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OCT 25 2013

ENVIRONMENTAL

October 21, 2013

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

Attention: Gene Kaufman

Subject: Programmatic Categorical Exclusion (PCE) Concurrence Request  
MT 200 & Old Highway 10 - Bonner  
NH 24-1(69)0  
CN 7074000

Dear Kevin McLaury:

This submittal requests approval of the above-mentioned proposed project as a Categorical Exclusion under the provisions of 23 CFR 771.117(d) and the Programmatic Agreement as signed by the Montana Department of Transportation (MDT) and the Federal Highway Administration (FHWA) on April 12, 2001. This proposed action also qualifies as a Categorical Exclusion 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 PCE. A copy of the Alignment and Grade Report is attached. In the following form, "N/A" indicates not applicable; "UNK" indicates unknown.

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

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>UNK</u>
1. This proposed project would have (a) significant environmental impact(s) as defined under 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 1965 <i>National Land &amp; Water Conservation Fund Act</i> (16 USC 460L, <i>et seq.</i> ) on or adjacent to proposed the project area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The use of such <i>Section 6(f)</i> sites would be documented and compensated with the appropriate agencies. ( <i>e.g.</i> : MDFWP, local entities, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Are there any sites either on, or eligible for the National Register of Historic Places with concurrence in determination of eligibility or effect under <i>Section 106</i> of the <i>National Historic Preservation Act</i> (16 USC 470, <i>et seq.</i> ) by the State Historic Preservation Office (SHPO), which would be affected by this proposed project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. There are parks, recreation sites, school grounds, wildlife refuges, historic sites, historic bridges, or irrigation that might be considered under <i>Section 4(f)</i> of the 1966 <i>US DEPARTMENT OF TRANSPORTATION Act</i> (49 USC 303) on or adjacent to the project area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a. The proposed project would not impact the site(s), so a 4(f) evaluation is not necessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. De minimis finding(s) is/are necessary for this project.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. "Nationwide" Programmatic <i>Section 4(f)</i> Evaluation forms for these sites are attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. This proposed project requires a full ( <i>i.e.</i> : DRAFT & FINAL) <i>Section 4(f)</i> Evaluation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
B. The activity would involve work in a streambed, wetland, and/or other waterbody(ies) considered as "waters of the United States" or similar ( <i>e.g.</i> , "state waters").	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>UNK</u>
1. Conditions set forth in <i>Section 10</i> of the <i>Rivers and Harbors Act</i> (33 USC 403) and/or <i>Section 404</i> under 33 CFR Parts 320-330 of the <i>Clean Water Act</i> (33 USC 1251-1376) 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 (E.O.) #11990, and their proposed mitigation would be coordinated with the US Army Corps of Engineers and other Resource Agencies (Federal, State and Tribal) as required for permitting	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. A 124SPA Stream Protection Authorization would be obtained from the MDFWP?	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Tribal Water Permit would be required.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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</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 23 CFR 772.5(h), which typically consists of highway construction on a new location or the physical alteration of an existing route which substantially changes its horizontal or vertical alignments or increases the number of through-traffic lanes.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. If yes, are there potential noise impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 23 CFR 772 for FHWA's Noise Impact analyses and MDT's Noise Policy.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. There would be substantial changes in access control involved with this proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, would they result in extensive economic and/or social impacts on the affected locations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. The use of a temporary road, detour, or ramp closure having the following conditions when the action(s) associated with such facilities:				
1. Provisions would be made for access by local traffic, and be posted for same.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Adverse effects to through-traffic dependant businesses would be avoided or minimized.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Interference to local events ( e.g. festivals) would be minimized to all possible extent.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Substantial controversy associated with this pending action would be avoided.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Hazardous wastes /substances, as defined by the US Environmental Protection Agency (EPA) and/or the Montana Department of Environmental Quality (MDEQ), and/or (a) listed "Superfund" (under CERCLA or CECRA) 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 Stormwater Discharge conditions (ARM 17.30.1101-1117), 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> (7-22-2152, 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the proposed work would affect Important Farmlands, then a CPA 106 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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. and/or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Resources Management Bureau, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Is this proposed project in a “Class I Air Shed” under 40 CFR 52.1382(c)(2-4) and 40 CFR 81.417? (Northern Cheyenne, Flathead, and Fort Peck Indian Reservations; Glacier and Yellowstone National Parks; Anaconda-Pintlar, Bob Marshall, Cabinet Mountains, Gates of the Mountains, Medicine Lake, Mission Mountain, Red Rock Lakes, Scapegoat, Selway-Bitterroot, and U.L. Bend Wilderness Areas)	<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"/>

