

2012 NCAT Pavement Test Track Pavement Preservation Study



at AUBURN UNIVERSITY

Midwest Pavement Preservation Partnership Meeting

November 12, 2013

Mary Robbins

Pavement Preservation

“A program employing a network level, long-term strategy that enhances pavement performance by using an integrated, cost-effective set of practices that extend pavement life, improve safety and meet motorist expectations”

- FHWA Pavement Preservation Expert Task Group

Pavement Preservation

“A program employing a network level, long-term strategy that enhances pavement performance by using an integrated, cost-effective set of practices that **extend pavement life**, improve safety and meet motorist expectations”

- *FHWA Pavement Preservation Expert Task Group*

2012 Preservation Group (PG) Study

- Quantify life extending benefit of study treatments
 - Time/traffic to return to pretreatment condition(s)
 - Test sections on the Track and Lee Road 159
- Sampling/testing for construction quality

PG Sections on Lee Road 159

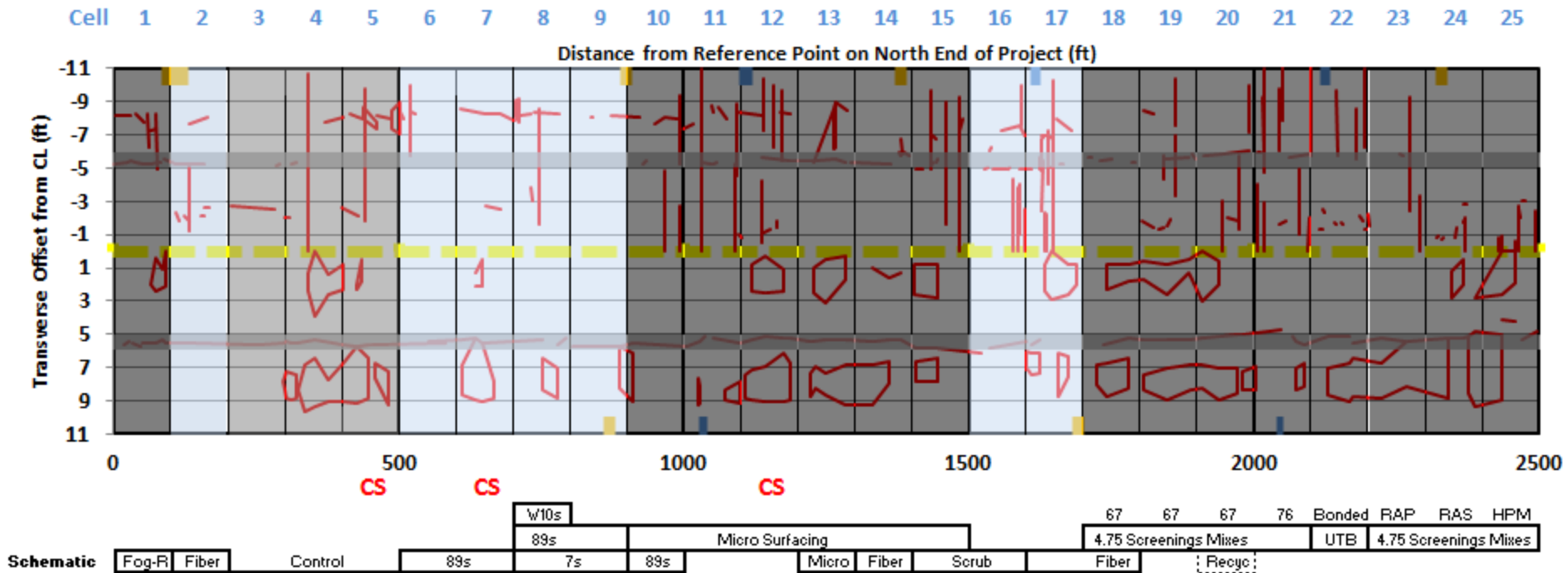
Martin Marietta Quarry

Asphalt Plant

Lee Road 159

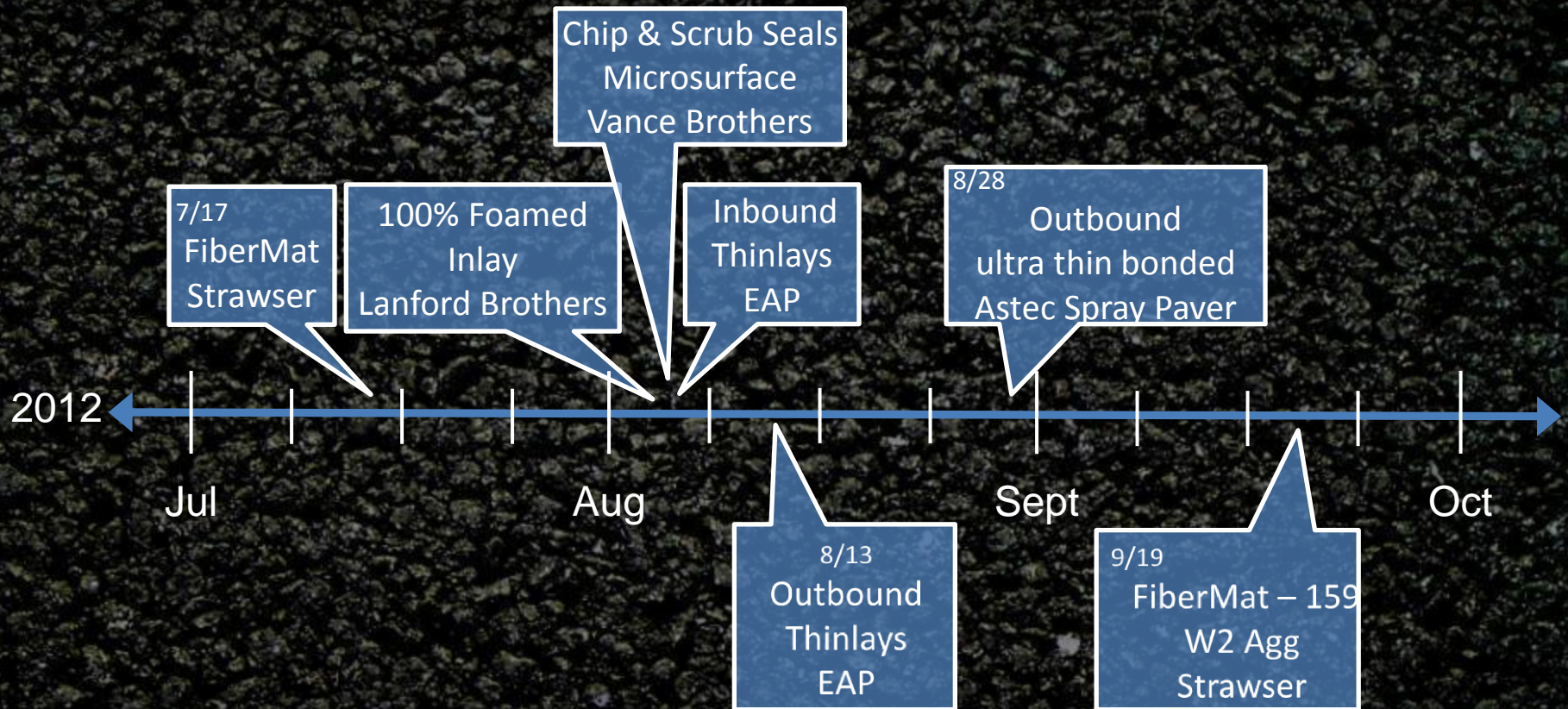
- Low ADT roadway
- Very high % trucks
- Load data provided by quarry and asphalt plant
- No traffic control needed for data collection

