E., Missoula Project Engineer, MDT Road Design – Helena  
Blair Nordhagen, CE Specialist III, MDT Road Design – Helena  
Gary Larson, Secondary Roads Engineer - Helena  
Jim Tompkins, Surfacing Design Supervisor – Helena  
Steve Herzog Maintenance Chief, Kalispell . (office review only)  
Larry Brazda, Construction Engineer, Kalispell. (office review only)

1. **Scope of Work**-The project was nominated to extend the life of the pavement by placing a thin lift plant mix overlay full width, followed by seal and cover. Other work will include replacing drop inlets with slotted drains, raising manholes and pavement markings. The project is needed to preserve the existing pavement until a project can be developed and funded that addresses the identified structural and operational deficiencies of the existing facility.

The project currently has a July 2003 ready date. The preliminary cost estimate, including 7% for construction engineering, is \$597,000. The estimate inflates at 3% annually to \$607,000 at a possible October 2003 letting.

2. **Project Location and Limits**-The project is in Flathead County on Reserve Drive (Secondary 548). It begins at Reference Post (RP) 4.015, 24.4 meters east of the

U.S. Highway 93/Secondary 548 junction. The project extends easterly 3.98 kilometers to RP 6.50, 15.1 meters west of the intersection with US Highway 2. See the attached location map.

The project stationing is Station 64+73.4. to [English Station 212+38.3 to 342+96.8 on RS 548-1(5)4].

3. **Physical Characteristics** - Secondary 548 (Reserve Drive) is on the State Secondary System, and is classified as a major collector. MDT maintains the route.

The project is in a mostly level to rolling urban area. There is heavy residential and commercial development on both sides of the roadway interspersed amongst undeveloped tracts.

The road was constructed under RS 548-1(5)4, West Reserve Drive – North of Kalispell in 1985. It was built as a two-lane curb & gutter section with two 3.66-meter driving lanes, and two 2.59-meter shoulders for a total paved width of 12.50 meters (edge-to-edge-of gutter pans). A 1.5-meter sidewalk was constructed along the south side from the Highway 93 intersection to RP 5.82, and on the north side from RP 5.82 to the Highway 2 intersection.

The road was widened in 2002 to accommodate increased turning movements due to the opening of a Home Depot just east of the southeast corner of the Reserve Drive/US Highway 93 intersection. The south (eastbound) side was widened about 0.4 to 2.2 meters from RP 4.009 to RP 4.12 $\pm$ . New approaches were constructed at RP 4.15 $\pm$  and RP 4.20 $\pm$ .

The north (westbound) side was widened 2.58 meters from RP 4.009 to 4.08. The roadway width then tapers to match the original roadway width at RP 4.15 $\pm$ , where a new approach was constructed.

At the Highway 93 intersection, the roadway is now 15.54 meters wide, with a 4.11-m westbound through/right lane, two westbound 3.66-m left turn lanes, and a 4.11-m eastbound through lane.

The segment beginning about 114 meters east of the US 93 intersection includes a 4.11-m eastbound through lane that widens on a 15:1 taper to 5.5 $\pm$  meters at the west approach radius for the main Home Depot approach at RP 4.15. The tapered section accommodates through traffic and traffic slowing to turn into the Home Depot approach. There is also a 3.66-m eastbound left turn lane for the approach at RP 4.15 on the north side. A painted median up to 2.4 $\pm$  meters wide separates

the left turn lane from the 4.11-m westbound lane.

The roadway was not widened east of the approaches at RP 4.15, but it was restriped to provide a 3.66-m through lane in each direction, a 3.66-m westbound left-turn lane, and two 0.76-m shoulders.

The original surfacing consisted of 76 mm of plant mix surfacing, 76 mm of crushed base course, 304.8 mm of select backfill and then a layer of construction fabric. There is curb and gutter on both sides. A 45 mm overlay was placed in 1994 under RS 548-1(6), increasing the total plant mix depth to 121 mm. To properly install the overlay the shoulders were milled from the gutter out approximately 3.81 meters on both sides.

The horizontal alignment provides good sight distance throughout the project. The sharpest curve, at RP 5.4, has a radius of 873.2 meters, well above the 80 km/h design speed minimum of 230 meters.

