

# NCAT Preservation Findings



**MnROAD**  
Safe, Smart, Sustainable Pavements Through Innovative Research

# Track Accelerated Traffic Preservation



4.9 million ESALs !



# Track Micro Surface

6.8 million ESALS...

# Track Thinlay

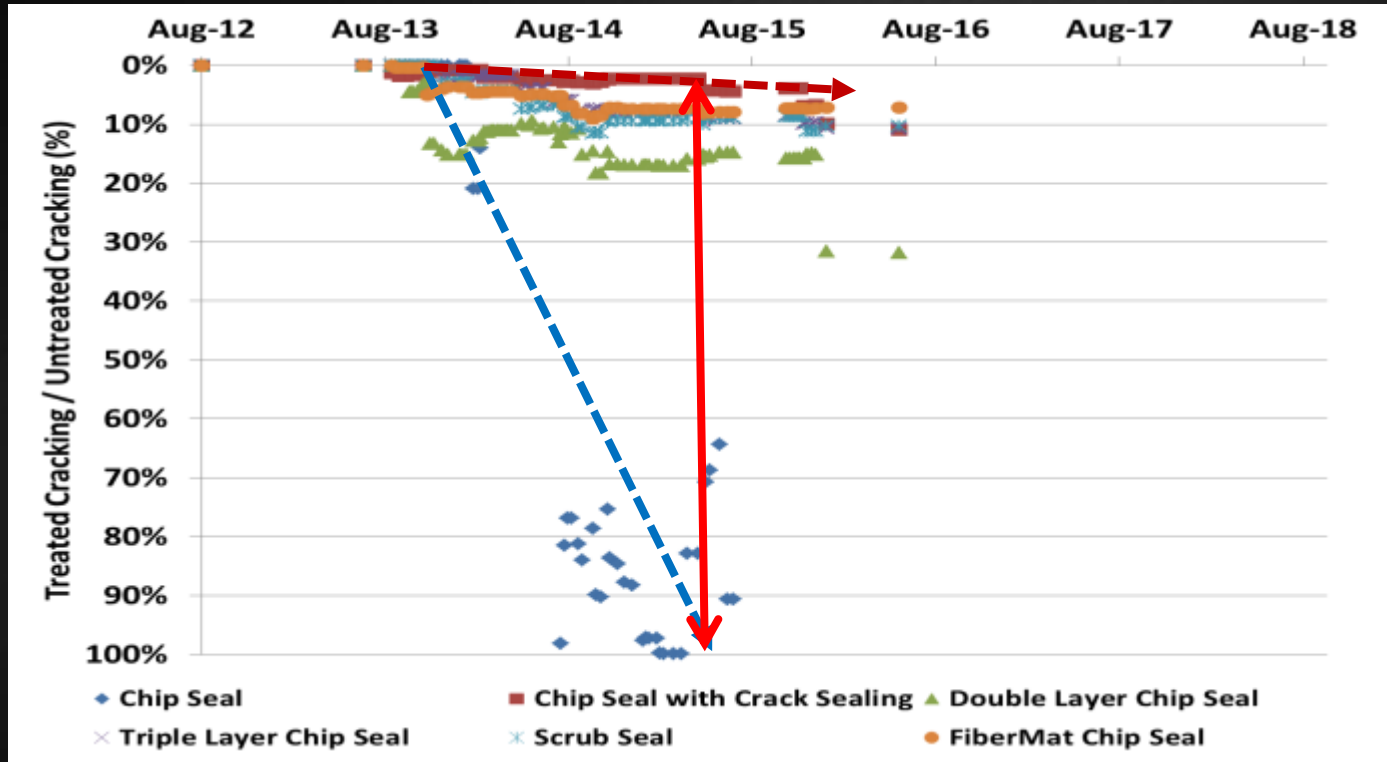
6.8 million ESALS...



