

State Planning and Research Program Quarterly Report

PROJECT TITLE: *Standardized Test Procedures for Ice Melting Capacity of Deicers*

OBJECTIVES: The goal of this research is to evaluate the suitability of the mechanical rocker test as a standardized laboratory test that can realistically and robustly assess the performance of deicers, which is needed to allow DOTs to make data-driven procurement decisions.

PERIOD COVERED: April 1, 2022 – June 30, 2022

PARTICIPATING AGENCIES:

Washington State University – Prime
Monte Vista Associates LLC – Subcontractor
Roadtech, Inc. - Subcontractor

<p>PROJECT MANAGER: Hafiz Munir / Tom Peters</p> <p>LEAD AGENCY: MnDOT</p> <p>PRINCIPAL INVESTIGATOR: Xianming Shi, Ph.D., P.E., WSU</p>	<p>SP&R PROJECT NO: MnDOT No. 1033080</p> <p>Federal Project No. TPF-5(353)</p>	<p>PROJECT IS:</p> <p style="text-align: center;">____ Planning <u> X </u> Research & Development</p>
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ANNUAL BUDGET: \$74,086	PROJECT EXPENDITURES TO DATE: \$63,040
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WORK COMPLETED:

Task 1. Mechanical Rocker Test Procedure Evaluation (100% complete).

Task 2. Interim Report (100% complete). In the last quarter, the team finished the data analysis of the 2nd round of round robin test with the revised test protocol and the updated testing plan. The Interim Report was updated for the 4th, 5th and 6th time on May 23, June 23, and July 5, 2022, respectively, to incorporate the review comments from the project panel. A project progress meeting was held on June 6, 2022, during which the PI reported the key findings from the 2nd round of round robin test and received suggestions from the project panel.

Task 3. Standard Test Procedure Development (60% complete). During the last quarter, the team further refined the existing test protocol in order to fully develop it into a Standard Test Procedure for the ice melting capacity (IMC) of roadway deicer products, for potential consideration by AASHTO. The team reached out to Brad Dorr and Rick Nelson, who will be the likely champions to bring the procedures to one AASHTO Committee in July 2022 (meeting in Washington, D.C.). This communication with relevant AASHTO committees aims to ensure that the documentation of test procedure development is thorough and potentially addresses any perceivable negative comments. We also understand the deadlines for material submission required to secure a spot on the agenda for presentation in Task 4.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

The work in the coming quarter will consist of project management as well as completion of Task 3 (Standard Test Procedure Development), with the focus on finalizing the standard test procedure (in light of the 2nd round of round robin tests with the selected peer labs) and on communicating with the relevant AASHTO Committees.

STATUS AND COMPLETION DATE:

The latest version of schedule is provided as follows. We are now slightly behind schedule in Tasks 3 & 4 but plan to catch up on the schedule.

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	02/01/2020	05/31/2021	02/01/2020	01/30/2022	02/28/2022
2	11/01/2020	06/30/2021	11/01/2020	01/30/2022	02/28/2022
3	10/01/2020	07/31/2021	02/01/2021	02/28/2022	04/30/2022
4	10/01/2020	11/30/2021	05/01/2022	08/31/2022	09/30/2022
5	12/01/2020	12/31/2021	09/01/2022	11/30/2022	12/31/2022
6	04/01/2021	03/31/2022	08/01/2021	12/31/2022	02/28/2023