



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

Memorandum



To: Lisa Hurley
 Fiscal Programming Section Supervisor

From: *for Skilcrease* Heidi Bruner, P.E.
 Engineering Services Supervisor
 Environmental Services

Date: May 22, 2014

Subject: Categorical Exclusion (C) Determination
 SF 139-BROOKS SAFETY IMPRV
 HSIP STWD(235)
 Control Number: 8171 000

Environmental Services has reviewed the proposed project and concluded that it will not involve unusual circumstances as described under 23 CFR 771.117(b). As a result, the project qualifies as a Categorical Exclusion under the provisions of 23 CFR 771.117(c), part (23) which describes Federally-funded projects that receive less than \$5,000,000 of Federal funds. The proposed action also qualifies as a Categorical Exclusion under the provisions of ARM 18.2.261 (Sections 75-1-103 and 75-1-201, MCA).

The proposed project in Missoula is to provide lighting on Brooks Street from Dore Lane to the west end of the Buckhouse Bridge over the Bitterroot River. There will be sign upgrades from Grant St. to the bridge and solar flasher at the bridge. The need for a cultural resources survey will be determined after the cadastral survey and the preliminary location of the lighting equipment. The total estimated cost of the project at this time including CN + CE w/INF + IDC = \$882,000.

In accordance with the Federal Highway Administration's (FHWA) letter of March 29, 1999, please notify FHWA that the proposed action is being processed in accordance with 23 CFR 771.117(c).

- e-copies: Ed Toavs, District Administrator- Missoula
- Roy Peterson, P.E., Traffic and Safety Engineer
- Gabe Priebe, P.E., Traffic Project Engineer
- Robert Stapley, Right-of-Way Bureau Chief
- Suzy Price, P.E., Contract Plans Bureau Chief
- Tom Martin, P.E., Environmental Services Bureau Chief
- Susan Kilcrease, Missoula Project Development Engineer
- Gene Kaufman, P.E., FHWA Operations Engineer
- Tom Erving - Fiscal Programming Section
- Montana Legislative Branch Environmental Quality Council
- copy: Environmental Services Bureau File



Memorandum

To: Distribution

From: Roy Peterson, P.E. [RAP]
 Traffic & Safety Engineer

Date: March 11, 2014

Subject: SF 139 - BROOKS SAFETY IMPRV
 HSIP STWD(235)
 UPN 8171000
 Work Type 310 – Roadway & Roadside Safety Improvements

Attached is the Preliminary Field Review Report/Scope of Work Report which was approved on [March 14, 2014]. 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:

- | | |
|---|--|
| Ed Toavs, District Administrator | Tom Martin, Environmental Services Bureau Chief |
| Kent Barnes, Bridge Engineer | Lynn Zanto, Rail, Transit, & Planning Division Administrator |
| Paul Ferry, Highways Engineer | Jake Goettle, Construction Engineering Services Bureau |
| Robert Stapley, Right-of-Way Bureau Chief | Matt Strizich, Materials Engineer |

cc:

- | | |
|--------------------------------------|---|
| Gabe Priebe, Project Design Engineer | Dawn Stratton, Fiscal Programming Section |
| Traffic and Safety file | Damian Krings, Road Design Engineer |
| Kevin Slovarp, City of Missoula | Rick Larson, City of Missoula |

e-copies:

- | | |
|--|--|
| Jim Walther, Engineering, Preconstruction Engineer | Jake Goettle, Construction Bureau – VA Engineer |
| Lesly Tribelhorn, Highways Design Engineer | Shane Stack, District Preconstruction |
| Mark Goodman, Hydraulics Engineer | Ben Nunnallee, District Projects Engineer |
| KC Yahvah, District Hydraulics Engineer | Mike Dodge, District Materials Lab |
| Bill Semmens, Env. Resources Section Supervisor | Steve Felix, District Maintenance Chief - Missoula |
| Pat Basting, District Biologist | Maureen Walsh, District Right of Way Supervisor |
| Susan Kilcrease, District Project Development Engineer | Phillip Inman, Utilities Engineering Manager |
| Danielle Bolan, Traffic Operations Engineer | David Hoerning, R/W Engineering Manager |
| Ivan Ulberg, Traffic Design Engineer | Greg Pizzini, Acquisition Manager |
| William Squires, Project Engineer | Joe Zody, R/W Access Management Section Manager |
| Kraig McLeod, Safety Engineer | Matt Strizich, Materials Engineer |
| Chris Hardan, Bridge Area Engineer, Missoula District | |
| Mike Grover, Engineering Cost Analyst | Bret Boundy, District Geotechnical Manager |
| Marty Beatty, Engineering Information Services | Bryce Larsen, Supervisor, Photogrammetry & Survey |
| Paul Grant, Public Involvement Officer | Paul Johnson, Project Analysis Bureau |
| Sue Sillick, Research Section Supervisor | Jean Riley, Planner |
| Alyce Fisher, Fiscal Programming Section | Dawn Stratton, Fiscal Programming Section |
| Suzy Price, Contract Plans Bureau Chief | Jeff Jackson, Geotechnical Engineer |
| Angela Zanin, Bicycle/Pedestrian Coordinator | Duane Williams, Motor Carrier Services Division |