# CR-159 Low Traffic Preservation



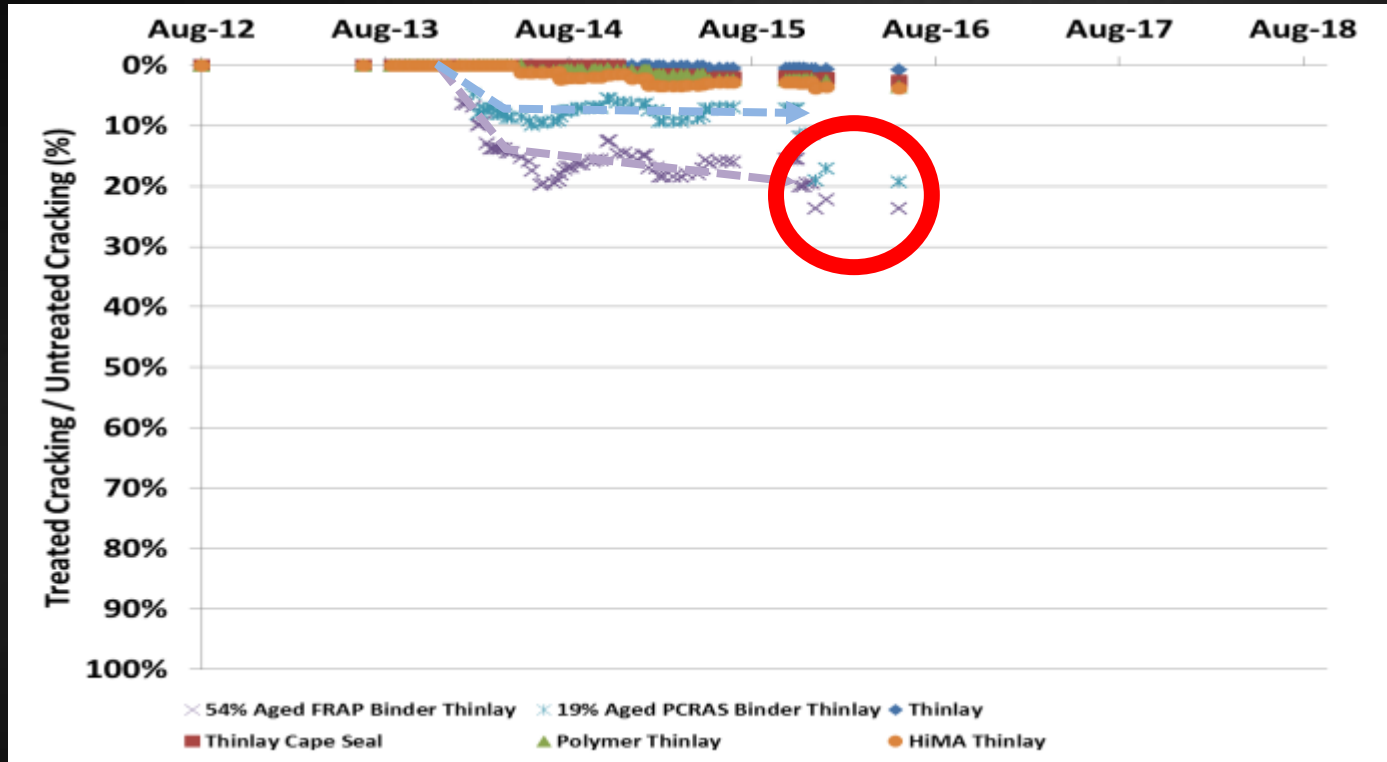
# CR-159 Low Traffic Chip Seals



# CR-159 Low Traffic Micro Surface



# CR-159 Low Traffic Thinlays





# CR-159 High Polymer Water Line Patch



# Observations from Lee Road 159

- Crack sealing
  - Significantly reduces cracks as standalone or in combination
- Chip seals
  - Least cracking in scrub/triple/FiberMat, then double, then single
- Micro surfaces
  - Less cracking in double layer/crack sealed, best in combination Capes
- Thinlays
  - No cracks in Cape/CCPR base sections, more in 50% F-RAP & 5% RAS
- Cape seals
  - Least cracking in scrub/Thinlay, then FiberMat, then chip

