



June 29, 2011

Alan Woodmansey, P.E.  
Great Falls and Billings Districts Operations Engineer  
Federal Highway Administration (FHWA)  
585 Shepard Way  
Helena MT 59602



Subject: Statewide Programmatic Categorical Exclusion for Pavement Preservation Projects  
NH 60-2(95)71  
Armington Jct.-Belt Hill  
Control Number: 7454000

Dear Alan Woodmansey:

The MDT Environmental Services Bureau has reviewed the Preliminary Field Review/Scope of Work Report (PFR/SOW) for the subject project. Based on the completed Environmental Checklist for Pavement Preservation Projects (Checklist), we conclude that the Statewide Programmatic Categorical Exclusion for these types of projects would cover this project. For your information, I have attached a copy of the PFR/SOW (including the location map) and the signed Environmental Checklist. Environmental-related Special Provisions will be included in the contract plans.

If you have questions or concerns, please contact Eric Thunstrom at 444-7648. He will be pleased to assist you.

Sincerely,

*Eric Thunstrom*

FOR: Heidi Bruner, P.E.  
Environmental Services Bureau Engineering Section Supervisor

Attachments: Environmental Checklist, PFR/SOW Report

electronic copies with attachment (Checklist only, unless noted):  
Michael P. Johnson                      Great Falls District Administrator  
Tom Martin, P.E.                          Environmental Services Bureau Chief  
Heidi Bruner, P.E.                        Environmental Services Bureau Engineering Section Supervisor  
Eric Thunstrom                            Environmental Services Bureau Project Development Engineer  
Paul Ferry, P.E.                            Highways Engineer  
Christie McOmber, P.E.                   Great Falls District Projects Engineer  
Kevin Christensen, P.E.                   Construction Engineer  
Suzy Price                                  Contract Plans Bureau Chief  
Dawn Stratton                              Fiscal Programming Section  
Montana Legislative Branch Environmental Quality Council (w/ PFR/SOW also)  
File    Environmental Services Bureau

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(FOR PROJECTS WITH NO RIGHT-OF-WAY INVOLVEMENT)

Applicant cannot be authorized to proceed with the proposed work until ALL of the conditions of the checklist have been satisfied.

ENVIRONMENTAL CHECKLIST FOR PAVEMENT PRESERVATION PROJECTS  
(CRACK SEALING, SEAL & COVER, THIN OVERLAYS, MILL & FILL, PLANT MIX LEVELING, MILL OGFC, MICRO SURFACING, FOG SEAL)

Project Number: NH 60-2(95)71 Control No.: 7454000 Project Name: Armington Jct. – Belt Hill

Reference Post (Station): 0.275 To Reference Post (Station): 74.816

Applicant's Name: Montana Department of Transportation Address: PO Box 201001; Helena, MT 59620-1001

Type of Proposed Pavement Preservation Activity:

Type of Proposed Pavement Preservation Activity: 180 Resurfacing – Asphalt (thin lift <=0.20')( including safety improvements)

Table with 3 columns: Impact Questions, [Y/N] There are Potential Impacts; or Item Requires Documentation, Evaluation, Mitigation Measures, and/or (a) Permit(s), and Comment (Use attachments if necessary). Rows include questions about Wild or Scenic Rivers, endangered species, water quality, MS4 permits, wetlands, Indian Reservations, and Air Sheds.

MASTER FILE COPY

Checklist prepared by:

Christie McOmber Applicant

Project Design Engineer Title

6/16/2011 Date

Approved by:

Eric Thumstrom

FOR: HEIDY BRUNER Click here to enter text.

6/29/2011 Click here to enter a date.



**Memorandum**

To: Distribution

From: Paul Ferry, P.E. Lesly Tribelhorn 6/16/11  
 Highways Engineer

Date: June 14, 2011

Subject: NH 60-2(95)71  
 Armington Jct. – Belt Hill  
 UPN 7454000  
 Work Type: 180: Resurfacing - Asphalt (thin lift<= 0.20°)(including safety improvements)

Attached is the Preliminary Field Review Report/Scope of Work Report which was approved on 6/16/11. We request that those on the distribution review this report and submit your concurrence within two weeks of the approval date.

