

**Experimental Feature Work Plan
April 2023**

Experimental Feature:	Void Reducing Asphalt Membrane (VRAM)
Location:	Great Falls District, Lewis and Clark County, MT Hwy 200, RP 65.4-75.8
MDT Project Name:	Lincoln – East & West
MDT Project Number:	NH 24-3(72)65[9960]
Experimental Project Number:	MT-23-01
Principle Investigator:	Chad DeAustin, Experimental Project Manager, (ExPM)
Technical Contact:	Mike Dodge, Materials Reviewer

Project Map



↑ Project Limits, approximately

Feature Description & Outline

In efforts to improve safety, MDT has begun installing centerline rumble strips on many sections of roadway that were constructed before centerline rumble strips were a standard practice. Some of these roadways have degraded centerline joints that would not hold up to the grinding installation of the rumble strips. To combat this, the practice has been to trench mill the old centerline joint and fill it with new asphalt which provides an improved surface for the rumble strips. One downfall of this method is it replaces the one joint with two. To seal the joints, most projects have required Jointbond, a topical joint sealant. This feature will evaluate a void reducing asphalt membrane as another potential option for joint improvement in a trench mill situation.



Void reducing asphalt membrane (VRAM) is an asphalt emulsion material that is applied prior to paving on an existing surface where a joint will be formed. After asphalt mix is placed, the VRAM will work from the bottom up to fill any air voids along or near the joint to restrict moisture intrusion and extend life of the roadway. MDT is evaluating another VRAM application on the [Condon – North & South](#) project from 2020.

Evaluation Procedures & Schedule

The measure of effectiveness prevalent with this feature are:

- Construction practices (constructability, construction time, cost effectiveness, etc.),
- Durability evaluation of joints,
- Comparison to section that had Jointbond applied.

In accordance with the Department’s ‘Experimental Project Procedures,’ MDT Research Section will monitor and report on performance for a minimum of five years annually. This includes delivery of a work plan, construction report, annual reports, and final project report.

2023: Installation/Construction Report
2024-2027: Annual Inspections/Evaluation Reports
2028: Final Evaluation Report/Project Conclusion

A dedicated [webpage](#) provides all reporting for the experimental feature.