# US-280 High Traffic Preservation





# Untreated Cracks, Pumping<sub>128.0-128.5</sub>



# No Cracking in Virgin Thinlay<sub>128.5</sub>





# Double Micro Cracks, No Pumping<sub>128.6</sub>





# No New Cracks in Crack Sealing<sub>128.7</sub>



# Cracking, Pumping in Fiber Micro<sub>128.8</sub>





# No Cracks in HiMA Micro<sub>128.9</sub>





# (Rejuvenating) Fog Seals<sub>129.0-129.2</sub>



# Chip Seal with Crack Sealing<sub>129.3</sub>





# Chip Seal Cracks, No Pumping<sub>129.5</sub>





# Cracks, No Pumping Micro Surface<sub>129.7</sub>



# Cracks, Pumping in Scrub Cape<sub>130.0</sub>





# Cracks, Healing FiberMat Chip Seal<sub>130.4</sub>





# Bleeding in Triple Chip Seal<sub>130.5</sub>



# Flushing in Double Chip Seal<sub>130.6</sub>





# No Cracks in OGFC<sub>130.9-131.4</sub> or UTB<sub>132.4</sub>

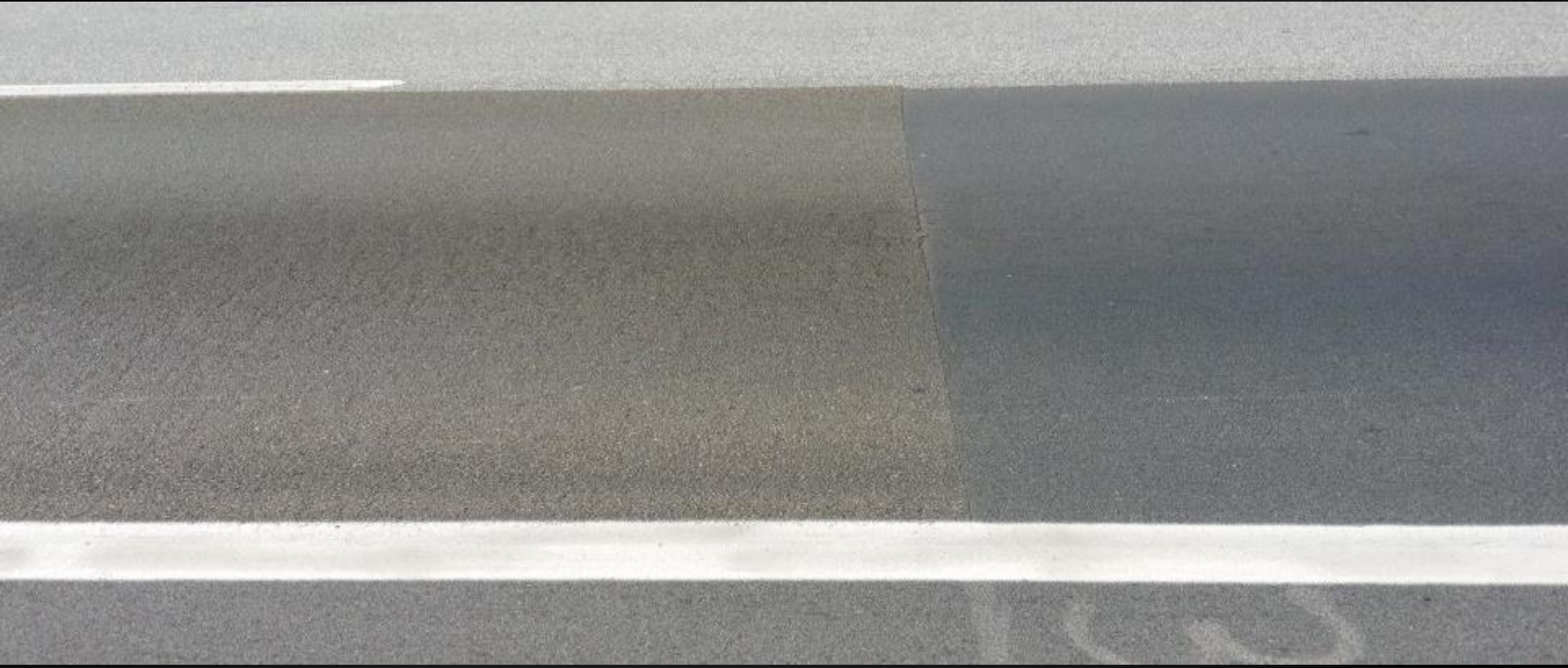




# Cracks, Pumping in Thinlay Scrub Cape<sub>131.4</sub>



# Friction Micro<sub>131.7</sub> on Thinlay<sub>131.8</sub>





# 100% RAP Cold Recycle Mix<sub>131.9-132.4</sub>



CCPR (KMA220)



CIR (3800CR)



# High Traffic Preservation on US-280

**OGFC from 130.9 to 131.4**

**Double Micro Surface from 130.7 to 130.8**

**Double Chip Seal from 130.6 to 130.7**

**Triple Chip Seal from 130.5 to 130.6**

**FiberMat Chip Seal from 130.4 to 130.5**

**FiberMat Cape Seal from 130.3 to 130.4**

# MnROAD Thinlays

Harddrives→EAP





# MnROAD Emulsion Treatments Vance Brothers







at AUBURN UNIVERSITY

MnROAD

Safer, Smarter, Sustainable Pavements Through Innovative Research

[www.ncat.us](http://www.ncat.us)

## **Dr. R. Buzz Powell, PE**

*Assistant Director & Test Track Manager*

277 Technology Parkway  
Auburn, AL 36830

Phone: (334) 844-6857

Cell: (334) 750-6293

Email: [buzz@auburn.edu](mailto:buzz@auburn.edu)

Web: [www.pavetrack.com](http://www.pavetrack.com)

Twitter: [www.twitter.com/pavetrack](http://www.twitter.com/pavetrack)