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

I recommend approval:

Approved \_\_\_\_\_ Date \_\_\_\_\_

**Distribution:**

- |   |  |
|---|--|
| Michael Johnson, District Administrator         | Paul Ferry, Highways Engineer                          |
| Kent Barnes, Bridge Engineer                    | Lynn Zanto, Rail, Transit, & Planning Division Admin.  |
| Tom Martin, Environmental Services Bureau Chief | Jake Goettle, Construction Engineering Services Bureau |
| Roy Peterson, Traffic and Safety Engineer       | Matt Strizich, Materials Engineer                      |
| Rob Stapley, Right-of-Way Bureau Chief          | Jon Swartz, Maintenance Administrator                  |

**cc:**

- |   |   |
|---|---|
| Dawn Stratton, Fiscal Programming Section | Cascade County Commissioners, 325 2 <sup>nd</sup> Ave. N, Rm. 111 |
| Dustin Rouse, Road Design Area Engineer   | Great Falls, MT 59401   |

**e-copies:**

- |   |   |
|---|---|
| Jim Walther, Preconstruction Engineer                   | Jake Goettle, Construction Bureau – VA Engineer       |
| Lesly Tribelhorn, Highways Design Engineer              | Walt Scott, R/W Utilities Section Supervisor          |
| Mark Goodman, Hydraulics Engineer                       | David Hoerning, R/W Engineering Manager               |
| Kurt Marcoux, District Hydraulics Engineer              | Greg Pizzini, Acquisition Manager                     |
| Bonnie Gundrum, Env. Res. Section Supervisor            | Becky Duke, Sup. Traffic Data Collection              |
| Paul Sturm, District Biologist                          | Joe Zody, R/W Access Management Section Manager       |
| Eric Thunstrom, Project Development Engineer            | Paul Johnson, Project Analysis Bureau                 |
| Danielle Bolan, Traffic Engineer                        | Susan Sillick, Research Section Supervisor            |
| Ivan Ulberg, G.F. District Traffic Project Engineer     | Steve Prinzing, District Preconstruction Engineer     |
| Kraig McLeod, Safety Management Engineer                | Christie McOmer, District Projects Engineer           |
| Stephanie Brandenberger, Bridge Area Eng, G.F. District | Stan Kuntz, G.F. District Materials Lab               |
| Mary Gayle Padmos, PvMS Engineer                        | Doug Wilmot, G.F. District Construction Engineer      |
| Daniel Hill, Pavement Analysis Engineer                 | Linda Cline, District R/W Design                      |
| Lee Grosch, District Geotechnical Manager               | Dennis Ghekiere, District Utility Agent               |
| Marty Beatty, Engineering Information Services          | Alyce Fisher, Fiscal Programming                      |
| Paul Grant, Public Involvement Officer                  | James Combs, District Traffic Engineer                |
| Jean Riley, Planner                                     | Jerilee Weibel, District R/W Supervisor               |
|   | Tony Strainer, Great Falls District Maintenance Chief |



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

**Memorandum**

To: Paul Ferry, P.E.  
Highways Engineer

From: Christie McOmer, P.E. *CWM*  
District Projects Engineer

Date: June 14, 2011

Subject: NH 60-2(95)71  
Armington Jct. – Belt Hill  
UPN 7454000  
Work Type: 180: Resurfacing - Asphalt (thin lift<= 0.20')(including safety improvements)

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

Approved Lesly Tribelhorn for Date 6/16/11  
Paul Ferry, P.E.  
Highways Engineer

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

cc (w/attach.):  
Damian Krings, Road Design Engineer  
Dustin Rouse, Road Design Area Engineer

## Preliminary Field Review/Scope of Work Report

NH 60-2(95)71, Armington Jct. – Belt Hill  
Project Manager : Christie McOmber, P.E.