- |  | <u>YES</u>               | <u>NO</u>                           | <u>N/A</u>               | <u>UNK</u>               |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| 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.

Susan Kilcrease, Date: 10/21/13  
Susan Kilcrease - Missoula District Project Development Engineer  
MDT Environmental Services Bureau

Concur Heidy Bruner, Date: 10/23/13  
Heidy Bruner, P.E. - Engineering Section Supervisor  
MDT Environmental Services Bureau

Concur [Signature], Date: 10/24/13  
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: Alignment and Grade Report (10/8/13)

- |                     |                            |                                       |
|---------------------|----------------------------|---------------------------------------|
| Copy (w/o attach.): | Ed Toavs                   | Missoula District Administrator       |
|                     | Kent Barnes, P.E.          | Bridge Engineer                       |
|                     | Tom S. Martin, P.E.        | Environmental Services Bureau Chief   |
|                     | Heidy Bruner, P.E.         | Environmental Services Bureau         |
|                     | Suzy Price                 | Contract Plans Bureau Chief           |
|                     | Lisa Hurley                | Fiscal Programming Section Supervisor |
|                     | Tom Erving                 | Fiscal Programming Section            |
|                     | Robert Stapley             | Right-of-Way Bureau Chief             |
|                     | Susan Kilcrease            | Environmental Services Bureau         |
|                     | File                       | Environmental Services Bureau         |
|                     | Montana Legislative Branch | Environmental Quality Council (EQC)   |



**Memorandum**

To: Ryan Dahlke, P.E.  
 Consultant Design Engineer

From: Bryan Miller, P.E. *BLM*  
 Consultant Plans Engineer

Date: October 8, 2013

Subject: NH 24-1(69)0  
 MT 200 and Old Hwy 10 - Bonner  
 7074000  
 Project Work Type Number 410 – Traffic Signals and Lighting

Please Approve the Alignment and Grade Review for this project.

Approved  Date 10/8/2013  
 Ryan Dahlke, P.E.  
 Consultant Design Engineer

We are requesting comments from the below distribution. If no comments are received within two weeks of the release date we will assume concurrence.

**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       |
| Roy Peterson, Traffic and Safety Engineer | Matt Strizich, Materials Engineer                            |
| Robert Stapley, Right-of-Way Bureau Chief |  |

**cc:**

- |  |   |
|--|---|
| Fred Bente, Project Design Manager       | Dawn Stratton, Fiscal Programming Section |
| Consultant Design Project File           | Bryan Miller, Consultant Plans Engineer   |
| Gene Kaufman, FHWA - Operations Engineer |   |

**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                     |
| K.C. Yahvah, District Hydraulics Engineer              | Darin Reynolds District Materials Lab                         |
| Bill Semmens, Env. Resources Section Supervisor        | Jack May, District Maintenance Chief                          |
| 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                             |
| Gabe Priebe, District Traffic 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  | Daniel Hill, Pavement Analysis Engineer                       |
| Michael 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   |
| Wayne Noem, Secondary Roads Engineer                   | Duane Williams, Motor Carrier Services Division Administrator |
| Mark Keffe, Bicycle/Pedestrian Coordinator             |   |
| Matt Maze, ADA Coordinator                             | Doug McBroom, Maintenance Division Operations Mgr (RWIS)      |

