

**State Planning and Research Program
Quarterly Report**

PROJECT TITLE: *Update to CR 13-04: Best Practices for Protecting DOT Equipment from the Corrosion effect of Chemical Deicers*

OBJECTIVES: To produce new data and renewed understanding to update the anticorrosion coating section of *CR 13-04 - Manual of Best Practices for the Prevention of Corrosion on Vehicles and Equipment* and thus provide guidance to encourage good practices and procedures that may be implemented.

PERIOD COVERED: April 1 to June 30, 2024

PARTICIPATING AGENCIES: Minnesota Department of Transportation, Clear Roads Technical Advisory Committee, Washington State University – Prime, Monte Vista Associates LLC – Subcontractor, and Roadtech, Inc. – Subcontractor

PROJECT MANAGER:
Hafiz Munir / Tom Peters

SP&R PROJECT NO:
MnDOT No. 1047787

PROJECT IS:

LEAD AGENCY: MnDOT

Federal Project No.
TPF-5(353)

 Planning
 X Research & Development

PRINCIPAL INVESTIGATOR:
Xianming Shi, Ph.D., P.E., WSU

ANNUAL BUDGET:
\$99,985

PROJECT EXPENDITURES TO DATE:
\$96,747

WORK COMPLETED:

Project Management: The PI submitted a Quarterly Progress Report in April 2024. The no-cost time extension of 6 months to extend the contract end date to July 31, 2024 was approved.

Task 1. Survey and Market Analysis (100% complete).

Task 2. Developing the Experimental Plan (100% complete).

Task 3. Execution of the Experimental Plan (100% complete). We completed all the designed laboratory tests. 1) Hardness Testing; 2) Adhesion Testing; 3) open circuit potential and electrochemical impedance spectroscopy testing; and 4) Salt Spray (Scribe and non-scribe methods for various selected coating products.

Task 4. Data Analysis and Manual Update (100% complete).

Task 5. Final Report, Presentations and Virtual Webinars. 85% Complete. The draft final report was submitted in May 2024 and now in review by the project TAC.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

Work in the coming quarter will consist of project management, and completion of Task 5: To finalize the Final Report in case there are any review comments from the project TAC and to conduct the Final Presentation (including the slides for future webinars).

STATUS AND COMPLETION DATE:

The project is on schedule. No time extension would be necessary.