

# National Road Research Alliance Meeting

## Draft Meeting Minutes (in RED) – December 15, 2017

### 1. Welcome

- a. Agencies attending the meeting – CA, IL, WI, MO, MI, MN, LRRB

### 2. Pooled Fund Status

- a. Membership (6 states and 40+ associates)
  - i. Steve Bower (Michigan is retiring this month – Thank you Steve for all your efforts over the years. NRRR letter of thanks needs to be sent and Michigan should find a replacement for him on the EC team)
- b. Timing
  - i. Current Start = 2/22/2016
  - ii. Current End = 9/30/18 (29 months or 2.41 years)
  - iii. Propose to extend to five years = 2/22/2021
    - 1. Extension approved by EC to 5 years ~ 2/22/2021)
    - 2. Allows for long term research to be done – note the research can go beyond the pooled fund as long as the money is encumbered before the pooled fund ends.
  - iv. Discussion on future (use table below)
    - 1. Discussion Funding for years 4 and 5 Phase-I
      - a. Discussion took place and team felt that money for years 4 and 5 should be discussed at the summer (May) meeting. At that time more of the current budget would be accounted for and we could have some additional time to think about what other activities would be needed.
      - b. EC also discussed Phase-II and the future. Right now no decision is needed on Phase-II and this can wait till year 4.
    - 2. Note pooled fund max is 5 years but obligated money can go over

Study	FY2016 (1)	FY2017 (2)	FY2018 (3)	FY2019 (4)	FY2020 (5)	2021 (6)	2022 (7)	2023 (8)
Phase-1	\$150	\$150	\$150	\$?	\$?			
Phase-2						\$?	\$?	\$?

### 3. NRRR Workshop/Conference/Travel Update

- a. May 23(workshop) – 24 (conference), 2018
  - i. EC team liked the format of the 2017 effort and suggests the same for this year.
- b. TRB Meeting - Meeting Room – Thursday January 11th (8am-12 noon)
  - i. Format (updates from states, pick a topic, last hour States only, .....)
  - ii. EC team suggested topics to include construction update, Team Updates from team leads, status of the pooled fund, and status of the research efforts/goals. MnDOT will be developing an agenda for the meeting and get the speaker's setup.
- c. TRB Travel Funds from NRRR (4 travelers accepted – CA, 2 IL, WI)
- d. Other meetings / issues / Discussion

### 4. Team Meetings

- a. Teams currently meeting 1 every month
  - i. EC suggested the technical teams meet 1 every two months since the TAPs for the short and long term research will start to meet more on the individual efforts.
- b. EC meetings 1 every 2 months
  - i. EC ok with this
- c. TAP members (attached)

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### 5. Long and Short Term Contract Status

- a. Roughly ½ contracted and ½ will be by Feb 1<sup>st</sup> 2018 (so three years to Feb 2021)
- b. Summary of the contracts and TAP members (Attached – after the notes)

### 6. Budget Overview

- a. Overall Funding ~ \$2,760,000
  - i. \$2,450,000 SPR
  - ii. \$150,000 WI – non-SPR
  - iii. \$160,000 (40) Associates
  - iv. \$3.1 million Construction (MnDOT)
- b. Spending Overall SPR
  - i. 2017 Q1 - \$15,180 + \$ 108,711.50 (MnDOT Donated Field Efforts)
  - ii. 2017 Q2 – \$26,875 + \$ 251,448 (MnDOT Donated Field Efforts)
  - iii. 2017 Q3 - \$653,647 + \$ 326,971 (MnDOT Donated Field Efforts)  
MnDOT Support Donation does not include TAP membership / Team Efforts  
Pooled fund quarterly reports show the costs and are posted on the [pooledfund.org](http://pooledfund.org) website.
- c. Proposed Changes Spreadsheet Discussion
  - i. Discuss Spreadsheet (attached)
  - ii. EC team went line by line through the budget spreadsheet. Ben noted that more information would be shared in the future when costs/accounting was discussed with others within MnDOT in the next month.
  - iii. EC teams did react to the following related to the budget spreadsheet.
    1. R1.3 Inspection Labor Costs MnDOT
      - a. MnDOT (Glenn) will pay the \$30,749 overrun of costs due to the long construction duration.
    2. R1.4 MnROAD Field Monitoring Labor Costs MnDOT
      - a. MnDOT (Glenn) will pay the \$40,940 overrun of costs due to the long construction duration.
      - b. EC did agree to provide \$120,000/year (2 years) for future labor costs for collecting data from the field at MnROAD.
    3. R1.8 Compacted Concrete Pavement Construction
      - a. The Rigid Team is going to get an estimate for the work for the spring 2018 and see if the costs are lower for Andale Construction. Andale said they can now use a plant to mix the PCC which reduces their costs. EC team wants the rigid team to get an estimate and tell the EC if it's a PCC priority and worth the investment. Right now we have \$50K in the budget for construction and R1.16 Compacted Concrete research for \$80K.
    4. R1.9 and R1.13 Diamond Grinding is not going to be done. This money is open for other opportunities. Maybe Compacted PCC if it's a priority but this needs to be weighed with other future needs also.