## Alignment and Grade Report

MT 200 and Old Highway 10 – Bonner CN 7074000

Project Manager : Fred Bente

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### **Introduction**

An alignment and grade plan review meeting for the above referenced project was held on August 2, 2013 at the Montana Department of Transportation (MDT) Missoula District office. Those in attendance included:

Shane Stack	District Preconstruction Engineer	MDT – Missoula
Benjamin Nunnallee	District Design	MDT – Missoula
Jeremy Wilde	Utilities Section	MDT – Helena
Susan Kilcrease	Project Development Engineer	MDT – Missoula
Ray Sacks	Construction Bureau	MDT - Helena
Fred Bente	Consultant Design Engineer	MDT – Helena
Nels Wilkins	Consultant Design	MDT – Helena
Gabe Priebe	Traffic Bureau	MDT - Helena
Mark Bancale	Project Manager	WGM Group - Missoula
Tom Tabler	Project Engineer	WGM Group - Missoula

### **Scope of Work (see attached figure)**

The project concept includes realigning and extending Old Highway 10 (MDT X-Route 32200) to intersect with First Street (a Missoula County road) north of Montana Highway 200 (MT 200) (N 24), with the combined roadways then intersecting MT 200 opposite the center Town Pump access point. The existing Old Highway 10 intersection with MT 200 will be eliminated to reduce the number of conflict points on MT 200, improve highway safety and operations, and due to its close proximity to the Interstate 90 (I-90) ramps.

MT 200 will not be reconstructed with this project; however, shoulders, curb, gutter, and sidewalk will be added to both the left and right side of MT 200 from the First Street intersection easterly to just west of the Blackfoot River bridge, where a similarly improved roadway section already exists. The merge from the I-90 westbound off-ramp to MT 200 will also be improved with the addition of a merge lane. A ten-foot wide asphalt surfaced multi-use trail will be constructed within existing right-of-way for the entire length of the project. An existing interpretive site parking area north of MT 200 will be re-graded and resurfaced. Finally, a traffic signal will be constructed at the intersection of Old Highway 10/First Street and MT 200.

The design speed for MT 200 is 45 miles per hour (mph), and for Old Highway 10 is 35 mph (as per the posted speed limits).

### **Project Location and Limits**

The project is located near Bonner, in Missoula County, Township 13 North, Range 18 West, Section 21. MT 200 is a principal arterial with one travel lane each eastbound and westbound, plus turn lanes at the primary intersections in the project area. Old Highway 10 and First Street are also both two-lane roadways. The project is located between MT 200 reference posts 0+0.126 and 0+0.494.

### **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 plans package will include a Transportation Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP) with

## Alignment and Grade Report

MT 200 and Old Highway 10 – Bonner CN 7074000  
Project Manager : Fred Bente

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a limited Public Involvement component to address the local access and lane closure impacts of the project.

### **Physical Characteristics**

The project will combine two existing approaches to MT 200 (Old Highway 10 and First Street) into a single approach aligned directly across from the center Town Pump approach, and provide a traffic signal to improve access to MT 200 for this combined traffic flow. Traffic in the area includes an unusually high percentage of heavy vehicles due to the Town Pump truck stop. MT 200 forms the east and west legs of the existing project intersections and is free-flowing. Old Highway 10, First Street, and the Town Pump approach are all stop-sign controlled. The posted speed limit is 35 mph on MT 200, 45 mph on Old Hwy 10, and 25 mph on First Street.

The topography in the project area is essentially flat. All of the project roadways are asphalt paved rural sections, with limited drainage ditch facilities. No on-street parking exists on any of the subject streets.

The westbound I-90 off-ramp merge with MT 200 is yield-sign controlled and is a direct merge with no taper length provided.

