

# **TRANSPORTATION ENGINEERING AND ROAD RESEARCH ALLIANCE TERRA GENERAL ASSEMBLY MEETING NOTES**

**Monday, December 14, 2015  
9:30 a.m. to 12:00 p.m., Central Time**

**McNamara Alumni Center  
University of Minnesota  
Minneapolis, Minnesota**

## **Attendees:**

Curtis Bleech (via phone); Tom Bold (via phone); Steve Bower (via phone); Brandon Brever; Pat Casey (via phone); Andy Cascione; Halil Ceylan (via phone); André Clover (via phone); Fred Corrigan; Nancy Daubenberger; Glenn Engstrom; Jim Grothaus; Hannah Grune; Ralph Hodek; Ron Horner (via phone); Kim Linsenmayer (via phone); Steve Lund; Stephanie Malinoff; Mark Maloney; Mihai Marasteanu; Bob Orthmeyer; Greg Ous; Barry Paye (via phone); Mitch Rasmussen; Dave Rettner; Dan Schellhammer; Dan Staebell; Linda Taylor; Peter Taylor (via phone); Curt Turgeon; Dave van Deusen; Dan Wegman; Ben Worel

## **Welcome and Introductions**

Glenn Engstrom opened the meeting and led the group in introductions. He noted that the time was right for the new National Road Research Alliance to move forward with the new federal transportation bill, and was excited about the momentum in the group. Engstrom noted that NRRRA will focus on the collaboration and maximizing activities and projects at MnROAD.

## **MnDOT Perspective**

Nancy Daubenberger shared a few words with the group about MnDOT's goals behind the development of NRRRA. Daubenberger noted that investing in more implementation in research has emerged as a high priority within MnDOT's broader goal of enhancing financial effectiveness. Utilizing MnROAD with input from NRRRA will help propel MnDOT toward an increased focus on implementation.

## **Objectives and Goals of NRRRA**

Engstrom outlined the mission and goals of NRRRA for the group, using the attached slides. The mission of NRRRA is: "Strategic implementation through cooperative pavement research." Ultimately, the group hopes to solve regional and national pavement challenges; foster innovation through membership from states, academia, and industry; ensure the development of implementable products for road owners; create an effective technology transfer program; and direct 2017 MnROAD construction. Engstrom emphasized that the results of the NRRRA research will not sit on the shelf: implementation will be part of the plan. The group will have funding dedicated toward technology transfer to help fulfill this goal. Finally, Engstrom noted that Minnesota, Wisconsin, and Michigan have already committed to joining the

pooled fund, and he hopes that other states will join, as well. The pooled fund solicitation can be found at the following website: <http://www.pooledfund.org/Details/Solicitation/1410>

## **Past Efforts**

Linda Taylor and Ben Worel shared information about past work at MnROAD and a 2014 National Peer Exchange that have helped shape the goals and directions of NRRRA.

In 2014, pavement experts from around North America met in Minnesota to focus on quantifying and communicating the value of research implementation for MnROAD's Phase II research projects and the development of future research. A number of individuals participated, representing DOTs from Minnesota, Maine, Texas, Illinois, Michigan, California, Ontario, Wisconsin, and Indiana; FHWA; TRB; the University of Washington; and Jackson County. The group recognized MnROAD as a national leader of research and highly valued the results that had emerged from MnROAD research. As a part of the Exchange, the group emphasized the importance of implementation and developed eleven research needs statements. These research needs statements will be a foundation for the new NRRRA.

Worel provided a few more details about the history of MnROAD, which encompassed Phase I from 1994 to 2006 and Phase II from 2007 to 2015. Phase I focused on the structural design of concrete, bituminous, and gravel pavement designs and Phase II involved the reconstruction of almost 40 test cells that supported over 20 different research projects. Worel noted that Phase II shifted MnROAD from being a local facility toward a national leader in pavement research. Through analyses of Phase I and Phase II, MnDOT has found that the research produced under Phase I and Phase II has generated roughly \$33.1 million and \$10.4 million dollars of savings per year, respectively (see slides 13 and 15 for details). Worel noted that some of the Phase II projects are still ongoing. As MnROAD moves into Phase III, Worel noted that there is an opportunity to expand upon partnerships and innovate even more. Some possible future research areas that have emerged from the 2014 Peer Exchange and past MnROAD work include pavement preservation, grading & base work, and research with flexible and rigid pavements (see slide 17 for more details).

Fred Corrigan noted that it's important the savings per year figures are reflected in the overall MnDOT budget, as MnDOT has been focusing on efficiencies. He stressed that the savings numbers should be shared beyond the NRRRA and MnDOT Materials Lab.

Dave Van Deusen shared more information on the projects occurring at NCAT. Van Deusen noted that there are two main projects at both facilities focusing on pavement preservation and cracking. Van Deusen noted that the new sections built at MnROAD will parallel those at NCAT, and will feature both low and high-volume roads. Van Deusen noted, however, that the cracking experiment will be slightly different from NCAT's due to climate differences and that MnROAD will be building eight sections compared to NCAT's ten. Van Deusen noted that the preservation and cracking studies will both be three-year studies; after three years, there will be opportunity for input on future research. The new construction will be undertaken with \$2.5 million of MnDOT State Transportation Improvement Plan (STIP) funding.

