

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: Overall, this project aims 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: January 1 to March 31, 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)	<u> </u> Planning <u> X </u> Research & Development
PRINCIPAL INVESTIGATOR: Xianming Shi, Ph.D., P.E., WSU		

ANNUAL BUDGET: \$99,985	PROJECT EXPENDITURES TO DATE: \$70,866
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WORK COMPLETED:

Project Management: The PI submitted a Quarterly Progress Report in Oct. 2023. 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).

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

Work in the coming quarter will consist of project management, and completion of Task 5 (Final Report, Presentations and Virtual Webinars).

STATUS AND COMPLETION DATE:

The updated timeline is as follows. Task 3 and Task 4 deliverables are ready for review, but instead of submitting them in March 2024 and we are now incorporating them into the project final report. We anticipate the submission of the draft project final report by April 30, 2024.

Task	Current Task Start Date	Current End Date for Task Approval	Revised Task Start Date	Revised Due Date to Submit Draft Deliverables	Revised End Date for Task Approval
1	05/01/2022	07/31/2022	05/15/2022	04/15/2023	05/31/2023
2	07/01/2022	10/31/2022	01/01/2023	04/15/2023	05/31/2023
3	11/01/2022	07/31/2023	06/01/2023	01/31/2024	03/31/2024
4	06/01/2023	10/31/2023	01/01/2024	03/31/2024	05/31/2024
5	10/01/2023	02/28/2024	03/01/2024	05/31/2024	07/31/2024