

TEST TRACK UNLOCKED POTENTIAL

Phase-I (1990-2005) Phase-II (2006-2015) Phase-III (2016-2018)

MnROAD along with its national partners are in a unique position to make a difference in the way we design, build, and maintain our roadways into the future. This document helps explain the deficiencies that we have nationally and how federal, state, local, and local industries and universities can join together to better bridge the gap related to national coordination of research and the implementation that needs to make place to put findings into practice.



National Road Research Alliance (NRRRA) is requesting 4 million a year

- Insure Test Tracks (MnROAD and NCAT) are utilized national in the future.
- Support FHWA in National Coordination and Implementation of Research Findings.
- Provide Required Data Critical to National Needs for Research Validation.
- Foster Innovation Required for the Future Safe and Efficient Transportations Systems.

Current National Research Deficiencies

Currently not enough is being done on a local, state, and national level in a number of critical areas. Federal Highway Administration (FHWA) are each state is struggling to manage the national investment into critical research needed by the state department of transportations. Much work through NCHRP, SHRP2, ETGs and State (local research and pooled funds) efforts are not being effectively coordinated creating lots of duplication of effort and very little focus on innovation. FHWA key technical staff is also bogged down in federal processes, keeping up technically, and meeting with their customers the states. Almost impossible to do it all creating staffing that cannot effectively participate with the states to provide enough coordination and implementation to make a difference at the local level where it will directly will impact state performance standards in the quickest time. Currently not tied to states.

Better National Coordination - Federal leadership/coordination is needed in the development/update of a national roadmap of a pavement research investment. Task group of FHWA and States should be developed to tie the research efforts together and also develop a roadmap for future investment which would include test tracks like MnROAD and NCAT along with others doing accelerated pavement testing into the national research needs. National plan is needed because right now each facility acts independently to keep operational.

Increased FHWA Technical Involvement - FHWA fund a full time position at Turner Fairbanks to assist as a facilitator for the coordination of the research activities and participate in the states. FHWA Loan Staff and or staff rotations at the major test tracks to support the national coordination.

National Data Sharing - Strong efforts are needed to have a system (like InfoPAVE) to bring states data including HVS and Test track data/results into a national database to more easily build upon. This includes having system to collect state/local calibration efforts for the design guide.

Innovation opportunities that could be pursued with additional funding making both MnROAD and NCAT centers of excellence for a number of areas. MnROAD/NCAT has started/hosted all these activities in the past and with this seed money could attract additional partnership to realize the potential of these sites. Groups that would benefit include:

- Regional storm water training and research facility – NCAT is currently doing this effort to both train and do research on the latest erosion control techniques needed to insure our construction practices do not have a harmful effect on the environment. MnROAD has the space and facilities to support this effort with very little extra costs.
- Development of cold regions autonomous vehicle proving grounds – Both MnROAD and NCAT have closed to the public test tracks that could be loaded using autonomous vehicles both in the hot south and the cold north.
- Intelligent Construction Center of Excellences – MnDOT has been a leader in the development and deployment of future construction equipment and tools needed to build the roads of the future. Currently there is not one locations devoted to this endeavor for both agencies and industry to work on solutions for the future.
- Automated Distress Data Collection Calibration Center – MnDOT has been doing ride calibrations for the region for a number of years but could expand this to other systems that will be future requirements including automated distress detection, friction, rolling resistance, along with other critical parameters to efficiently maintain our existing roadways.
- Innovative Pavement Test Decks – MnROAD and NCAT have developed national test decks outside of their facilities to develop the life extending benefits different maintenance treatments have on both high and low volume roads in both Minnesota and Alabama. This needs to be expanded to many other types of future asphalt and concrete structures that have been researched but no formal research comparisons have been completed. Both MnDOT and NCAT have dedicated pavement management vans and staff to collect and analyze this data.

Please contact us if you have any interests in joining our efforts

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