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### **Introduction**

This report was developed from information taken from the preliminary field review conducted on May 12<sup>th</sup>, 2011. The meeting was held at the Great Falls District Office followed by a field review. The following individuals were in attendance:

Mick Johnson	District Administrator	Great Falls
Christie McOmber	District Projects Engineer	Great Falls
Steve Prinzing	District Preconstruction Engineer	Great Falls
Steve McEvoy	Pavement Analysis	Helena
Jeania Cereck	District Design Supervisor	Great Falls
Teresa Davidson	District Designer	Great Falls

### **Proposed Scope of Work**

The proposed project has been nominated as a seal and cover. At the Preliminary Field Review it was determined that a mill/fill overlay was a better fix due to the deterioration of the existing pavement. A portion of the project RP 71.820 to RP 72.031 was part of NH 60-2(94)72, Armington Jct. N Slide Repair, a 0.2 mile reconstruct. This portion will be a seal & cover only.

### **Purpose and Need**

Belt N&S is a reconstruction project currently in design for the NH-60 corridor from RP 69.61 to RP 81.74. Funding is available for only a portion of this project in 2014/2015. Due to timing between Belt N&S and this project and the deteriorating pavement conditions a mill/fill overlay is essential.

### **Project Location and Limits**

This project is located in Cascade County on N- 57 (US 87) and N-60 (US 87/89). The project limits run from RP 0.275 to RP 74.816 and is functionally classified as a Principal Arterial Non-Interstate. The project begins south of Jct. N-57 (US 89) and P-60 (US 87), locally known as Armington Jct. and proceeds northwesterly 4.053 miles to north of the Jct. S-331 and N-60. The Jct. of S-331 and N-60 is located 1 mile west of Belt and approximately 21 miles southeast of Great Falls. The project includes a 4,000'±, 6% grade, locally known as Belt Hill.

### **Work Zone Safety and Mobility**

At this time, Level 2 construction zone impacts are anticipated for this project as defined in the Work Zone Safety and Mobility (WZSM) guidance. The Traffic Management Plan (TMP) will consist of a Traffic Control Plan (TCP), and a limited Public Information (PI) component. Traffic Control issues are discussed in more detail under the Traffic Control and Public Involvement sections of this report.

### **Physical Characteristics**

- a. The project begins at RP 0.275 on N-57 (US 87) just south of the Jct. of N-57 and P-60 (US 87/89) locally known as Armington Jct.(RP 71.038 on P-60 = RP 0.00 on N-57). This rural roadway proceeds northwesterly through rolling terrain primarily used for grazing to RP 74.816 north of the Jct. of N-60 and S-331.
- b. A bridge that crosses Belt Creek is located at RP 71.312, a 62' concrete T beam constructed in 1955. Total bridge width is 28'.
- c. This project was originally constructed in 1955 under project FAP F-64(8), overlaid in 1986 under project RTF 60-2(15)71 and again in 1999 under project STPN 60-2(52)71. The second overlay began at RP 71.327 the north bridge end of a bridge over Belt Creek and did not include Armington Jct.

## Preliminary Field Review/Scope of Work Report

NH 60-2(95)71, Armington Jct. – Belt Hill

Project Manager : Christie McOmber, P.E.

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- d. A portion of the project, RP 71.820 to RP 72.031, was reconstructed in 2010 under NH 60-2(94)72 as an Emergency project to correct a major slide.
- e. As-built projects are as follows:

From RP	To RP	Existing Surfacing	As-Built Project ID	Year Constructed
70.3	74.4	<b>0.15' Comp. P.M.B.S. 0.25' Comp. Top Course 0.65 Comp. S.B.B.C.</b>	<b>FAP F-64(8)</b>	<b>1955</b>
70.8	82.7	<b>0.25' P.M.B.S. Grade B</b>	<b>RTF 60-2(15)71</b>	<b>1986</b>
71.2	87.3	<b>0.15' P.M.B.S. Grade D</b>	<b>STPN-NH 60-2(52)71</b>	<b>1999</b>
71.8	72.0	<b>0.40' P.M.B.S. Comm. 1.75' CAC</b>	<b>NH 60-2(94)72</b>	<b>2010</b>

- f. Existing pavement widths vary between 28' and 68'. The widened sections are the climbing lanes on Belt Hill and the turn lanes at Jct. S-331 and Armington Jct.
- g. The Pavement Management System's pavement condition and treatment recommendations are for AC Crack Seal & Cover from RP 71.1 to RP 73.2 and thin lift overlay for RP 73.2 to 74.4.

