

Meeting Minutes: NRRA Intelligent Construction Technologies (ICT) Team

(Agency & Associate Member Meeting)

Date: April 1, 2021
 Minutes prepared by: Rebecca Embacher
 Location: Microsoft Teams
 NRRA Team Webpage: <http://www.dot.state.mn.us/mnroad/nrra/structure-teams/intelligent-construction/index.html>

Attendance

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Other Attendees: Jim Schneider (MnDOT), Raul Velasquez (MnDOT), Zueb Zavery (NYDOT)

Decisions Made

- Agreed on submitting only top 3 priorities to executive team for funding consideration.

Action items

- Submit idea form document to Worel by April 16th.

Agenda

- General NRRA Phase II Funding Updates
- Review Idea Form for Top Priorities

Next Meeting

Date: May 6, 2021
 Time: 10:30-11:30AM Central Time
 Location: Microsoft Teams
 Agenda items: TBD

Meeting Notes

NRRA Phase II Update (Worel)

Team Efforts

- Each team has a little different variations on the process to get their 4-5 ideas pulled together.
- Team research leaders will provide more information on their individual system being used as needed.
- Focus is on 2022 MnROAD construction research but its ok to have non-MnROAD mainline research also in your top-5

Timelines

Finalize Team Top Ideas	April 1 and 7 – NRRA Team Monthly Meeting <ul style="list-style-type: none"> • Geotech-ICT Meetings April 1st • Flex-Rigid-PM Meetings April 7th • NRRA teams develop/finalize 2-pagers April 16 – Teams send in top 4-5 ideas to Ben Worel April 17-21 – MnROAD Staff combine into one set for EC April 22 – MnROAD staff share ideas from teams to the EC
Executive Committee	April 27 <ul style="list-style-type: none"> • Executive Team meeting to fund projects

Updated Idea Form

Updated with feedback from the teams – it is attached.

- Remember these are ideas that RFP’s will be based on (everyone can participate in the research RFP)

- Focus the 2-pager on the research studies
 - Basic Idea / Study Needs
 - Highlight Partnerships on cost sharing/getting groups involved
 - Construction, instrumentation, and MnROAD monitoring
 - Do not need these costs in the proposal

ICT Team Idea Form Review (Embacher)

Reviewed the idea forms that were created for the top 3 priorities. Did not create a form for top priorities 4 and 5 due to the large budget that will be already needed for the top 3 priorities.

Priorities 1 and 2 were combined into one idea form (e.g., Veta Web and MDMS). Priority 3 (AMG Milling/Paving) was included in a separate document.

Quotes are to be generated for the 3 activities and will be ready for submittal soon.

Dielectric Profile System Update (Cooper and Hoegh)

Focus on data analysis when using technology on construction projects. Focused on ensuring data is of good quality and able to evaluate given spots on pavement to filter data to given area to allow for a summary of what is being measured.

A DPS implementation workshop is scheduled for April 20-21, 2021. Contact Steve Cooper if interested in attending.

Two Pre-workshop webinars, with a smaller audience, are being held. The first one was on March 31st, while the second is scheduled for April 14th. Currently, they are not opening these meetings up to larger groups. Again, this information will be covered in the implementation workshop on April 20-21st, where all are welcome to attend.

A pooled fund update will be held on April 6th.

NRRA Flexible and Geotechnical Committee Updates

Flexible Committee (Vrtis)

Overarching theme – reflective cracking and perpetual pavements.

Trying to better replicate asphalt construction through reflective cracking scenario. Fill saw cuts with sand to simulate cracking.

10 test sections. 3-5 MnROAD/NCAT additive study (recycled asphalts, fiber, rubber); regional focused mixes (e.g., super-pave 5, varying PG grading, etc.)

Deep strength asphalt – instrument test sections in Eau Claire, WI. Deep strength design and perpetual pavement design. 12” asphalt designed using AASHTO layer coefficient. Perpetual – put strain limitation at bottom of asphalt. Sensors will be instrumented in the test sections (e.g., environmental, strain gauges, pressure plates, etc.).

SFDR cells at MnROAD that have performed well. Cells 2-3 for 13 years. Cell 4 needs deeper fix. Mill all asphalt treated layers off, put to side. Address fly ash layer. Do CCP mix with RAP on side. Perpetual pavement. Instrumentation down to base.

Geotechnical Committee (Velasquez)

22 project ideas from members. Top item is “Use of IC for QA for base/subbase/subgrade construction assessing spatial variability of stiffness and moisture.”

ICT team informed Raul of the on-going research with federal highway to evaluate whether IC can be used to assess whether ICMV (stiffness) has met target, along with evaluation of uniformity of foundation. Additionally, shared the current efforts of the NRRA Level 3/4 IC study and upcoming continuous moisture measurement study. Recommended additional discussions be held to ensure that future efforts work off findings of these studies, in lieu of running in parallel.

Remaining NRRA Phase I Contracts (Dao)

Contracts went out 6 weeks ago and are in process. Please let Lauren know if there are any changes to the contact that would be signing the contracts to ensure faster contract execution. Survey coming out soon regarding whether fall NRRA meeting should be in-person or virtual.

Discussions are occurring regarding whether Linked-In group should be established.

Research pays off for April/May/June are on website. Welcome to forward on to others that may be interested.