

Pavement Preservation Study - Phase III (PG3)

Pavement Preservation Group Study



Pavement Preservation Group Study

- Phases I & II
 - TPF-5(267) – Led by ALDOT
 - TPF-5(375) – Led by MnDOT
- Objective was to quantify the life-extending benefits of various treatments

PG Study Timeline

2023 End of Phase II 

2019 **70th Street**
North cold recycled treatments placed on 70th Street in Albertville/Otsego, MN



2015 **NCAT-MnROAD**
NCAT-MnROAD partnership is established.
Test sections placed on high-volume road (US-280) near Opelika, AL



2016 **Northern Sections**
North Treatments placed on CSAH 8 and US 169 in Pease, MN



2012 **Lee Road 159**
First test sections placed on low-volume county road in Auburn, AL



Phase II Sponsors



Current Status



145 Test
Sections



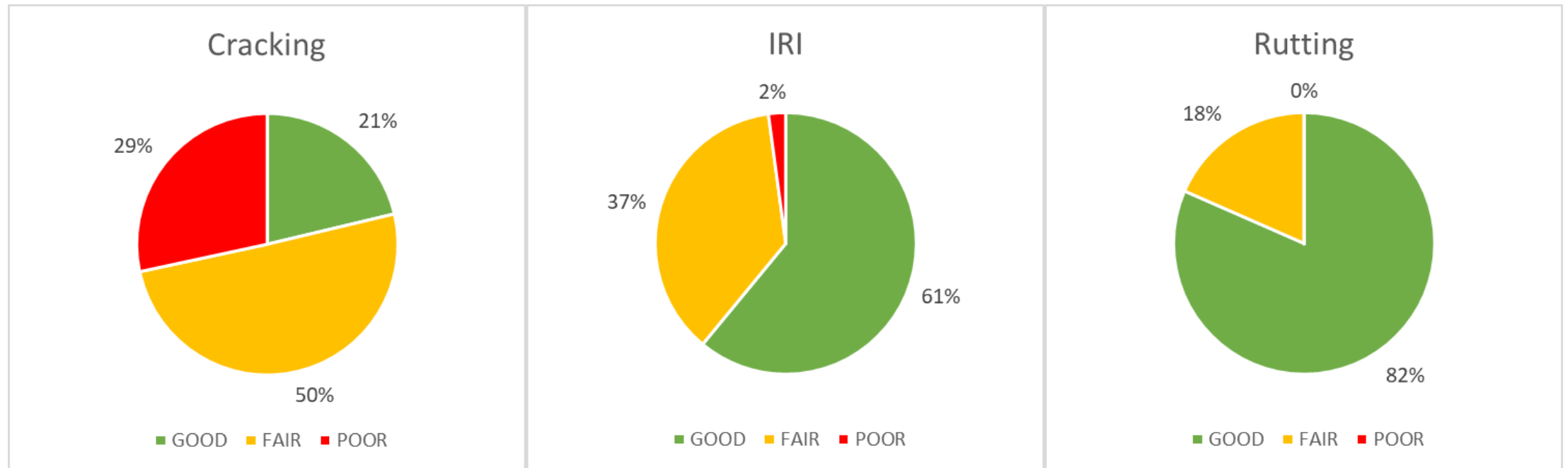
~13 lane
miles



>100 lane mile-
years worth of
data

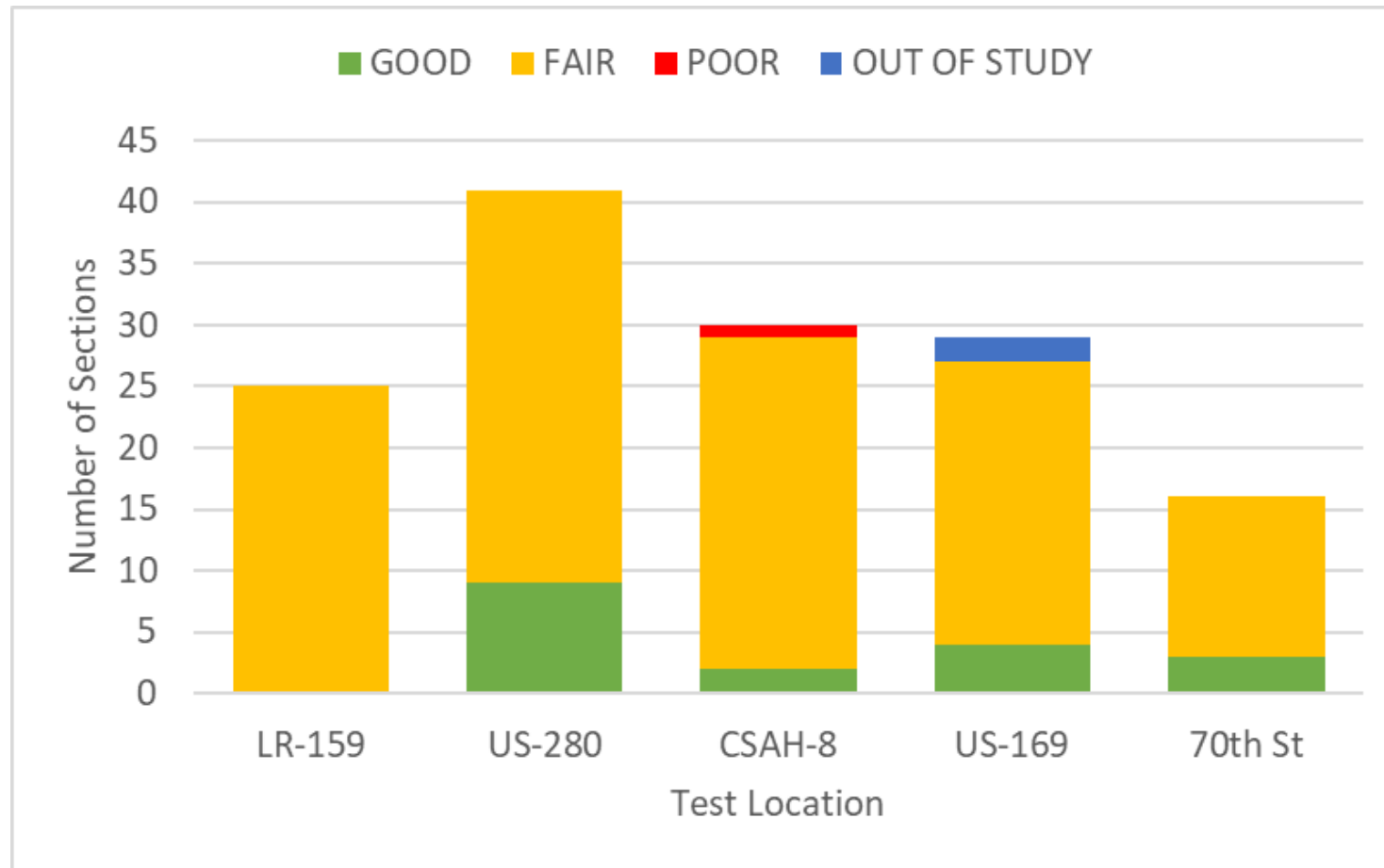
Phase II

- Condition category by performance measure



Phase II

- Overall condition category



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Treatment

- Crack sealing only
- Single layer chip seal** ✓
- Single layer chip seal with crack sealing
- Triple layer chip seal
- Double layer chip seal
- Cape seal

Condition

- Good** ✓
- Fair
- Poor

Time

0.0
0.5
1.0
1.5
2.0
2.5

MAIN PANEL

Treatments Location (Google Maps)