The vertical alignment features rolling terrain and fairly steep grades in the vicinity of the river crossings. There are 13 vertical curves, four of which do not provide desirable stopping sight distance (SSD) at 80 km/h. The two crests are at RP 4.0 and RP 5.4. They provide desirable [minimum] SSD at 65 [74] km/h and 76 [85] km/h, respectively. The two sags are at RP 5.7 and RP 6.1. They provide desirable [minimum] SSD at 79 [91] km/h and 64 [72] km/h, respectively

The flattest grade is 0.202% at RP 6.5, and the steepest grade is 7.015% at RP 5.5.

4. **Traffic Data** – The traffic data collected has one break. The break point is the intersection with Whitefish Stage Rd. at RP 5.010 (junction with Secondary 292 and U-6728). The information for each section is included to depict the variation of traffic characteristics throughout the length of this project.

	<u>RP 4.0 to 5.010</u>	<u>RP 5.011 to 6.500</u>
2002 ADT (Present)=	12,160	11,080
2004 ADT (Letting)=	13,020	11,870
2024 ADT (Design Year)=	25,910	23,620
DHV=	2,850	2,600
T=	4.9%	5.0%
ESAL's (Daily)=	460	425
Growth Rate (Annual)=	3.5%	3.5%

5. **Accident History**- Safety Management analyzed the reported accidents for the five-year period from 1996 through 2001. There were 109 accidents, including 47 injury accidents. The accident rate was 2.28, the severity index was 2.18, and the

severity rate was 4.97, compared to the statewide averages of 1.77, 2.44, and 4.31, respectively. There were no truck accidents.

There were several variations from the statewide average occurrence for rural primary highways:

- 17.4% on shoulder vs. 6.3% statewide city average
- 24.8% icy road conditions vs. 10.2% statewide city average
- 38.5% rear-end collision vs. 25.9% statewide city average

The section of road between RP 4.0 and RP 4.5 was identified as an accident cluster in 2001; no feasible countermeasures to address a specific accident trend were identified. The section of road between RP 5.4 and 6.5 was also identified as an accident cluster in 2001. The Safety Improvement recommendation in 2001 was to alter the pavement markings and signing to add a center left turn lane in the next pavement preservation project.

Safety Management also noted that the greatest concentration of crashes were in the vicinity of the intersection with Whitefish Stage Rd. at RP 5.010 and between the Whitefish River Bridge at RP 6.0 and the intersection with US Highway 2 at RP 6.5.

6. **Major Design Features**- The project will be developed in accordance with the Guidelines for Nomination and Development of Pavement Projects (Preventative Maintenance → Reconstruction) as approved October 17, 2000. The Pavement Preservation portion of the guidelines will provide specific guidance on project development. The Helena Design crew will develop the construction plans.
  - a. **Design Speed** - Design speed is not an applicable design criteria for preventative maintenance type projects. The posted speed limit is 50 mph (80.5± km/h) from RP 4.0 to 5.94, and 40 mph (64.4± km/h) from RP 5.94 to 6.5.
  - b. **Horizontal Alignment** - The existing horizontal alignment is adequate for the proposed preventative maintenance resurfacing.
  - c. **Vertical Alignment** - The existing vertical alignment is adequate for the proposed preventative maintenance resurfacing.
  - d. **Typical Sections** – No changes are proposed to the existing pavement width. We will consider restriping the roadway to provide a center turn lane (see **Traffic Engineering**). It is beyond the scope of this project to

widen or reconstruct the roadway.

The normal practice of taper milling a 3.81-m strip adjacent to the curb prior to the overlay is not feasible. The roadway was taper milled in 1994 for the last overlay. If we taper mill again, the resulting pavement depth in the outside wheel path would not provide adequate strength to handle the heavy traffic loads. Also, another taper mill would result in an undesirable cross slope of 5.0%±.

We propose to extend the 60 mm overlay over the wheel path and feather the mix down to the gutter pan. We believe this will maintain adequate pavement depth under the outside wheelpath and maintain an acceptable cross slope. We propose 120 tons/kilometer of leveling to address the moderate rutting indicated by PvMS.

