

EXPERIMENTAL PROJECTS WORK PLAN

CHFRS-2P - HIGH FLOAT AND POLYMER MODIFIED EMULSION SEAL & COVER

Location: Big horn County-Billings District: Interstate 90 from MP 543.5 to MP 554.5

Project Name: Wyoming Line – North

Project Number: IM 90-9(112)544

Experimental Project: MT-13-06

Type of Project: Seal & Cover (aka Chip seal)

Principal Investigator: Craig Abernathy: Experimental Project Manager (ExPM)

Technical Contact: Mike Taylor, District Construction Engineer; Billings District

Description

Determine the effectiveness, long term durability, and/or potential chip retention benefits due to the 'gel' characteristics of CHRFS-2p along with a combination of CSS-1H (diluted 50%) fog seal treatments. Western Emulsion representatives have stated that the CHRFS-2p meets the CRS-2p requirements in the Contract. The Contractor proposed treatments may potentially minimize absorption or 'drain down' of chip oil into a newly paved Grade S surface.

Newly paved Grade 'S' plant mix often exhibits an 'open' surface, which may require varying application rates of chip oil to achieve desired chip embedment and retention. The proposed research is in attempt to identify standardized application rates for chip seals on new Grade 'S' mix and to introduce an alternate chip seal product.

Experimental Design

The project plans include a full width 0.20' mill and Grade S overlay on the eastbound (EB) and westbound (WB) lanes of Interstate 90 from MP 543.5 to MP 554.5.

The project will include three 1 mile test sections on the EB driving lane and parking lane (32 ft. width) with the following treatments:

- Section 1: MP 546-547 EB-CHRFS-2p seal & cover
- Section 2: MP 547-548 EB-Pre-fog seal & CHRFS-2p seal & cover
- Section 3: MP 548-549 EB-Pre-fog seal, CHRFS-2p seal & cover, Post-fog seal
- The remainder of the project will be chip sealed with conventional CRS-2p.

The proposed application rates are listed below. Actual applications may be adjusted according to the mix design prior to the work.

- Pre-fog: 0.10 Gal/SY
- Post-fog: 0.05 Gal/SY
- CHRFS-2P: 0.42 Gal/SY
- CRS-2p: 0.42 Gal/SY
- Chips: 27 lbs./SY

Evaluation Procedures

Construction Documentation: The Research Section will document the construction methods and equipment, application rates, weather, and specification conformance etc.,

Post Documentation: Will entail semi-annual site visits/inspections of the sections for inclusion in to the annual and final reports; in addition to include any maintenance activities associated with the seal & cover.

Evaluation Schedule

Research will monitor and report on performance for a minimum period of five years annually, with every year up to *ten years (informally). This is in accordance with the Department's "Experimental Project Procedures". Delivery of a construction/installation report, interim, annual or semi-annual reports is required as well as a final project report (responsibility of Research). A web page will be dedicated to display all reporting from the project.

The Contractor's schedule shows that paving will begin on 7/17/13 and be completed on 8/26/13. The seal and cover is schedule to begin on 8/26/13 and be completed on 8/31/13. The EPM will ensure that the seal & cover is applied at least 72 hours after the plant mix

placement in accordance with Supplemental Specification 409.03.3.

2013: Installation/Construction Report

2014-2017: Semi-Annual Inspections/ Annual Evaluation Reports

2018: Final Evaluation/Final Report

*If considered the extra data collection and analysis will add value to the overall results of the project.

Note: Project Schedule Change – New construction date of spring 2014.