Single layer chip seal

IRI (in/mile) for Treatment

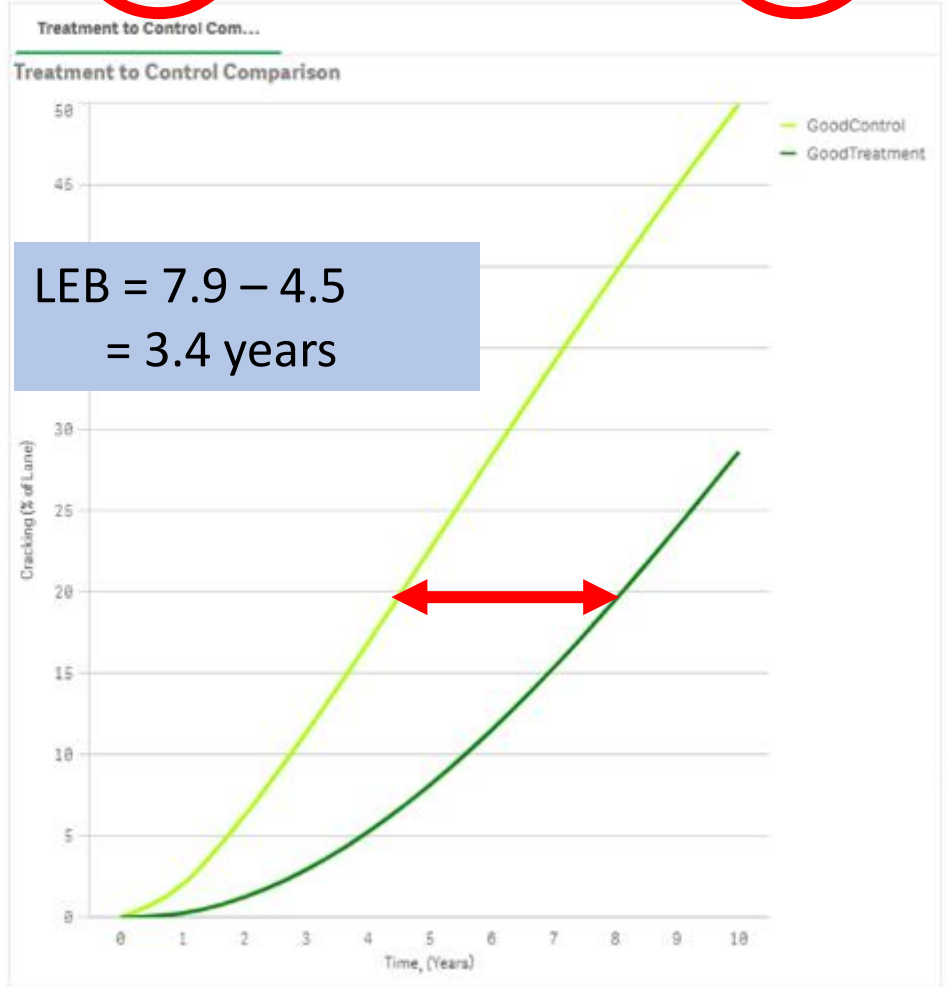
Rutting (mm) for Treatment



Time to Poor (Control) **4.5**

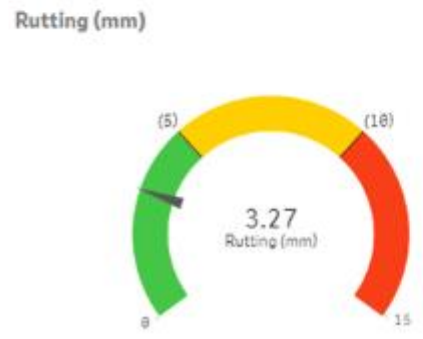
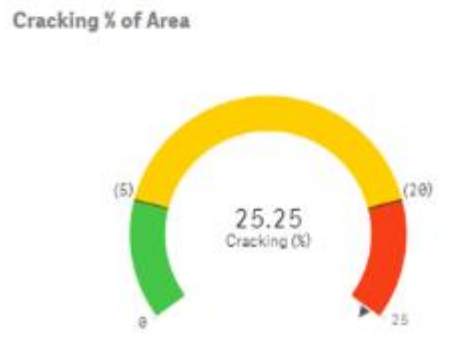
Crack Reduction (Average) **13.3**

Time to Poor (Treatment) **7.9**



Overall Section Condition

FAIR



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... [Close] [Check]

Search Treatment

- Cape seal (Microsurfacing over Chip Seal) ✓
- Double chip seal

Search Time

0.0

0.5

Treatments Location (Google Maps)