### 7. Adjourn

- a. Upcoming meetings include
  - i. January 11@TRB – Check on computer link
  - ii. May 23-24 @Minnesota – Workshop and Pavement Conference.

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### TAP Members - NRRRA Short Term Technology Transfer Topics

SRF Consulting under contract - Ben Worel (MN is the TL)

NRRRA Team	Title	TAP Members (Updated Sept 18 <sup>th</sup> )			
Flex	Tack Coats	Randy West(NCAT) Eshan Dave (UNH)	Zhanping You (MTU) Ed Johnson (MN)	Jill Thomas (MAPA) Jim Trepanier (IL)	Dan Wegman (Braun)
Flex	Longitudinal Joint Construction Performance	Randy West (NCAT) Eshan Dave (UNH) Jim Trepanier (IL)	Ed Johnson (MN) Tim Clyne (MN)	Jill Thomas (MAPA) John Garrity (MN)	Zhanping You (MTU) Curt Turgeon (MN)
Rigid	Design and Performance of Concrete Unbonded Overlays	Jim Wilde (MSU) Matt Zeller (CPAM)	Zhanping You (MTU) Tom Burnham (MN)	Charles Wienrank (IL) Tim Andersen (MN)	Maria Masten (MN)
Rigid	Repair of Joint Associated Distress Pavements	Mark Gawedzinski (IL) Matt Zeller (CPAM)	John Roberts (IGGA) Gordy Bruhn (MN)	Tom Burnham (MN) Ed Johnson (MN)	Maria Masten (MN)
Geo	Larger Subbase Materials	Sheila Beshears (IL) Dan Wegman (Braun)	Terry Beaudry (MN) James Bittmann (MN)	Ed Johnson (MN) Tim Andersen (MN)	
Geo	Subgrade Design for New and Reconstructed	Sheila Beshears (IL) Dan Wegman (Braun)	Terry Beaudry (MN) Ed Johnson (MN)	Chris Dulian (MN) Tim Andersen (MN)	
PM	Surface Characteristics of Diamond Ground PCC Surfaces	Robert Green (MI) John Roberts (IGGA)	Matt Zeller (CPAM) Zhanping You (MTU)	Jim Wilde (MSU) Maria Masten (MN)	
PM	Pavement preservation approaches for lightly surfaced roadways	Mark Gawedzinski (IL) Kevin Kliethermes (FHWA)	Dan Wegman (Braun) Zhanping You (MTU)	Eshan Dave (UNH) Jim Wilde (MSU)	Ed Johnson (MN) Jerry Geib (MN)