### **Horizontal Alignment**

The button-hook approach of Old Hwy 10 to MT 200 will be eliminated and the alignment of Old Highway 10 will be extended to the east, terminating at First Street. This alignment will include two superelevated horizontal curves joined by a short tangent and a continuously rotating plane. The first horizontal curve has a radius of 380 feet and a 4% superelevation, laying generally between Station 14+02 and 16+13. The second horizontal curve has a radius of 510 feet and a 2% superelevation, laying generally between Station 19+15 and 21+71. On First Street, a horizontal curve currently exists at the approach to MT 200. The proposed design uses a 510 foot radius normal crown curve between Stations 103+33 and 107+59 to replace the existing curve and to shift the approach alignment slightly to the west to match the Town Pump approach alignment.

The alignment for MT 200 will remain unchanged.

### **Vertical Alignment**

MT 200 will not be reconstructed and, as a result, its existing vertical alignment will not change. The Old Highway 10 extension will be across level terrain. A series of sub-one-percent grades will be used to cross this terrain and balance earthwork.

First Street will be fully reconstructed between its intersections with Old Highway 10 and MT 200. Grades along First Street will be between one and two percent. The Town Pump approach opposite Old Highway 10 will also be reconstructed with the approach grade averaging between approximately 1.5 and 2.6 percent.

### **Surfacing and Typical Section**

As discussed in the Preliminary Geotechnical Report for this project, the existing subgrade soils have an R-value of 49, indicating good soils for road construction. Because of the good-quality soil, no stabilization fabric or special borrow will be needed beneath the pavement sections. A structural section of 0.40 feet of plant mix surfacing (PMS) and 0.85 feet of crushed aggregate

## Alignment and Grade Report

MT 200 and Old Highway 10 – Bonner CN 7074000

Project Manager : Fred Bente

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course (CAC) is proposed on the MT 200 shoulder and ramp merge area improvements as well as the Town Pump approach (because of the high percentage of heavy vehicles stopping, starting, and turning on this approach), and a section of 0.25 feet of PMS and 0.70 feet of CAC is proposed on the Old Highway 10 and First Street project sections.

The Old Highway 10 extension to First Street will have a total top width of 30 feet (11-foot lane and 4-foot shoulder in each direction). The top width of First Street will vary from 30 at Old Highway 10, to 50-feet (including dedicated left-turn lane and intersection widening) at MT 200.

The cross-slope of the roadway (in normal crown areas) will be two percent and side slopes of 4:1 to 6:1 are anticipated.

### **Grading**

The roadways will be graded to minimize earthwork while maintaining minimum longitudinal grades. The project area is flat, and the native soils are of high bearing capacity, so no special project grading is necessary.

### **Hydraulics**

There are no major hydraulic structures or irrigation facilities in the project area. Drainage will be provided with standard roadside ditches. The existing ditch system does not drain to any specific outfall. Proposed ditches will likely be designed to infiltrate into the gravelly soils below the ditch rather than run to a specific point because there is no established drainage system on MT 200. Percolation test pits conducted as part of the geotechnical analysis revealed very free-draining soils. A storm sewer system is not proposed for this project.

### **Bridges**

There are no bridge structures within the project limits.

### **Traffic**

MT 200 provides one travel lane in each direction, plus left-turn lanes at project intersections. Each of the side-street approaches are stop-sign controlled. No on-street parking is permitted within the project area. The posted speed limit is reported above in the Physical Characteristics section of this report.

The existing intersection of MT 200 with First Street and the Town Pump Access has a negative offset between the two side-street approaches. The Town Pump Access will be shifted approximately 15 feet to the west to position it in a better location to accommodate onsite queuing at the proposed traffic signal, and the First Street approach will be shifted slightly west to properly align with the Town Pump Approach, eliminating the negative offset.

Traffic signal control will be added at the MT 200 and Old Highway 10/Town Pump Approach intersection. Stop control will be used on the Old Hwy 10 approach to First Street. The planned ramp merge lane will improve traffic operations and safety on the westbound off-ramp to eastbound MT 200.