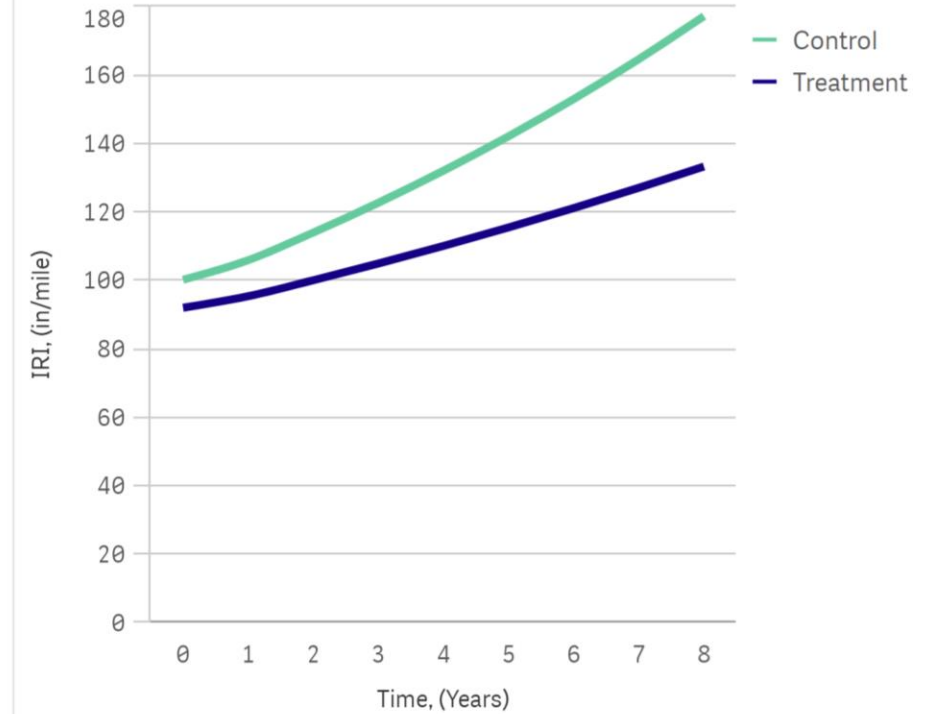
Cape seal (Microsurfacing ... Cracking (% area) fo... Rutting (mm) for ...



Time to Poor (Control) IRI Reduction (Average, in/mi... Time to Poor (Treatment)

7.2 24.5 8+

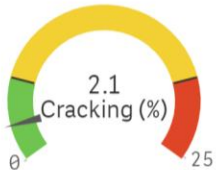
Treatment to Control Comparison



Overall Section Condition

FAIR

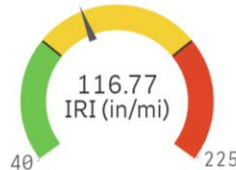
Cracking % of Area



Rutting (mm)



IRI (in/mile)



aub.ie/PG-webinars

Pavement Preservation Webinars

The NCAT-MnRoad PG Study Findings Webinar series is designed to discuss the construction, performance, and conclusions from our test sections, with a focus on implementation of findings. Below are the recordings of past webinars.

Crack Seal Webinar NCAT & MnROAD presents PG Study Findings Webinar Series

TOPIC: **CRACK SEAL**

for more information visit our websites
www.ncat.us
www.dot.state.mn.us/mnroad

Watch on YouTube

QR code with handwritten note "SCAN ME" pointing to it.

This promotional graphic for the Crack Seal Webinar features a yellow background with a green chevron pattern. At the top left is the NCAT logo and the text "Crack Seal Webinar". To the right are "NCAT & MnROAD presents" and "Watch later" and "Share" icons. The central text reads "PG Study Findings Webinar Series" followed by "TOPIC: CRACK SEAL" in large, bold letters. A laptop screen on the left displays the MnROAD and NCAT logos and "PG STUDY FINDINGS WEBINAR SERIES". A QR code is located at the bottom right, with a handwritten note "SCAN ME" and an arrow pointing to it. At the bottom, it says "for more information visit our websites www.ncat.us www.dot.state.mn.us/mnroad" and "Watch on YouTube".

Fog Seal Webinar NCAT & MnROAD presents PG Study Findings Webinar Series

TOPIC: **FOG SEAL**

for more information visit our websites
www.ncat.us
www.dot.state.mn.us/mnroad

Watch on YouTube

QR code

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Chip Seal Webinar NCAT & MnROAD presents PG Study Findings Webinar Series

TOPIC: **CHIP SEAL**

for more information visit our websites
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Watch on YouTube

QR code

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Micro Surfacing Webinar NCAT & MnROAD presents PG Study Findings Webinar Series

TOPIC: **MICRO SURFACING**

for more information visit our websites
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Watch on YouTube