### TAP Members - NRRRA Long Term Research Status

NRRRA Team	Title	Contract Status	TAP Members (Updated Sept 18 <sup>th</sup> ) (MnDOT TL Underlined) (Review Team Highlighted)		
Flex	<b>HMA Overlay of PCC &amp; Methods in Enhancing Compaction</b>	<b>University of New Hampshire</b> Finalized workplan - Expected Feb 1 <sup>st</sup>	<u>Shongtao Dai (MN)</u> Charles Wienrank (IL) Kevin Kennedy (MI) Barry Paye (WI) Daniel Oesch (MO)	Randy West (NCAT) Zhanping You (MTU) Andy Cascione (Flint Hills) Tom Burnham (MN) Ed Johnson (MN) Chris Dulian (MN)	James Bittmann (MN) Jill Thomas (MAPA) Tim Andersen (MN) Cody Brand (MN) John Garrity (MN) Jerry Geib (MN)
	<b>Cold Central Plant Recycling</b>	<b>American Engineering and Testing</b> Finalized workplan - Expected Feb 1 <sup>st</sup>	<u>Dave Van Deusen</u> Randy West (NCAT) Andy Cascione (Flint Hills)	Curt Turgeon (MN) Ed Johnson (MN) Zhanping You (MTU)	Barry Paye (WI) Terry Beaudry (MN)
Rigid	<b>Fiber Reinforced Concrete Pavements</b>	<b>University of Minnesota Duluth</b> Contracted -1003325(wo56)	<u>Tom Burnham (MN)</u> John Donahue (MO)	Chris Dulian (MN) Maria Masten (MN)	Tim Andersen (MN) Matt Zeller (CPAM)
	<b>Early Opening Strength to Traffic</b>	<b>University of Pittsburgh</b> 1003327 (wo3) - Expected Dec 2018	<u>Bernard Izevbekhai (MN)</u> Matt Zeller (CPAM)	James Krstulovich (IL) Tom Burnham (MN)	Maria Masten (MN) Jim Wilde (MSU)
	<b>Optimizing the PCC Mix Components</b>	<b>Iowa State</b> Expect Dec Contract	<u>Bernard Izevbekhai (MN)</u> Tumer Akakin (ARM)	Brett Trautman (MO) Curt Turgeon (MN)	Maria Masten (MN) Matt Zeller (CPAM)
Geo	<b>Recycled Aggregates and Larger Subbase Materials</b>	<b>Iowa State</b> 1003320 (wo2) Expect Dec 2018 Contract Start	<u>John Siekmeier (MN)</u> Deepak Maskey (CA) Sheila Beshears (IL)	Ed Johnson (MN) James Bittmann (MN) Tim Andersen (MN)	Jeff Horsfall (WI) Richard Endres (MI) Thomas Fennessey (MO)
PM	<b>Maintaining Poor Pavements</b>	<b>SRF Consulting</b> Contracted 1029360	<u>Jerry Geib (MN)</u> Cody Brand (MnDOT D8) Elliot Keyes (MN) Andrew Hanz (Mathy) Robert Green (MI)	Ed Johnson (MN) James Bittmann (MN) Tim Andersen (MN) Mark Gawedzinski (IL)	Timo Saarenketo (RoadScanners) Dan Wegman (Braun) Kevin Kliethermes (FHWA)
	<b>Partial Depth Repair</b>	<b>Braun Intertec</b> Finalized workplan - 1029497 Expect Dec 2018 Contract Start	<u>Jerry Geib (MN)</u> Mark Gawedzinski (IL) Maria Masten (MN)	Tom Burnham (MN) John Roberts (IGGA) Gordy Bruhn (MN)	Timo Saarenketo (RoadScanners) Eshan Dave (UNH)

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Line Item Budget Discussed Today