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

Memorandum

To: Roy Peterson, P.E.
Traffic & Safety Engineer

From: Gabe Priebe, P.E. [GBP]
Traffic Project Engineer

Thru: Ivan Ulberg, P.E. [IBU]
Traffic Design Engineer

Date: March 11, 2014

Subject: SF 139 - BROOKS SAFETY IMPRV
HSIP STWD(235)
UPN 8171000
Work Type 310 – Roadway & Roadside Safety Improvements

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

Approved [Signed by RAP] Date [3/14/14]
Roy Peterson, P.E.
Traffic & Safety 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.):
Traffic and Safety Master file

Preliminary Field Review Report

HSIP STWD(235); SF 139 - BROOKS SAFETY IMPRV

Project Manager: Gabe Priebe

Page 1 of 5

Introduction

A preliminary field review was held on January 14, 2014. The following attended the field review.

Glen Cameron, Traffic Engineer – Missoula
Danielle Bolan, Traffic & Safety – Helena
Gabe Priebe, Traffic & Safety – Helena
Dan Cunningham, Traffic & Safety – Helena
Rick Larson, City of Missoula
Kevin Slovarp, City of Missoula
Ellen Buchanan, City of Missoula

Proposed Scope of Work

The proposed project has been nominated to provide the following safety improvements on Brooks Street in Missoula:

- Street lighting from Buckhouse Bridge to Dore Lane
- Corridor-wide upgraded signing
- Icy Bridge Signs with temperature-actuated solar flashers on the approaches to Buckhouse Bridge

Purpose and Need

The purpose of this project is to address crashes along the corridor by providing enhanced lighting and signing. The project is needed to enhance roadway safety for the traveling public.

Project Location and Limits

This project is located on Brooks Street (N-7) in Missoula between the west approach to Buckhouse Bridge and Grant Street (RP 90.000 to RP 91.700).

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. Although this project is on a Level 1 corridor, nearly all of the work is expected to take place outside of the travel lanes, as the majority of Brooks has wide shoulders or off-street access for installation of lighting and signing fixtures. It is anticipated that lighting conduit runs crossing Brooks will be minimized or avoided altogether. The plans package will include a Transportation Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP). A limited Transportation Operations (TO) component and a limited Public Information (PI) component to address short-term lane closures as necessary. These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

Physical Characteristics

The existing terrain within this location is generally flat to rolling, in an urban setting. Brooks Street is functionally classified as an urban principal arterial. The existing roadway section consists of four travel lanes, a two-way-left-turn lane and generally includes two eight foot shoulders.

Traffic Data

The traffic data for this location is as follows:

N-7 (RP 90.000 to RP 90.925):
2014 (Present) AADT = 24,350
2015 (Letting) AADT = 24,640
2035 (Design) AADT = 31,280
DHV = 3280
Truck % = 1.5%
Annual Growth Rate = 1.2%

P-7 (RP 90.925 to RP 91.700):

Preliminary Field Review Report

HSIP STWD(235); SF 139 - BROOKS SAFETY IMPRV

Project Manager: Gabe Priebe

Page 2 of 5

2014 (Present) AADT = 33,250
2015 (Letting) AADT = 34,110
2035 (Design) AADT = 57,000
DHV = 5990
Truck % = 3.4%
Annual Growth Rate = 2.6%

Crash Analysis

The Montana Highway Patrol records show 168 crashes along this section of roadway for the dates July 1, 2008 through June 30, 2011. The analysis excludes the crashes at the intersection of Brooks Street & Dore Lane. The main crash trend is intersection crashes along the corridor. A breakdown of the major intersection crashes are as follows:

- Intersection of Brooks Street & Miller Creek Road: 40 crashes
- Intersection of Brooks Street & Reserve Street: 101 Crashes
- Intersection of Brooks Street & Paxson Street: 17 crashes

The majority of the intersection crashes resulted in either a rear end or right angle collision.

Buckhouse Bridge

For the period from July 1, 2008 through June 30, 2011 there have been 5 crashes related to the Buckhouse Bridge. Four of these crashes were considered addressable with the installation of icy bridge signs with solar flashers on the approaches of the Buckhouse Bridge. These crashes resulted in one injury crash (possible injury crash) and 3 property damage only crashes. The safety improvements in this area yielded a benefit-to-cost ratio of 10.01, assuming a project cost of \$20,800.

Corridor-wide Signing Upgrade

For the period from July 1, 2008 through June 30, 2011 there have been 234 crashes along the corridor. All of these crashes were considered addressable with the corridor-wide signing upgrade. These crashes resulted in four fatal crashes resulting in 4 fatalities, 67 injury crashes resulting in 102 persons injured and 163 property damage only crashes. The safety improvements in this area yielded a benefit-to-cost ratio of 66.18, assuming a project cost of \$82,500.