The pavement will be taper milled for 30 meters at the following locations: PTW connections at each end of the project, the four bridge ends, the railroad crossing at RP 6.33±, and in each direction at Whitefish Stage Rd. (S-292 to the north and U 6728 to the south).

The 100± cubic meters of cold millings produced will be given to MDT Maintenance or Flathead County.

- e. **Surfacing**- Due to the nature of the project, a surfacing design was not requested, but plant mix cores were collected by the District April 26, 2003 and evaluated by Jon Watson, the Pavement Engineer.

Based on his evaluation, Mr. Watson agreed the 60 mm overlay was appropriate. He also noted that the high AADT and high ESAL's warranted Grade S plant mix, but he is aware that Kalispell Maintenance has not been satisfied with the performance of some Grade S pavements placed in the area. Jim Tompkins, the Surfacing Design Supervisor, recommended a 64-28 PG asphalt binder. The chip seal will be a grade 4A cover material and CRS-2P seal oil.

The 2003 Pavement Management System (PvMS) recommendation for the segment from RP 4.0 to RP 6.5 is "AC Minor Rehabilitation". The performance indexes were Structural Capacity Index (SCI) – 96.9, Ride – 58.5, Rut – 53.4, Alligator Cracking Index (ACI) – 95.3, and Miscellaneous Cracking Index (MCI) – 92.5. The indexes correlate to condition ratings of Good, Poor, Fair, Good, and Good, respectively.

Funding for a Minor Rehabilitation project would likely not be available for several years. Such a project could possibly evolve into complete reconstruction of the surfacing section, which may be structurally inadequate for the current traffic loadings. Widening the roadway (and potential right-of-way acquisition) would also have to be considered to address the operational problems.

The proposed treatment (60 mm overlay) is appropriate given the generally good condition of the existing plant mix, the available funding, and the expected delays that a minor rehabilitation project would entail. An overlay placed in 2004 should extend the service life of the pavement long enough to develop a more comprehensive project that addresses other concerns on this corridor.

- f. **Grading**- There will be no grading on the project.
- g. **Hydraulics** – If the pavement is restriped to eliminate the wide shoulders currently present on most of the project, we propose to revise the storm drain inlets to provide more usable pavement width. The grates of the existing 840 mm x 840 mm drop inlets extend about 0.5 meters in front of the gutter pans.

If the lanes were reconfigured large vehicles would occasionally run over the depressed concrete collars around the grate. The grates and the collars would also be a hindrance to bicyclists, who would typically ride on this portion of the shared 4.45-meter curb lane.

We recommend the twenty-one drop inlets be replaced with slotted drains, preferably the 152.4 mm wide versions. These slotted drains are placed entirely within the gutter pan. If feasible, the slotted drains will be connected to the existing concrete boxes.

- h. **Geotechnical Considerations** - There will be no geotechnical considerations.
- i. **Bridges**- No work is proposed at the two bridges: RP 4.3± (Stillwater River) and RP 5.75± (Whitefish River). Each of the bridges has a 13.41-meter roadway, with a 1.5-meter walkway on each side, separated by concrete barrier. The bridge deck at RP 4.3± will be sealed with “HMWM” this year under BH 0002(507), D-1 Seismic Rehabilitation [3843], currently under contract.

If the pavement markings are revised, the existing markings on the bridge decks will have to be removed and replaced with new ones. The deck on

the bridge at RP 5.75 should be evaluated for possible "HMWM" treatment under [4860].

The pavement will be taper milled for 30 meters into the bridge ends to provide a smooth transition to the 60 mm overlay.

- j. **Traffic Engineering** - We propose to address the accident trends and clusters identified by Safety Management by revising the lane configuration. We recommend the roadway be restriped to provide a dedicated left turn lane or continuous two way left turn lane (TWLTL) the full length of the project. The roadway is currently striped for dedicated left turn lanes from RP 4.0± to 4.35, and from RP 4.56 to 5.2.

A public meeting will be conducted to present this concept. There may be concern over the loss of on-street parking, although the existing 2.6 meter parking lane is seldom used for parking. A greater concern may be the loss of shoulder for bicyclists. To mitigate these concerns, we recommend a 3.6 meter left turn lane /TWLTL and two 4.45 meter curb lanes that would be shared by motor vehicles and bicyclists.