### NRRA Spending Budget - NRRA December Meeting

NRRA Focus	Effort Type	Item (Letter.#)	General Outcome / Deliverable	Funding Total	Approved Date	Current Funding					Costs Estimate - 2017 Q3					Comment	
						SPR	Partner ships	FWHA Grant	MnDOT STIP	MnDOT	SPR	Partner ships	FWHA Grant	MnDOT STIP	MnDOT		
5% (M) Marketing	MnDOT Labor	M1.1	(Website, Monthly Newsletter, Written Documents/Marketing work)	125,000	Jan 17	125,000	-	-	-	-	56,487	-	-	-	-	ok	
	MnDOT PO	M1.2	Promotional Items / Printing Costs	5,000	Jan 17	-	5,000	-	-	-	-	-	-	-	-	ok	
30% Tech Transfer (T)	MNDOT PO	T1.1	Agency travel / meals / meeting room costs	115,000	Jan 17	115,000	-	-	-	-	14,361	-	-	-	-	ok	
	TBD	T1.2	Communication (Written, Newsletter, video, Website)	40,000	Jan 17	40,000	-	-	-	-	-	-	-	-	-	Open	
	SRF	T1.3.1	Tech transfer write-ups (Consultant) - Topics Below	160,000	Jan 17	100,000	-	-	-	-	-	-	-	-	-	Contracted 100K	
	Remaining		Remaining Tech Transfer		Jan 17	60,000	-	-	-	-	-	-	-	-	-	Open	
	MnDOT	T1.3.2	Tech transfer write-ups (MnDOT Labor) - Topics Below	30,000	May 17	30,000	-	-	-	-	-	-	-	-	-	ok	
	Labor to do these State of Practice topics are listed in T1.3.1 (consultant) and T1.3.2 (MnDOT)	T1.3.3	Tack Coats														
		T1.3.4	Longitudinal Joint Construction Performance														
		T1.3.5	Design and Performance of Concrete Unbonded Overlays														
		T1.3.6	Repair of Joint Associated Distress Pavements														
		T1.3.7	Larger Subbase Materials														
		T1.3.8	Subgrade Design for New and Reconstructed														
T1.3.9		Surface Characteristics of Diamond Ground PCC Surfaces															
T1.3.10		Pavement preservation approaches for lightly surfaced roadways															
T1.3.11		Partial Depth Repairs of Concrete															
TBD		T1.4	Equipment	25,000	Jan 17	-	25,000	-	-	-	-	-	-	-	-	-	ok
65% Research (R)	MnDOT PO	R1.1	Sensor Purchase	159,130	Mar 17	159,130	-	-	-	-	147,024	-	-	-	-	ok	
	MnDOT PO	R1.2	Sample Buckets	4,000	May 17	-	4,000	-	-	-	81,149	-	-	-	-	ok	
	MnDOT	R1.3	Inspection (MnDOT)	81,149	Mar 17	50,400	-	-	-	30,749	50,400	-	-	-	30,749	ok	
	MnDOT	R1.4	MnROAD Staff - Construction, Sensors and Performance Monitoring	320,258	Mar 17	279,318	-	-	-	-	40,940	279,318	-	-	-	40,940	ok
			ACTION? Estimated at 120K/year		Dec 17?	-	-	-	-	-	-	-	-	-	-	Future Monitoring \$ 120K/year	
	AET Consultant	R1.5	PCC Sampling/Testing	80,000	May 17	20,000	5,000	-	-	-	-	-	-	-	-	-	Increased to 80K
			Additional Funding Approved		July 17	55,000	-	-	-	-	-	-	-	-	-	-	-
	TBD	R1.6	HMA Performance Testing	75,000	May 17	75,000	-	-	-	-	-	-	-	-	-	-	Working on
	Diamond Surfacing	R1.7	Partial Depth Repairs Construction (not in construction contract)	80,000	May 17	40,000	-	-	-	-	-	-	-	-	-	-	ok
		R2.7	Additional Funding Approved	-	July 17	40,000	-	-	-	-	-	-	-	-	-	-	-
	Not Done	R1.8	Compacted Concrete Pavement Construction (not in construction contract)	50,000	May 17	50,000	-	-	-	-	-	-	-	-	-	-	Spring 18?
			ACTION?		Dec 17?	-	-	-	-	-	-	-	-	-	-	-	-
	Not Done	R1.9	Diamond Grinding Construction (not in construction contract)	30,000	May 17	30,000	-	-	-	-	-	-	-	-	-	-	Reassign?
			ACTION?		Dec 17?	-	-	-	-	-	-	-	-	-	-	-	-
	UNH	R1.10	HMA Overlay and Rehab of Concrete and Methods of Enhancing Compaction	1,235,000	May 17	150,000	-	-	-	-	-	-	-	-	-	-	Contract
	AET Consultant	R1.11	Cold Central Plant Recycling	-	May 17	100,000	-	-	-	-	-	-	-	-	-	-	Contract
	UMD	R1.12	Fiber Reinforced Concrete Pavements	-	May 17	150,000	-	-	-	-	-	-	-	-	-	-	Contract
	Not Done	R1.13	Long Term Effects of Diamond Grinding	-	May 17	75,000	-	-	-	-	-	-	-	-	-	-	Reassign?
			ACTION?		Dec 17?	-	-	-	-	-	-	-	-	-	-	-	-
UofPitt	R1.14	Concrete Early Opening Strength to Traffic	-	May 17	150,000	-	-	-	-	-	-	-	-	-	-	Contract	
Iowa State	R1.15	Optimizing the Concrete Mix Components for Contractors	-	May 17	150,000	-	-	-	-	-	-	-	-	-	-	Contract	
Not Done	R1.16	Compacted Concrete Pavements for Local Streets	-	May 17	80,000	-	-	-	-	-	-	-	-	-	-	Spring 18?	
		ACTION?		Dec 17?	-	-	-	-	-	-	-	-	-	-	-	-	
Iowa State	R1.17	Recycled Aggregates in Aggregate Base and Larger Subbase Materials	-	May 17	225,000	-	-	-	-	-	-	-	-	-	-	Contract	
SRF	R1.18	Maintaining Poor Pavements	-	May 17	80,000	-	-	-	-	-	-	-	-	-	-	Contract	
Braun Inertec	R1.19	Partial Depth Repair	-	May 17	75,000	-	-	-	-	-	-	-	-	-	-	Contract	
FHWA Grant (G)	iEngineering	G1.1	Data - Website Interface	25,000	May 17	-	5,000	20,000	-	-	-	-	-	-	-	Working on	
		G2.1		(25,000)	July 17	-	(5,000)	(20,000)	-	-	-	-	-	-	-		
		G3.1		25,000	Nov 17	-	-	-	-	25,000	-	-	-	-	-		
Construction MnDOT	C.S. McCrossan	M1.2	MnDOT Funding of ~36 - 500' equivalent test cells	3,132,681	May 17	-	-	-	3,132,681	-	-	-	-	-	-	Done	
	Uretk	0	Uretk Funding	20,000	July 17	-	20,000	-	-	-	-	-	-	-	-		
						2,503,848	59,000	-						Total Funds	\$2,730,000		

PDF.