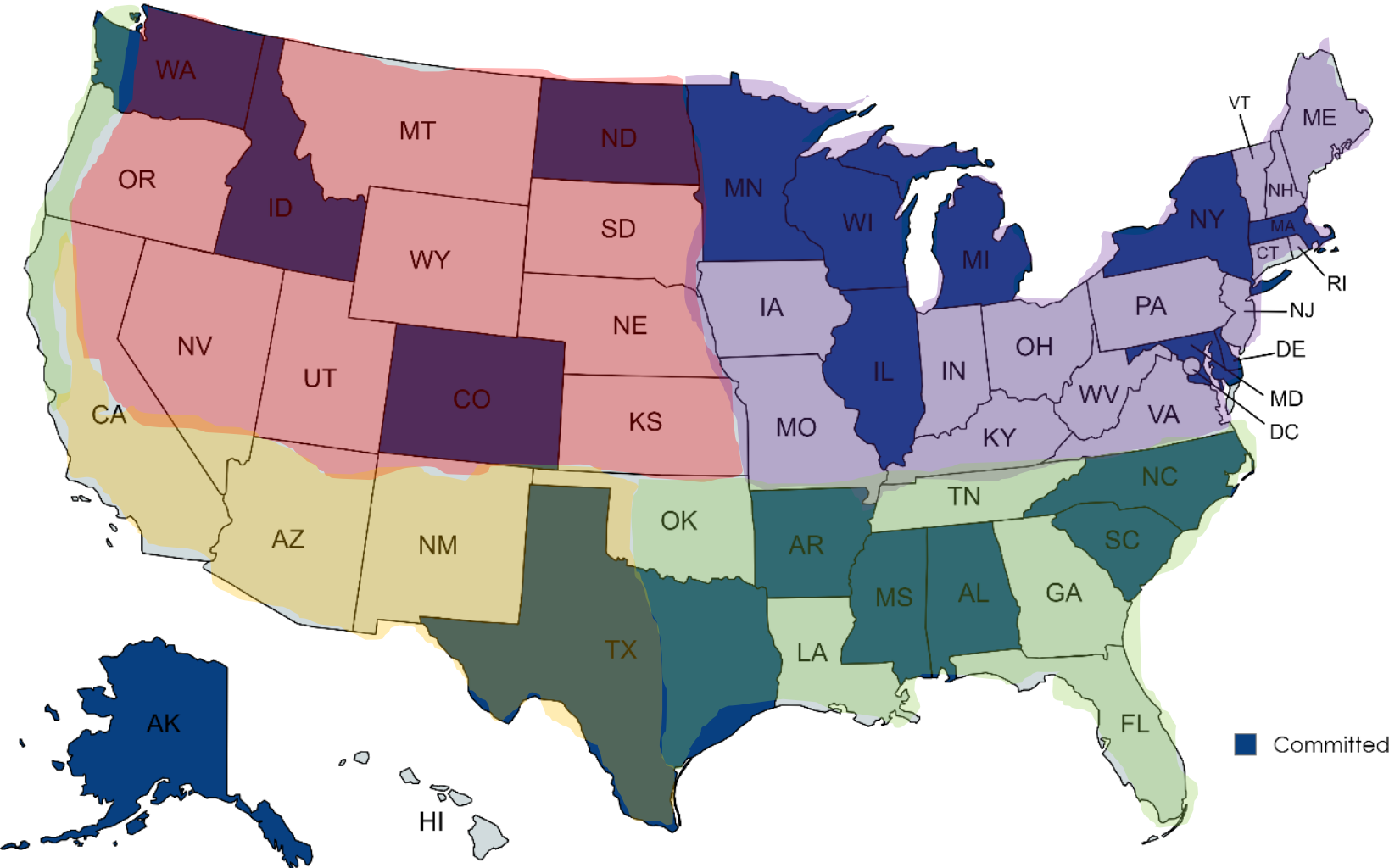
QR code

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A New Era

- Phase III
 - TPF-5(522) – Led by MnDOT
Improving the Quality of Pavement Preservation Construction and Data Collection Practices
- Focus on State Implementation / agency demonstration projects