If the public is solidly against the revised striping proposal, we recommend the existing pavement markings be perpetuated.

Traffic Engineering will have to review the pavement markings from RP 4.0 to 4.35 that were recently revised as part of the Home Depot work. It may be determined the existing markings are acceptable.

If the left turn lanes are added, NO PARKING signs will be required. At RP 5.82 the sidewalk ends on the south side of the road and begins on the north side. We recommend a marked pedestrian crossing be added at this location.

At each end of the project there is a W11-1 (bike symbol) warning sign with a plaque below it stating "ON ROADWAY". These signs should be evaluated for replacement, especially if the wide shoulders are completely eliminated. One possibility is the W16-1 sign (SHARE THE ROAD).

Traffic Engineering will provide the quantities, details, and specifications for interim paint and final epoxy to be included in the road plans. Pavement markings will be applied according to the April 16, 2002 memo from Don Dusek.

- k. **Safety Enhancements**- The new chip seal will increase skid resistance.

If implemented, the proposed lane reconfiguration should reduce conflicts between left turning and through traffic. The elimination of on-street parking would also eliminate a source of potential conflict.

The concrete “dragontails” separating the vehicle lane and the sidewalk at the bridge ends of the Stillwater Bridge at RP 4.5± will be removed and replaced with standard concrete barrier rail and impact attenuators under Project BH 0002(646), D1 – Seismic Rehab [3843], currently under construction.

The bridge at RP 5.75 has virtually the identical guardrail configuration. We propose to modify the approach rail and sidewalk to the bridge at RP 5.75 to match what will be done on the bridge at RP 4.5± (i.e, 27.4 m of concrete median barrier and a 6-bay impact attenuator at the approach ends, and 9.1 meters of concrete median barrier and a 6-bay impact attenuator at the departure ends).

There is also about 200 meters of metal guardrail shielding the fill slope and a skewed approach on the north side from RP 5.35 to 5.46±. The rail is about 2 meters behind the curb. There was only one reported crash (no injuries) in which the rail was struck.

We propose to install doubled w-beams along the section of rail that is parallel to the curb to reduce the rail deflection. This should avoid the possibility of a vehicle vaulting the rail.

The other section of guardrail was installed around the northeast radius of the Highway 93 junction when the road was widened in 2002. The guardrail was installed properly, with the face of rail flush with the face of curb. However, we will replace the standard 150 mm curb with 100 mm laydown curb along the 3.81 m adjacent to the end anchor of the optional terminal section (OTS), and the 15.24 meters upstream of the OTS.

The new slotted drains should ameliorate the effects of the reduced shoulder width on bicycle operation.

- k. **Miscellaneous Features** – If the lanes are reconfigured, this section of S-548 could become less attractive to bicyclists. We suspect the heavy traffic volumes and intermittent shoulder between Highway 93 and Whitefish Stage Road (RP 5.0) already discourage the casual and

inexperienced bicyclists. These users probably stay on the sidewalk on the south side, which is adjacent to a residential development on this segment.

7. **Design Exceptions** - N/A
8. **Right-of-Way**-There will be no additional right of way or construction permits required. Access control is not proposed for this project.
9. **Utilities/Railroads** – The proposed work will not require utility relocations.

The project crosses the Burlington Northern Santa Fe line at RP 6.33. A standard railroad agreement for work within 15.24 meters of the track will be required.