Street Lighting-Buckhouse Bridge to Dore Lane

For the period from July 1, 2008 through June 30, 2011 there have been 43 crashes along the corridor, including the intersection with Dore Lane. All of these crashes were considered addressable with the addition of street lighting along the corridor. These crashes resulted in one fatal crash with one fatality, 14 injury crashes resulting in 23 persons injured and 28 property damage only crashes. The safety improvements in this area yielded a benefit-to-cost ratio of 7.79, assuming a project cost of \$604,100.

There have been 104 additional crashes within the study area for the time frame July 1, 2011 through June 30, 2013. The crash trend of intersection crashes resulting in either a rear end or right angle collision have remained relatively unchanged.

Major Design Features

- Design Speed.** The design speed on Brooks for a multi-lane curbed urban principal arterial is 45 mph. The posted speed limit on Brooks through the project is 35 mph from RP 91.7 to RP 90.6 and 45 mph from RP 90.6 to RP 90.0.
- Horizontal Alignment.** The horizontal alignment will not change with this project.
- Vertical Alignment.** The vertical alignment will not change with this project.
- Typical Sections and Surfacing.** The current surfacing will not be changed with this project.
- Geotechnical Considerations.** There are no geotechnical considerations for this project.
- Hydraulics.** There are no hydraulic considerations for this project.
- Bridges.** There are no bridges within the project limits.
- Traffic.** The proposed project includes street lighting from Buckhouse Bridge to Dore Lane,

Preliminary Field Review Report

HSIP STWD(235); SF 139 - BROOKS SAFETY IMPRV

Project Manager: Gabe Priebe

Page 3 of 5

corridor-wide upgraded signing and Icy Bridge Signs with temperature-actuated solar flashers on the approaches to Buckhouse Bridge. During project development, an investigation will be conducted to determine the reliability of temperature-actuated flashers. Manual “on/off” overrides will be included on the flashers in the event temperature actuation becomes an issue.

- i. **Pedestrian/Bicycle/ADA.** There is no Pedestrian/Bicycle/ADA involvement.
- j. **Miscellaneous Features.** No miscellaneous features have been identified.
- k. **Context Sensitive Design Issues.** There are no context sensitive design issues identified for this project.
- l. **City Coordination.** As the project design progresses, MDT will continue coordination with the City of Missoula regarding the City’s lighting corridor between Dore Lane and Reserve Drive. The conversation will include City cost participation for potential enhanced LED lighting in this segment.

Other Projects

No other MDT projects are currently under construction or in design that will affect this project.

Location Hydraulics Study Report

A Location Hydraulics Study Report will not be needed for this project.

Design Exceptions

No design exceptions are anticipated for this project.

Right-of-Way

New right-of-way may be required. The existing right-of-way width varies throughout the project limits; therefore a cadastral survey will be requested to determine potential right-of-way needs for placement of lighting equipment.

Access Control

No changes to access control are proposed.

Utilities/Railroads

There are no railroads affected by this project. A one-call will be specified on the plans to ensure that sign supports, conduit runs and light pole foundations are not installed in conflict with any underground utility features.

Cold-In-Place Recycle - N/A

Maintenance Items

No Maintenance involvement is required.

Intelligent Transportation Systems (ITS) Features

Temperature-actuated flashers are considered an ITS feature.

Experimental Features

No experimental features will be used on this project.

Survey

Topographic and cadastral surveys will be required.

Public Involvement

The project will include a ‘Level A’ standard of public involvement. This includes a news release explaining the project and a Department point of contact.

Tribal Involvement

Preliminary Field Review Report

HSIP STWD(235); SF 139 - BROOKS SAFETY IMPRV

Project Manager: Gabe Priebe

Page 4 of 5

No tribal involvement is required since this project is not within a reservation.

Environmental Considerations

No significant environmental impacts or issues were identified. A Categorical Exclusion is anticipated for this project.

Energy Savings/Eco-Friendly Considerations

The proposed flashers are considered an energy saving feature since they are solar powered.

Traffic Control

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. The final traffic control plan (TCP) will be discussed with district personnel. The TCP will include a sequencing special provision that will provide a safe route for the travelling public at all times. All signing and/or flagging operations will be in accordance with the Manual on Uniform Traffic Control Devices. Restricting the work to night time and/or off-peak hours will be discussed.

Project Management

Gabe Priebe will be the Project Design Engineer. This project does not require full FHWA oversight.

Preliminary Cost Estimate

The estimate below is based on information provided during nomination and will be refined as design progresses.

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Electrical & Signing	\$494,466		
Mobilization (10%)	\$49,447		
Subtotal	\$543,913		
Contingencies (15%)	\$81,587		
Total CN	\$625,500	\$97,599	\$803,218
CE (10%)	\$62,550	\$9,759	\$78,903
TOTAL CN+CE	\$688,050	\$107,358	\$882,121

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 9.12% as of FY 2014.

Ready Date

Ready and letting dates will be established after OPX-2 over-rides have been completed.

Preliminary Field Review Report

HSIP STWD(235); SF 139 - BROOKS SAFETY IMPRV

Project Manager: Gabe Priebe

Site Map