Accessible pedestrian signal (APS) features will be incorporated in the project traffic signal. A signal warrant study completed for this intersection concluded that a traffic signal is warranted based on Manual on Uniform Traffic Control Devices (MUTCD) warrants and the combined Old

## Alignment and Grade Report

Highway 10 and First Street traffic volumes on the north intersection leg.

The First Street and Town Pump Access approaches were evaluated to determine if they meet the MDT criteria for auxiliary turn lanes. The turn-lane criteria used for this evaluation is contained in the MDT *Traffic Engineering Manual* Section 28.4.1. Design year peak-hour traffic volumes were used for this evaluation resulting in the conclusion that neither the First Street nor the Town Pump approaches meet the standard criteria for the addition of a separate turn lane. However, vehicle queue length is of critical importance on the south side of this intersection as long queues could interfere with the on-site circulation and fuel pump access on the Town Pump property. Therefore, two-lanes are recommended on the northbound approach in order to distribute the queuing, and reduce the queue length. The addition of a separate left-turn lane on the northbound approach results in reduction of the estimated peak hour maximum queue length by approximately 50 to 75 feet versus the queue length estimated without the added turn lane.

The southbound First Street approach will also include a separate left-turn lane in order to balance the intersection geometry. A painted median could be used instead of the turn lane, and quickly tapered out, but given the amount of developable property north of the intersection it is prudent to provide a turn lane instead of a painted island as part of this construction.

The existing two-way left-turn lane in both directions (TWLT) on MT 200 will be perpetuated by the project.

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

The project is proposed to be constructed utilizing standard industry products and procedures. ITS features are not included in this project.

### **Miscellaneous**

A cove gutter is proposed for the south side of the interpretive site parking area to delineate the parking area from the roadway. This gutter will be in line with the adjacent curb and gutter alignment along MT 200. The parking area will be regraded to drain to the cove gutter.

### **Design Exceptions & Clear Zone**

Four existing luminaire poles north of MT 200 (between First Street and I-90) are right at or just within the MT 200 clear zone. It is proposed that these poles would not be moved or replaced by this project. These will require a design exception. Additionally, two utility poles on the right side of First Street (approximate stations 107+26 and 108+98) are located within the First Street clear zone. The utility company has not yet determined how they will address these poles. Should they remain in the clear zone, this too will require a design exception.

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

All improvements along MT 200 including shoulder widening, curb and sidewalks, ramp merge area, multi-use trails, and interpretive parking lot resurfacing, will be completed within the existing MDT right-of-way.

The extension of Old Highway 10 will be across undeveloped property owned by the Town Pump Corporation and identified as a commercial subdivision. A 60-foot right-of-way across this property will be purchased by the project.

## Alignment and Grade Report

MT 200 and Old Highway 10 – Bonner CN 7074000  
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Improvements to First Street will be primarily within the existing 60-foot county right-of-way, with some acquisition from the undeveloped Town Pump commercial subdivision required between approximately Station 5+30 and 7+60 left.

### **Utilities/Railroads**

There are no railroads located within the project limits.

Both overhead and underground utilities exist within the project area. A Phase I SUE Survey has been completed and the information gathered is presented on the Alignment and Grade plans. A Phase II SUE Survey is expected to be necessary for select utilities including NorthWestern Energy (underground power and natural gas), AT&T (underground fiber optic), Optimum (underground cable TV), and Centurylink (underground telephone). Utility coordination meetings were held with each of these utility companies. Utility relocations are anticipated to be required of Centurylink, NorthWestern Energy, and Optimum. The Preliminary Utility Conflict Report dated June 2013 proved more detail concerning the type and location of utilities that will be in conflict with the current design.

### **Environmental Considerations**

An Initial Site Assessment was completed for this project which concluded that there was no need for further evaluation of issues including detailed noise analysis, air quality analysis, Phase II for hazardous materials/substances, and environmental issues related to special provisions. The cultural resource evaluation and documentation, as well as the biological and wetlands evaluations, are currently being completed.