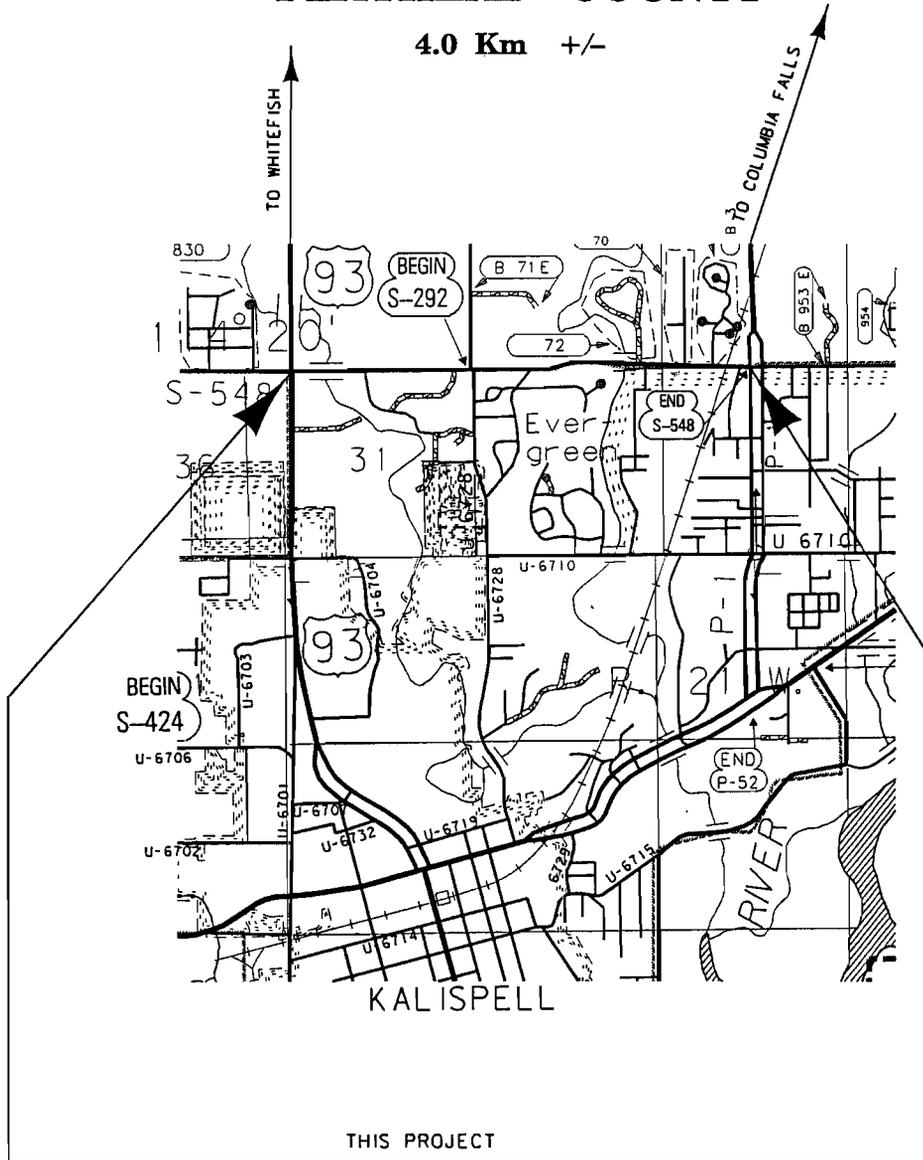
10. **Survey** - No survey is required.
11. **Public Involvement** – Based on the presently anticipated scope of work, a Level B public involvement plan is appropriate. The proposed plan is briefly described below:
  - a) A news release describing the proposed scope of work and need for the project was sent to the local media in early 2003, with a department point of contact.
  - b) A public informational meeting will be held May 29, 2003 to present basic concepts about the project and to gather local input. The meeting will focus on our proposal to restripe the roadway to provide a center turn lane, and thereby eliminate on-street parking.

The public involvement plan may be adjusted. If controversial issues surface at the public informational meeting, additional meetings may be required.

12. **Environmental Considerations**- No significant environmental impacts or issues were identified. We reviewed the project and determined it meets the criteria for the Programmatic Agreement as a Categorical Exclusion under the provisions of 23 CFR 771.117(d) as signed by MDT April 12, 2002, and concurred in by the FHWA on May 8, 2002. The Environmental Checklist for Pavement Preservation Projects is attached .
13. **Traffic Control** – A minimum of one lane of traffic will be maintained in each direction through the construction zone at all times. The traffic control will be in accordance with the Manual on Uniform Traffic Control.

**PROJECT STPS 548-1(8)4  
 OVERLAY SEAL AND COVER  
 JCT US 93 - JCT US 2  
 FLATHEAD COUNTY**

4.0 Km +/-



BEG STPS 548-1(8)4  
 R.P. 4.0

R.P. 6+0.5  
 END STPS 548-1(8)4