### Traffic Data

2011 AADT = 2,670 (Present)  
 2011 AADT = 2,670 (Letting Year)  
 2031 AADT = 3,430 (Design Year)  
 DHV = 450  
 T = 13.6%  
 EAL = 184  
 AGR = 1.3%

### Crash Analysis

The crash analysis was taken from January 1, 2006 through December 31, 2010 from RP 71.1 to RP 74.4.

- a. There were 44 reported crashes.
- b. The average crash rate of 2.47 for this roadway is **above** the statewide average of 1.07 for rural primary routes.
- c. The severity index is 1.55, below the statewide average of 2.14.
- d. The severity rate is 3.83, **above** the statewide average of 2.29.
- e. Variations from Average Occurrence: 18.2% dark – not lighted conditions vs. 34.9% statewide average for NINHS.
- f. There were no crash clusters or safety projects for the study area during the study time frame.
- g. Remarks and Recommendations:  
 23 of the 44 crashes cited wild animal as the first or most harmful event. Please note the higher than average crash rate and severity rate.  
 The Safety Engineering Section recommends the following for consideration by the Design Team during project development.
  - Upgrade guardrail end treatments. *Non-standard guardrail ends will be replaced with this project.*
  - Upgrade signing to include animal warning signs. *New signing will be required throughout this project. The Environmental Section will advise as to the location of*

## Preliminary Field Review/Scope of Work Report

NH 60-2(95)71, Armington Jct. – Belt Hill  
Project Manager : Christie McOmer, P.E.

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*the animal warning signs.*

### **Major Design Features**

- a. **Design Speed.** The design speed for the project is 60 mph while the posted speed limit is 65 and 70 mph for trucks and cars respectively.
- a. **Horizontal Alignment.** The existing vertical alignment is satisfactory for a preventative maintenance treatment.
- b. **Vertical Alignment.** The existing vertical alignment is satisfactory for a preventative maintenance treatment. The project includes a 4,000'±, 6% grade, locally known as Belt Hill.
- c. **Typical Sections and Surfacing.** Due to the nature of this project, existing surface widths will not be altered. The PTW varies between 28 feet and 68 feet.
- d. **Geotechnical Considerations.** Because of the limited scope of this project, geotechnical considerations will not be addressed.
- e. **Hydraulics.** Due to the nature of this project, hydraulic considerations are not anticipated for this project.
- f. **Bridges.** A bridge that crosses Belt Creek is located at RP 71.312. It is a 62' concrete T beam constructed in 1955 with a width of 28'. No upgrades to the existing bridge guardrail are planned although any non-standard guardrail ends will be replaced.
- g. **Traffic.** New pavement markings and signing will be required throughout this project. Striping plans and details will be required for the intersections with S-331 and P-60. The location of the animal warning signs will be supplied by Environmental Services.
- h. **Pedestrian/Bicycle/ADA.** Due to the limited scope of this project, no new ADA features or impacts to existing features are anticipated for this project.
- i. **Miscellaneous Features.** An ATR site is present on the project and will be perpetuated. New guardrail end sections and replacement of any damaged guardrail is proposed with this project.
- j. **Context Sensitive Design Issues.** No context sensitive design issues will be addressed with this project.

### **Other Projects**

Two projects also proposed as crack seal, seal & covers and possibly tied for letting are:

Armington Jct. – East  
NH 57-1(6)0  
UPN 7453000  
RP 0.275 to RP 7.072

Riceville Hill – Armington Jct.  
STPP 60-2(97)60  
UPN 7463000  
RP 60.298 to RP 71.038

Belt N&S is a reconstruction project currently in design for the NH-60 corridor from RP 69.61 to RP 81.74. Funding is available for only a portion of this project in 2014/2015.

