

Meeting Minutes: NRRA Intelligent Construction Technologies (ICT) Team

(Agency & Associate Member Meeting)

Date: October 7, 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

Agency Members

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<input type="checkbox"/>	North Dakota	Nathan Haaland	

Other Attendees: Joseph Podolsky (MnDOT), Glenn Engstrom (MnDOT), Lynnette Steyn (Kittson County)

Decisions Made

- Finalizing MnROAD Reconstruction Construction / Testing Matrix

Action items

- Continue working on contract paperwork for projects approved for funding.
- Continue finalizing MnROAD Reconstruction Construction / Testing Matrix.

Agenda

- Minnesota Transportation Conference
- Working meeting discussing which ICTs to use during construction of the various Test Cells

Next Meeting

Date: November 4, 2021

Time: 10:30-11:30AM Central Time

Location: Microsoft Teams

Agenda items: TBD

Meeting Notes

Minnesota Transportation Conference (Engstrom)

Conference will be held March 1-2 and in-person. The NRRA meeting will be held at the same time, since the fall workshop was cancelled. The monthly committee meetings will also be held at this venue.

There will be some awards distributed.

NRRA will pay for travel expenses for Agency members to attend event.

The North America chapter of ISIC will also be holding their meeting at this conference as well.

Pre-liminary meetings have been held to discuss what the conference will look like.

NRRA & ISIC will have their own time slots during the conference.

Business meetings will be held the day before the conference.

In the past ~ 900 individuals have attended. NRRA and ISIC are new tracks to this conference this year, and therefore, anticipate that the attendance will be greater.

Information regarding booths and equipment displays will be coming out soon.

The NRRA ICT team will be mainly connected to the ISIC track.

Vendor – booth or piece of equipment welcome.

Finalizing price for booths (booth prices will include registrations).

Equipment area. Space for upwards of 10 pieces of equipment. Looking into details of space for equipment & weight. Rubber track vs. steel track. In past, have brought in equipment as long as 50 ft.

Reminder for state agencies to start working on out of state travel. Engstrom will put together a document for use in out of state travel.

(Chang) Add a half day event on Feb. 28th and March 3rd to add for flexibility of travel.

(Kowalski) Requested an update on the latest changes to Veta. Discuss the changes, what they are for, who is involved, why the needed updates, how are these updates streamlining the process. Request for presentation of changes from 6.0 to 7.0 to go along with class.

(Chang) Every Veta release includes a note and list of new features, modified items and fixes.

NRRA Phase II Projects

RFP were sent out for the 8 projects. Anticipating RFPs to be posted by October 15th.

MnROAD Construction Plan Set

Contract in place for creation of plan set and drawings.

MnROAD staff is 90% complete with internal discussions for cell layouts.

MnROAD has previous MicroStation drawings to assist with plan set updates and development.

Kickoff meeting with consultant next week – for start of plan set.

FYI...Certain sensors need to be ordered within 1 month due to supply demand issues and delays in shipping.

ICT During MnROAD Construction (All – Working Group Discussion led by Emil Bautista)

Split table from last month via projects. Provided refresher on existing test cells and 2022 construction.

Team with through each technology to determine priority levels. See table below.

Test	Acronym	Lead	Protocol	HMA Related				Concrete Related				Unbound Related				Comments	
				Original Layer HMA	MA Milling	CIR Layer w/ Juvicator	CIR Layer w/o Juvicator	HMA Layer	Original Concrete	Concrete Removals	Grind	Paving	Reinforced PCC	PCC Panel placement	Base Removals		Ext. Clay Subgrade
Traffic Speed Deflectometer	TSD	Ben	P	2020													Completed couple of months after construction. Fall of 2022 then semiannually
Automated Machine Guidance - Grade Control	AMG-Grade Control	Rebecca	P														Unable to get LiDAR scan and 3D done before advertisement date
Automated Machine Guidance - Milling	AMG-Milling	Rebecca	SP	L													
Automated Machine Guidance - Paving	AMG - Paving	Rebecca	P														
Seismic / NRRRA Sweden	-	Jason	P														
Continuous Moisture Meter	CMM	Raul	P		L	L							H				Check w/ Soheil is device can be used in CIR
Asphalt Real-Time Smoothness	ARTS	John	P/CO														
Low Nuclear Density	-	Raul	P		M	M							H				
Non-Nuclear Density	-	Raul	P		M	M							H				
Machine Drive Power	MDP	John	P		H	H							H				
Automated Plate Load Testing	APLT	John	P/SP														
Concrete Real Time Smoothness	CRTM	Maria	P							L	L						Need to hear back for go from folks on availability and cost
Wirtgen - Hamm H25IVC Roller	-	John	P														Concrete Contractors may not own the equipment
Vibration Monitoring	VM	John	P														Equipment availability needs to be confirm
Intelligent Compaction	IC	John	SP/P														Independent assurance. Depends on Wirtgen - Hamm H25 Roller availability
ICMV Level 3 and Level 4	ICMV Level 3 and 4	John	P		H/SP	H/SP	H/SP						H/P				Possibly tie to Level 3 and Level 4 study
Paver Mounted Thermal Profiler	PMTP	Rebecca	SP														
Material Delivery Management System	MDMS	Rebecca	SP														
Dielectric Profile System	DPS	Dai	I/SP														
3D Ground Penetrating Radar	3D GPR	Dai	I														
Falling Weight Deflectometer	FWD	Jacob	I	MnROAD	H	H	H	H	H	H	H						Talk to Curt Turgeon. P means only w/ partnership
Ride - Pathways / LISA	-	Jacob	I	MnROAD	H												Coordinate w/ contractor for dielectric puck testing
Light Weight Deflectometer	LWD	Raul	I														Test needs to be on same cell
Dynamic Cone Penetrometer	DCP	Raul	I														
2D Ground Penetrating Radar	2D-GPR	Dai	I										NA/L				
Thermal Profiler/IV FLIR	TP/IV FLIR	Rebecca	I														Test needs to be on same HMA cell
Nuclear Gauge	-	Raul	I	MnROAD	M	M	M										
Sand Cone	-	Raul	I														
Laser Scanning	-	?	I														
HMA Lab Modulus	-	Dai	I	AASHTO T342													
Base Lab Modulus	-	Dai	I	NCRHP 1-28A													Collect material during construction for post testing. (10-37 protocol/Soheil)
Subgrade Lab Modulus	-	Dai	I	NCRHP 1-28A													Collect material during construction for post testing. (10-37 protocol/Soheil)

I = Internal
P = Partnership
SP = Special Provision
CO = Change Order
H - High Priority
M - Medium Priority
L - Low Priority
NA - Not Applicable