Van Deusen also noted that, now that MnROAD and NCAT have a partnership, they will be combining the sponsor meetings with them twice a year; this meeting will be held in Minnesota in the fall.

Engstrom noted that Alabama will not be leading NCAT's pooled fund in the future – Minnesota will likely take this over. MnDOT will keep NRRRA members updated as they move forward. Worel added that MnDOT and NCAT are still determining how information will be housed about progress at both facilities, but noted that there will be links available to the NRRRA website on MnDOT's main page.

## **Membership and Structure**

### ***Roles and Responsibilities/Membership Levels***

Engstrom walked through the overall structure of NRRRA. There will be an Executive Committee overseeing NRRRA made up of pooled fund members who have contributed at the \$150,000/year level. Minnesota and Michigan have committed at this level for 2016-18; Wisconsin has committed for 2016 and will commit further if funding is available. Underneath the Executive Committee, NRRRA Project Teams focused on research, communication, and tech transfer will be made up of Associate and Academia members (who contribute at \$2,000/year) as well as interested Executive Committee members. Each membership group would have a three-year commitment.

Worel is leading the effort to increase commitments beyond MN, MI, and WI: he has sent out letters to every state DOT and have had targeted communications with certain states, as well. Linda Taylor noted that there will be a large marketing effort at, TRB, as well. CTC Consultants are assisting MnDOT with marketing to groups, as well. Engstrom noted that, while NCAT is not currently a member of NRRRA, he anticipates this changing in the future.

### ***Return on Financial Commitment***

Engstrom noted that groups committed to the group at the \$150,000/year membership level will be able to lead the research efforts; lead the communication of the results; lead technology transfer; and have travel to conferences and meetings taken care of. Those who commit at the \$2,000/year level will be able to hear about the research taking place and help develop technology transfer and communication of the research taking place.

### ***Tech Transfer Plan***

Jim Grothaus led a discussion about technology transfer with the group by walking through the attached NRRRA Technology Transfer Ideas document. The Center for Transportation Studies has developed a number of ideas for tech transfer possibilities based on some of the work done with the Minnesota Local Technical Assistance Program (LTAP), including state member webinars; peer exchanges; video development; TRB-focused webinars; and conferences. NRRRA can aim to connect with LTAPs in other states to reach local interests, as well.

Corrigan noted that the local government link – in both membership and tech transfer activities – should be stressed in NRRRA's materials.

## **Schedule**

Van Deusen talked through the proposed schedule of NRRRA's next steps (attached). Major milestones include a National Webinar on January 8<sup>th</sup>; a meeting of all members on February 17<sup>th</sup> held in conjunction with the NRRRA Pavement Conference on February 18<sup>th</sup>; and an NRRRA summer meeting in August. A deadline for membership commitments will be put in place sometime between February and April. The ultimate goal will be to have projects designed by September 2016. Worel noted that determining the specifics of the relationship between NCAT and NRRRA is still in progress, so NCAT meetings are not yet included in the schedule. Additionally, the process for academia and associate members to join is still being worked out through the MnDOT legal team – Worel noted that this should be set up within the next month or so.

## **Discussion**

Meeting attendees shared their thoughts and questions on NRRRA and the future of MnROAD research. Questions and comments included:

- Corrigan noted that many associate members had funding invested in TERRA, and wanted to make sure that TERRA-associated projects – such as the STIC-funded research – would be completed.
- Bob Orthmeyer noted that the new federal transportation bill will help move this initiative forward, and noted that technology deployment is crucial.
- Dave Rettner suggested MnDOT add specific projects that correspond to the savings per year from MnROAD projects in Phase II (slide 15).
- Stephanie Malinoff felt that the group was moving in a good direction, and encouraged providing more information about benefits and ways to participate to academic and associate members.
- Mitch Rasmussen noted that it would be important for other states to see how this research could be included in their local system and how they could get universities and industries involved in their area. Mark Maloney and Mike Sheehan echoed Rasmussen's comments.
- Dan Staebell noted that it's important to define implementation clearly in order to show some of the successes. He also suggested clarifying what the word "sustain" refers to in the NRRRA tag (the tag "Develop -> Collaborate -> Research -> Implement -> Sustain." can be seen at the bottom of the slides). Dan Schellhammer echoed Staebell's comments about implementation.
- Schellhammer noted that construction and research at MnDOT should be melded together better, and noted that construction's involvement in NRRRA could be valuable.
- Brandon Brever emphasized the importance of marketing the group and the research at different events and conferences.
- Andrew Cascione asked for clarification on the length of the construction and data collection cycles. Worel noted that MnROAD will try to balance accelerated and long-term research, and clarified that all test cells will be open for construction for Phase III.
- Staebell also requested highlights and/or information that associates could bring back to their organizations to justify joining NRRRA.

Daubenberger and Engstrom thanked the group for attending and closed the meeting.