### **Design Exceptions**

No Design Exceptions are anticipated for this project.

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

NH 60-2(95)71, Armington Jct. – Belt Hill  
Project Manager : Christie McOmer, P.E.

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### **Right-of-Way**

No new right-of-way will be required for this project.

### **Access Control**

Access Control will not be pursued on this project.

### **Utilities/Railroads**

Due to the nature of this project, no utility involvement is anticipated.

BNSF Railway tracks run parallel to the roadway through a portion of the project; however, no involvement with the railroad is anticipated. The railroad is more than 50 feet away from the roadway through this area.

### **Intelligent Transportation Systems (ITS) Features**

There are currently ITS features located within the project limits, an ATR site W-127 at RP 71.9 for the Armington weigh station that includes a Pre-pass and Weigh in Motion. The sensors located in the pavement will be replaced. The design for this portion of the project will be done by the Electrical Section of the Traffic and Safety Bureau.

### **Survey**

No survey will be required for this project. The project will be designed using as-builts.

### **Public Involvement**

Due to the limited scope of the project, a level “A” public involvement plan is appropriate. The plan will include a news release, which will explain the project and include a department point of contact.

### **Environmental Considerations**

This project meets the criteria for a statewide programmatic categorical exclusion under the pavement preservation agreement with FHWA. A pavement preservation checklist will be submitted along with this report.

As proposed, no CWA 404 permit or SPA 124 notifications are anticipated for this project. The Protection of Wetlands and Other Drainages special provisions will be included in the bid package for this project.

### **Energy Savings/Eco-Friendly Considerations**

Due to the nature of this project, extending the useful life of the pavement is aimed directly at minimizing the footprint on the environment. This is accomplished by postponing reconstruction projects through routine maintenance.

### **Experimental Features**

No experimental features are planned for this project.

### **Traffic Control**

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

The Traffic Management Plan (TMP) will consist of a Traffic Control Plan (TCP) only.

## Preliminary Field Review/Scope of Work Report

NH 60-2(95)71, Armington Jct. – Belt Hill  
 Project Manager : Christie McOmber, P.E.

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### Project Management

The Great Falls District will be responsible for the plans. Christie W. McOmber, P.E., is the Great Falls District Projects Engineer. The project is not under full FHWA oversight.

### Preliminary Cost Estimate

The project was programmed at \$270,000.

The increased cost of the project is due to the change from a chip seal to a mill/fill overlay. Project costs include cold milling, new plant mix, seal and cover, guardrail upgrades, paint striping and signing. Cost per mile is \$266,618.

		Estimate	Inflation (INF)	w/INF + IDC
Armington Jct. - Belt Hill		Costs	(from PPMS)	(from PPMS)
Road work		\$890,703		
Traffic Control		\$35,000		
<b>Subtotal</b>		<b>\$925,703</b>		
Mobilization	10%	\$92,570		
<b>Subtotal</b>		<b>\$1,018,273</b>		
Contingencies	8%	\$81,462		
<b>Total CN</b>		<b>\$1,099,735</b>	<b>\$196,905</b>	<b>\$1,469,742</b>
<b>CE</b>	10%	<b>\$109,974</b>	<b>\$19,690</b>	<b>\$146,974</b>
IDC:	13.35%		<b>TOTAL</b>	<b>\$1,616,716</b>
<b>Inflation Factor (ppms)</b>			<i>0.1790476</i>	

### Ready Date

The tentative ready date is September of 2011. The anticipated letting date is March 2012. The project is on track in the OPX2 schedule.

### Site Map

The project site map is attached.

# Preliminary Field Review/Scope of Work Report

NH 60-2(95)71, Armington Jct. – Belt Hill  
Project Manager : Christie McOmber, P.E.

## MONTANA DEPARTMENT OF TRANSPORTATION

### FEDERAL AID PROJECT NH 60-2(95)71 OVERLAY, SEAL & COVER, AND GUARDRAIL UPGRADE ARMINGTON JCT. – BELT HILL CASCADE COUNTY

LENGTH 4.0 miles  
NO SCALE

