

DRISI

CALTRANS DIVISION OF RESEARCH,
INNOVATION AND SYSTEM INFORMATION

Research Notes

Pavement

SEPTEMBER 2023

Project Title:
National Road Research Alliance –
NRRRA, phase 2 TPF-5(466)

Task Number: 3925

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PAV: National Road Research Alliance – NRRRA, phase 2 TPF-5(466)

This pooled fund will help direct and compliment the use of the MnROAD test track for local, regional and national research, tech transfer and implementation.

WHAT IS THE NEED?

The National Road Research Alliance (NRRRA) is a Pooled Fund with the goal to improve the future sustainability of our roads through research and a commitment to cooperative implementation. The alliance sponsors research at the MnROAD test track, one of the most sophisticated cold-weather pavement facilities in existence, as well as other locations.

WHAT ARE WE DOING?

Primary objectives of the National Road Research Alliance (NRRRA Phase-II) are:

- Implementation and technology transfer of NRRRA Phase-I research efforts and other common interests;
- Continue to fund and support research and implementation efforts of common interest;
- Continue the communication with both its government agencies along with its associate members (industry, associations, consultants, academia);
- Continued utilization of MNROAD to conduct structured construction, field testing and evaluation of pavement materials, equipment and methods under real-world conditions;
- Establish industry standards and develop performance measure for improving pavement performance;
- Develop and/or revise specifications and recommendations;
- Studying and promoting innovative techniques and technologies that will save agencies money, improve safety and increase efficiency;
- Supporting technology transfer by developing practical field guides, best practices, and training curriculum to promote the results of research projects;
- Conduct cost-benefit analysis to ensure that new technologies, materials or methods contribute to operational efficiencies;
- Support the exchange of information and ideas through collaborative research efforts that provide opportunities for public agencies to share experiences.
- Identify and prioritize common road related research needs to address regional and national issues that are built on existing efforts such as FHWA's PCC and HMA Roadmaps as well as the Foundation for Pavement Preservation Roadmap;
- Fund high priority, readily



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implementable research projects through research contracts and university partnerships; • Leverage knowledge, skills, and resources from participating partners to advance pavement research and implementation efforts while developing the workforce of the future. Support technology transfer that highlights the implementation of research results and the associated benefits.

WHAT IS OUR GOAL?

The goal of this pooled-fund study is to develop knowledge of pavement behavior in a real-world laboratory and develop tools for practical implementation.

WHAT IS THE BENEFIT?

This pooled fund will help direct and compliment the use of the MnROAD test track for local, regional and national research, tech transfer and implementation. Road owner agencies will provide input and participate in the decision making needed for future MnROAD construction and research scheduled in 2017 (Phase-I) and in 2022 (Phase-2). In Phase-I MnDOT and Missouri have funded construction in both states while Phase-2 MnDOT, Missouri, Wisconsin will fund 2022-2023 construction of test sections. MnROAD will continue to support common goals. Industry and academia will also play an important role to provide critical input on long-term future trends in research and barriers to implementation, including working with their customers and members who play a direct role in implementation.

WHAT IS THE PROGRESS TO DATE?

To date ten (14) government agencies and over fifty-five (85+) industry, associations, consultants, and academic institutions have become NRRRA members to share their expertise and are learning about new tools and methods to improve and expand upon transportation systems nationally.

Membership

- Montana and Nebraska joined NRRRA in 2022.
- Many additional NRRRA associates also joined.

Phase-I Projects

- Tech Transfer - 100% of the 13/13 projects complete.
- 2017 Long Term Research – 100% of the 8/8 projects complete.
- 2019 Long Term Research – 64% of the 7/11 projects complete.
- 2019 Call for Innovation Research – 33% of the 2/6 projects complete.
- 2020 Call for Innovation Research – 43% of the 3/7 projects complete.

Phase-2 Projects

- 2021 Long Term Research – 0% of the 0/11 projects complete.
- 2021 Long Term Research – three projects to be contracted in 2023.
- 2023 Call for Innovation – up to \$1,714,652 new research selected in July 2023 which is now in the process of being finalized and contracted. Expect contracting to be done early 2024.
- Two projects are being developed for RFP's in early 2024 including Perpetual Pavements in Wet Freeze Climates and Recycled Binder Availability. Details on the newly funded projects can be found on the NRRRA webpage under projects.

General

- NRRRA Technical Teams have met every month again this quarter which also acts as TAP meetings for each team's short and long-term research efforts.
- See the NRRRA website for details on all the teams' updated activities.
- Monthly Research pays off webinars have been completed and a plan for 2024 topics are developed.
- NRRRA budget for Phase-I and Phase-II are attached at the end of this report.
- 2022 Construction Report is complete now being published.