

MEMORANDUM

To: RRC Members
Debbie Alke, Administrator/Aeronautics Division
D. John Blacker, Deputy Director
Mike Bousliman, Operations Manager
Monte N. Brown, Operations Manager/Business Process Solutions Unit
Jeffery M. Ebert, P.E./District Administrator-Butte
Larry Flynn, Administrator/Administration Division
Loran Frazier, P.E., Administrator/Highway and Engineering Division
Jennifer Jensen, Operations Manager
Dwane Kailey, Operations Manager
Jim Lynch, Director
Bob Seliskar/FHWA
Dennis Sheehy, Administrator/Motor Carrier Services Division
Jerry Stephens, P.E./WTI MSU
Jon Swartz, Administrator/Maintenance Division
Lynn Zanto, Administrator/Rail, Transit, and Planning Division

From: Susan C. Sillick, Manager
Research Programs

Date: July 8, 2009

Subject: 6/30/2009 RRC Meeting Agenda (9:00 a.m. MDTCNF Commission Room)

RRC Members Present: Debbie Alke, John Blacker, Mike Bousliman, Monte Brown, Bill Cloud (for Lynn Zanto), Jeff Ebert, Larry Flynn, Loran Frazier, Dwane Kailey, Dennis Sheehy, Sue Sillick, Jerry Stephens, and Jon Swartz.

RRC Members Absent: Jennifer Jensen, Jim Lynch, and Bob Seliskar.

Others Present: Kent Barnes and Matt Strizich.

1. **Budget Report:** Attached

No discussion.

2. **Research Project – current listing:** Attached

No discussion

3. **Reports:** Available Upon Request

No discussion.

- a. **Bozeman Pass Wildlife Monitoring** – Progress Reports – May 2009
- b. **Impact of Increased Canadian Economic Development on Northern Montana Highways (08.002)** – Progress Report – April 2009; Technical Memorandums 1 & 2
- c. **Smart Transportation and Land Use Planning (07.014)** – Progress Report – May 2009

4. **Contract Extensions:** None

5. **Proposals:**

- a. **Synthesis of Warm Mix Asphalt Paving Strategies for Use in Montana Highway Construction (09.014)**

Matt Strizich presented this synthesis proposal on the behalf of the Technical Panel, who recommends this proposal for funding.

The purpose of this project is to review available literature, current initiatives, research, and programs related to warm mix asphalt (WMA) with a focus on tools that provide insight into how WMA may be implemented and how it may perform in Montana. This information will be used to develop specification(s). Advantages of using WMA include: decreased energy use, emissions, and construction time; increased compaction and construction season. A possible disadvantage is long-term pavement performance; there is not enough information at this time to determine impacts on long-term pavement performance.

Both Dwane Kailey and John Blacker indicated they wanted to see a WMA job this construction season, most likely in the fall and they were concerned about the five month project time frame. In response to this concern, it was indicated that this five months contains final report preparation, review, and revision time. Also, data necessary to prepare a specification can be obtained early. As data is obtained, it can be shared with the Department. Matt S. indicated the length of this project shouldn't preclude developing a specification for a WMA project this year.

John B. moved to approve this project with a cost to MDT of \$20,579. Dwane K. seconded the motion. The motion passed unanimously.

- b. **Steel Pipe Pile/Concrete Pile Cap Bridge Support Systems: Confirmation of Connection Performance (09.016)**

Kent Barnes presented this proposal on behalf of the Technical Panel, who recommends this proposal for funding.

A previous research project investigated the pile cap connection for heavy cyclic loading, such as might occur during earthquakes and ice jams. This initial project determined the connection at the time didn't hold up to these loads well. Nor did

many of the designs tested. Towards the end of this project, a final design was tested that was able to withstand these loads. However, for constructability purposes, the actual design the Bridge Bureau specified had less steel due to constructability issues. The purpose of this project is to confirm the current design can withstand the seismic and ice loading situations as well as is expected. Kent B. expects that MDT's current specification will be confirmed or will need to be tweaked as a result of this research.

Dwane K. would like the benefits of this project and the initial research clearly indicated in the final report.

Dwane K. moved to approve this project with a cost to MDT of \$56,589. Mike Bousliman seconded the motion. The motion passed unanimously.

c. **Interim Evaluation of Three Instrumented Bridges in Saco, Montana**
(09.017)

Kent Barnes presented this proposal on behalf of the Technical Panel, who recommends this proposal for funding.

Previous research evaluated three bridge decks near Saco, Montana, identical in all respects except in deck design. This was one of the first high performance concrete installations in Montana. This research involved an initial and two-year post-construction evaluation. The purpose of the current project is to try to determine long-term performance differences among the three deck designs. We are beginning to see differences in bridge deck cracking. Also, cracking is a result of shrinkage, which is usually visible within the first five years post construction. These two facts lead us to believe we may see differences among the three bridge decks.

Dwane K. would like to see some recommendations. Both Kent and Jerry stated that while the benchmark and preliminary signs indicate there may be differences in performance, it cannot be guaranteed. Dwane also asked about the value of the literature search. Both Jerry and Kent indicated, they didn't think there was any new information related to this project, but this needs to be verified.

Dwane K. made the motion to approve this project with a cost to MDT of \$55,722. Loran Frazier seconded the motion. The motion passed unanimously.

d. **Best Management Practices to Mitigate Burrowing Mammal Impacts on Paved Highways: Phase 1** (07.010)

Jeff Ebert presented this proposal on behalf of the Technical Panel, who recommends this proposal for funding.

Sue Sillick indicated a proposal on this topic was presented to the RRC in May. The RRC indicated they wanted to phase this project. The proposal being presented today covers the first phase.

Jeff Ebert indicated the ultimate goal of this project is to develop a toolkit to provide alternatives to use in dealing with mammals burrowing into the roadsides. The first phase of this project involves characterizing the nature and extent of the problem through surveys and interviews of MDT and natural resource agency staff and site inspections.

Mike B. made a motion to approve this project with a cost to MDT of \$26,591. Dwane K. seconded the motion. All voted in favor of the motion, except Loran Frazier, who opposed the motion. The motion passed.

6. Implementation/Technology Transfer: None

7. Department/Division Hot Topics – RRC Members Roundtable Discussion

No discussion.

cc: Craig Abernathy/Research Programs w/attachments
Kent M. Barnes, P.E./Bridge Bureau
Kevin Christensen/Highways and Engineering Division
Kris Christensen/Research Programs w/attachments
Tim Conway, P.E./Consultant Design Bureau
Lisa Durbin/Construction Administration-Bureau
Mike Dyr Dahl/Highways and Engineering Division
Paul R. Ferry, P.E./Highways Bureau
John Horton/Right-of-Way Bureau
Paul Jagoda, P.E./Construction Engineering Bureau
Michael P. Johnson/District Administrator-Great Falls
Tom Martin, P.E./ Environmental Services Bureau
Ray Mengel/District Administrator-Glendive
Doug Moeller/District Administrator-Missoula
Suzy Price/Contract Plans Bureau
Timothy W. Reardon/Legal Services
Stefan Streeter, P.E. /District Administrator-Billings
Matt Strizich, P.E./Materials Bureau
James A. Walther, P.E./Highways and Engineering Division
Duane E. Williams, P.E./Traffic & Safety Bureau
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