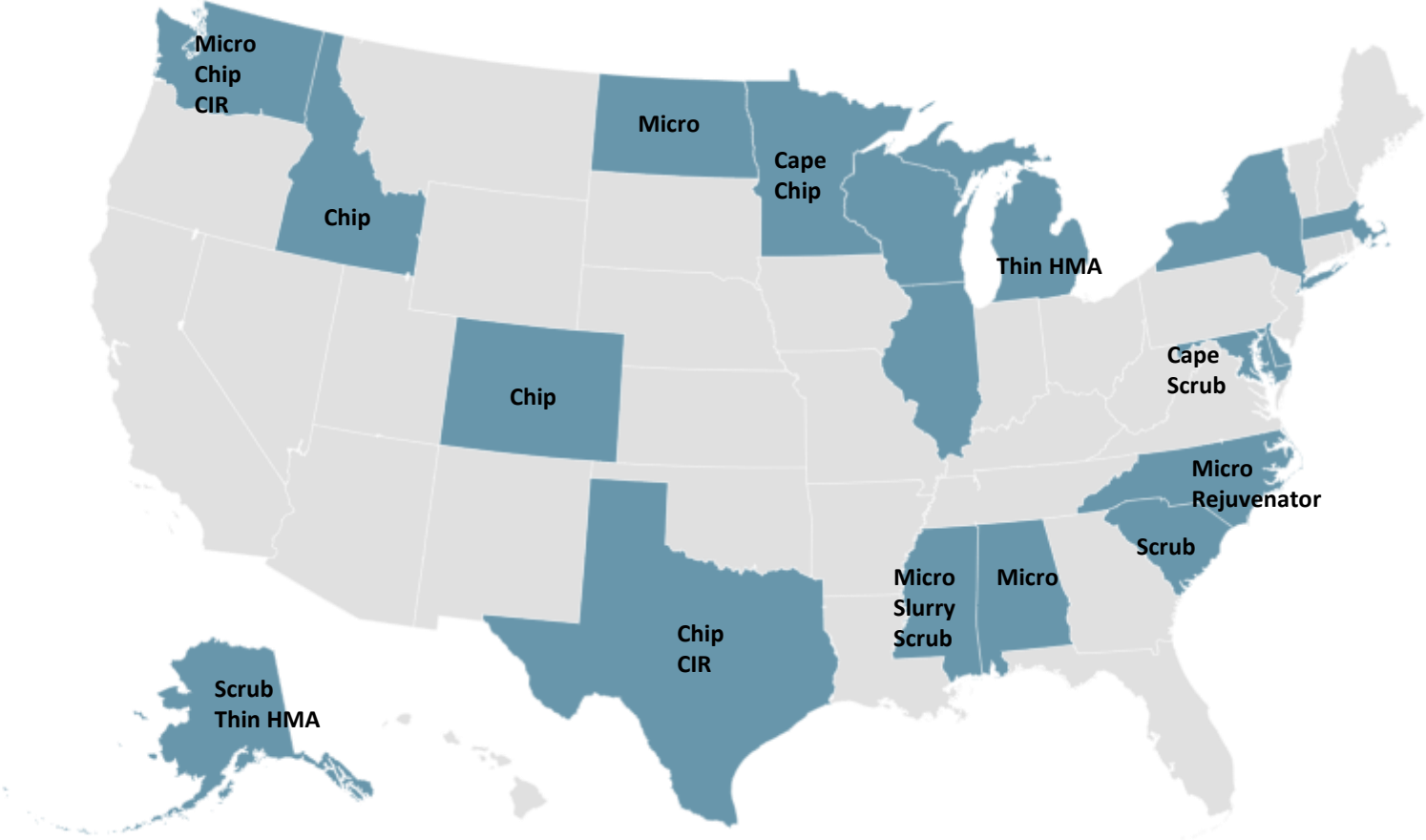
Phase III Sponsors



Phase III

- Two consultants
 - NCAT (research) and NCPP (implementation)
- Scope of work
 - Performance monitoring of existing sections
 - Technical assistance for the construction of new sections
 - Development and revision of reporting requirements
 - Performance monitoring of new sections
 - Outreach and dissemination of results

Possible Treatments



Process

Project section nomination

Section review/approval

Pre-construction: spec review, training

Construction: on-site tech support

Performance monitoring & analysis

Construction On-Site Support

- Detailed data collection
 - Materials
 - Application rates
 - Equipment
 - Practices
 - Issues
- Sampling

Data Collection & Analysis

- How do new sections compare to PG2 sections?
- Cover all climatic regions
- Data collection
 - Less frequent
 - Performed by each agency
 - Possible support from FHWA

Summary

- PG Study has been a significant effort
 - Promote pavement preservation
 - Data-driven
- Good results continue to draw support
- Industry is key partner
- More outreach, dissemination of results

Questions?