It is not anticipated that this project will induce significant land use changes or promote unplanned growth. There will be no significant effects on present traffic patterns other than diverting Old Hwy 10 traffic to First Street. This project is not expected to create adverse human health or environmental effects on the local population.

The project qualifies as a Categorical Exclusion under the provisions of 23 CFR 771.117(d), the Programmatic Agreement signed by MDT and FHWA on April 12, 2001, and per ARM 18.2.261 (sections 75-1-103 and 75-1-201, MCA).

### **Experimental Features**

Experimental features are not included in this project.

### **Traffic Control**

The anticipated Traffic Control Plan is a project special provision including the following:

- Minimizing disruption of traffic on MT 200, including a requirement for two-directional traffic flow on MT 200 at all times.
- Requirement for a public information effort in the form of a web site or direct mailing.
- Requirement for adjacent property access at all times.
- Contractor coordination with adjacent property owners/residents addressing access needs.
- Construction on First Street may require one-lane traffic with flagging or short-duration detours. Contractor responsible for establishing, maintaining, and providing public notification of detour routes.

## Alignment and Grade Report

MT 200 and Old Highway 10 – Bonner CN 7074000

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- Compliance with a MUTCD and MDT Standard Drawings for temporary traffic control.

### Public Involvement

Public involvement for this project has included a series of three public meetings with the Bonner Community Council during which the project was presented, alternatives were described and discussed, and public comment was received. A project press release was also prepared and distributed. Individual meetings with Town Pump, the primarily affected land owner, have also been held.

### Cost Estimate

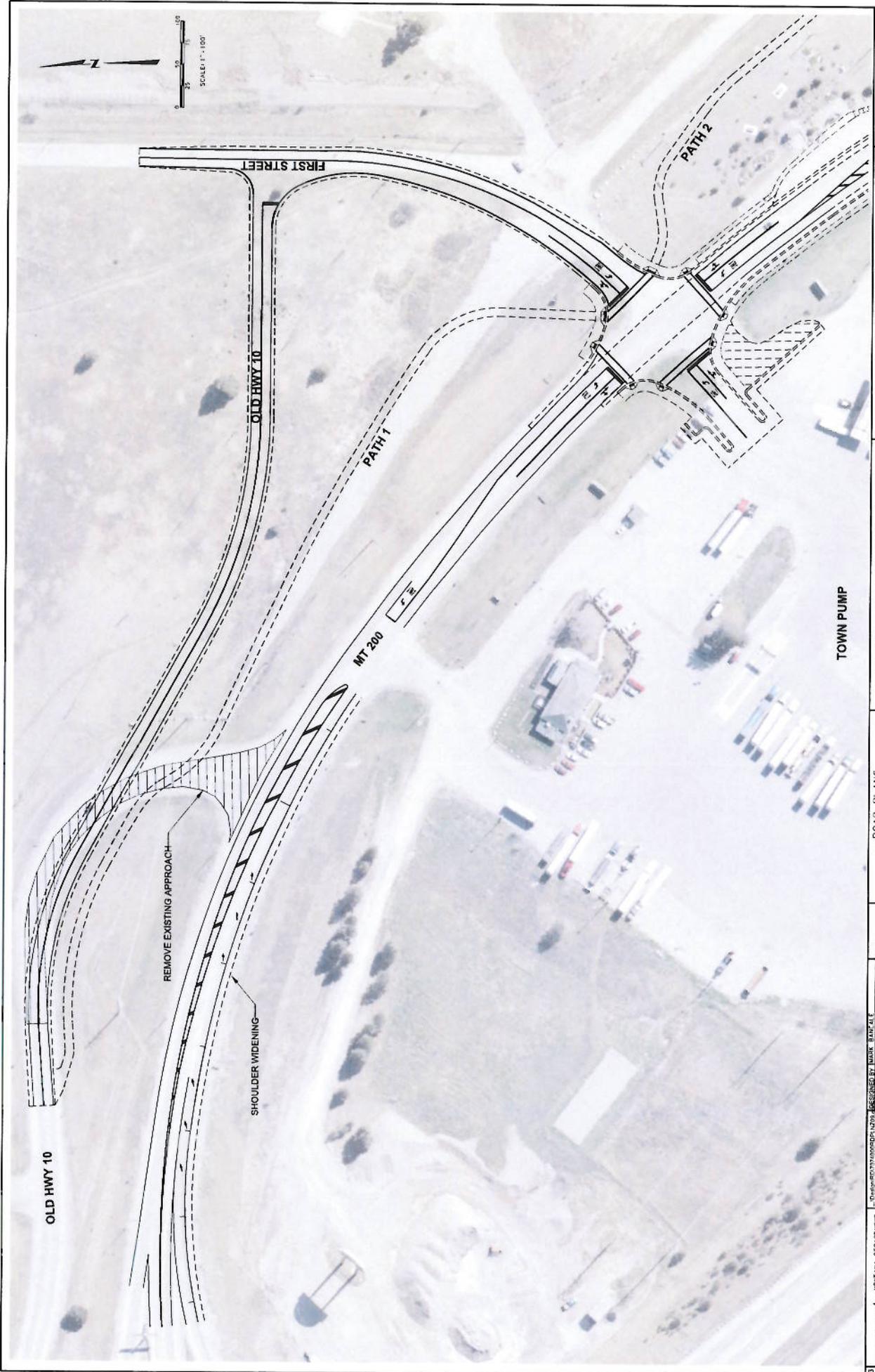
The PFR had the project programmed for \$750,000 by MDT's Missoula District. The current estimated construction cost for this project is summarized below. Several elements have been added to the project construction scope since development of the PFR programming budget, including shoulders, curb, and sidewalk along a portion of MT 200; two multi-use paths; re-surfacing of the interpretive pull-out parking area; and improvements to the I-90 westbound off-ramp merge area.

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Road Work	\$530,830		
New Structure			
Remove Structure			
Detour			
Traffic Control			
<b>Subtotal</b>	\$530,830		
Mobilization (10%)	\$53,083		
<b>Subtotal</b>	\$583,913		
Contingencies (8%)	\$46,713		
<b>Total CN</b>	<b>\$630,626</b>	<b>\$ 5,234</b>	<b>\$ 693,850.00</b>
<b>CE (10%)</b>	<b>\$63,062</b>	<b>\$523</b>	<b>\$ 69,315.00</b>
<b>TOTAL CN+CE</b>	<b>\$693,688</b>	<b>\$5,757</b>	<b>\$ 763,165.00</b>

### Ready Date

The current ready date for this project is October 1, 2014. The latest finish date in OPX-2 is September 29, 2014.

The current letting date shown in the Tentative Construction program is June 12, 2014. Obviously this is not in sync with the ready date noted above (the ready date was adjusted during a recent design coordination meeting). This should be resolved during the next red-book review.



3	MDTA	MONTANA DEPARTMENT OF TRANSPORTATION	DESIGNED BY: WALKER PARKER	ROAD PLANS	PRELIMINARY AGR	UPN 1014000	8M 24-117010
2			CHECKED BY: [blank]	MISSOULA COUNTY		CSF 0.93524092	MT 200 AND OLD HWY 10 - BOMBER
1			DRAWN BY: [blank]				



 <b>MDTA</b> MISSOURI DEPARTMENT OF TRANSPORTATION	PREPARED BY: <b>LOU TAYLOR</b> CHECKED BY: <b>MARK BRIDGLE</b> DATE: <b>11/11/10</b>	PROJECT: <b>MT 200 AND OLD HWY 10 - BONNER</b> DRAWING: <b>UPN 1014000</b>	SHEET: <b>2 OF 2</b>
	ROAD PLANS MISSOURI COUNTY	PRELIMINARY AGR	SHEET: <b>2 OF 2</b>