Final 159 Treatment Layout



- Preventive maintenance
- Routine maintenance
- Minor rehabilitation

Lee Road 159 Construction



Rates Checked Prior to Placement



Actual Rates Verified During Placement



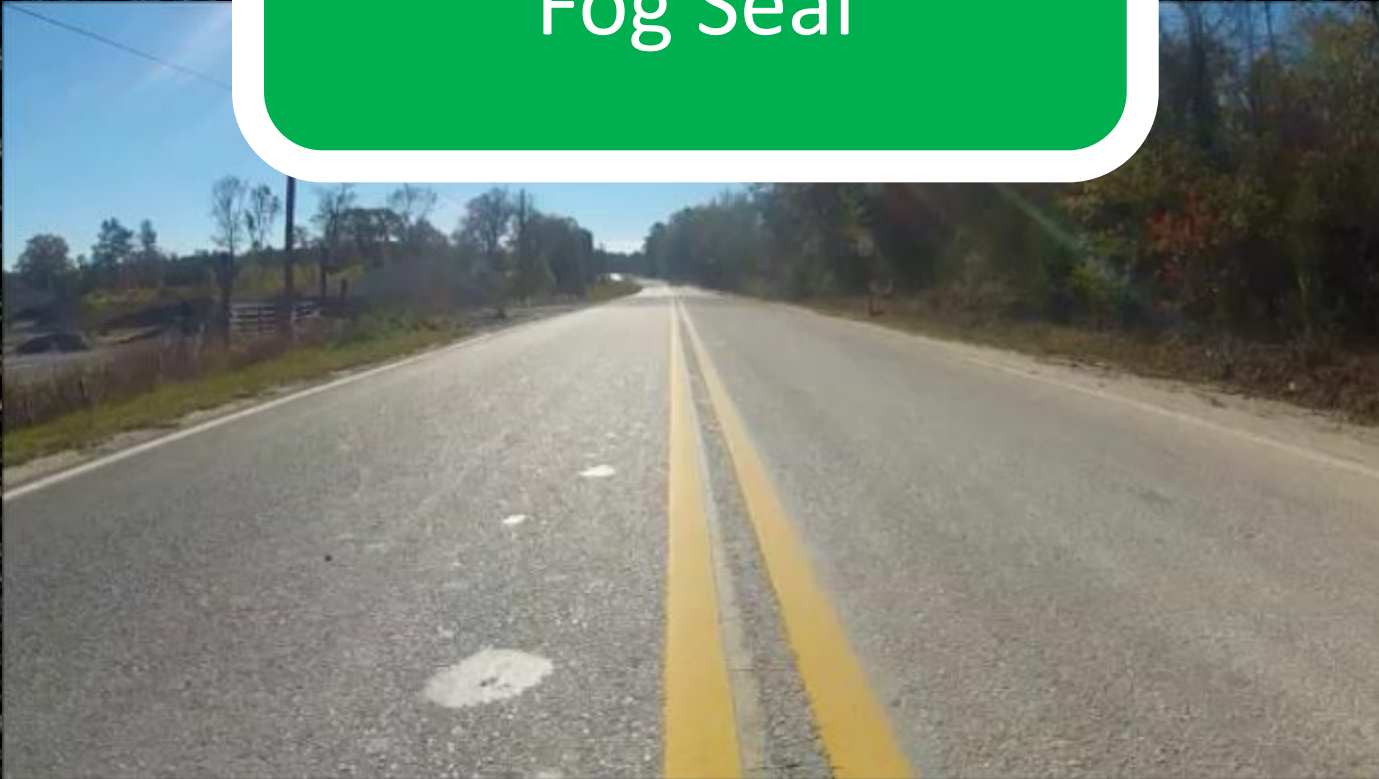
Lee Road 159

Pavement Preservation Experiment to Reduce the Cost to Maintain Your Roads

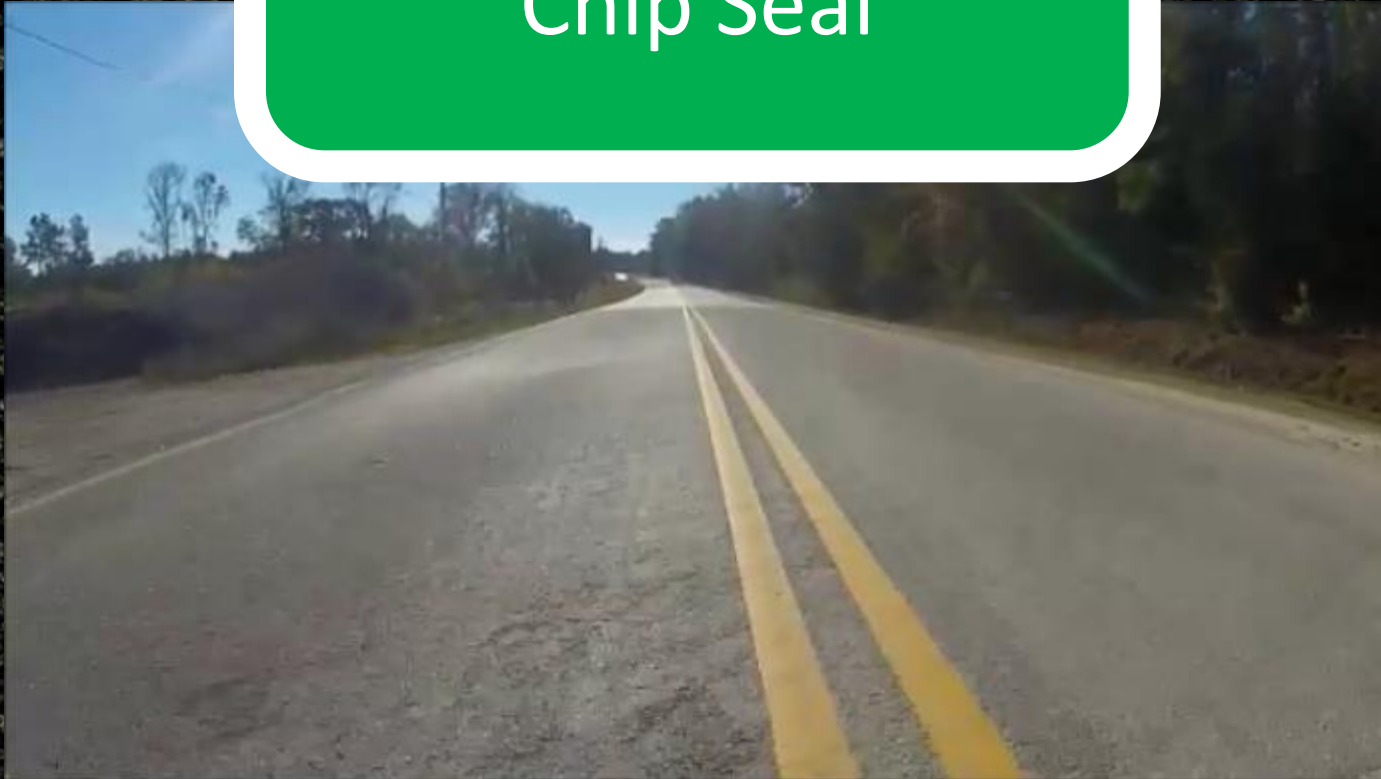
Funding Provided by:

Alabama, Mississippi, Missouri, North Carolina,
Oklahoma, South Carolina, Tennessee, and FP2 via
Auburn University and the Lee County Commission

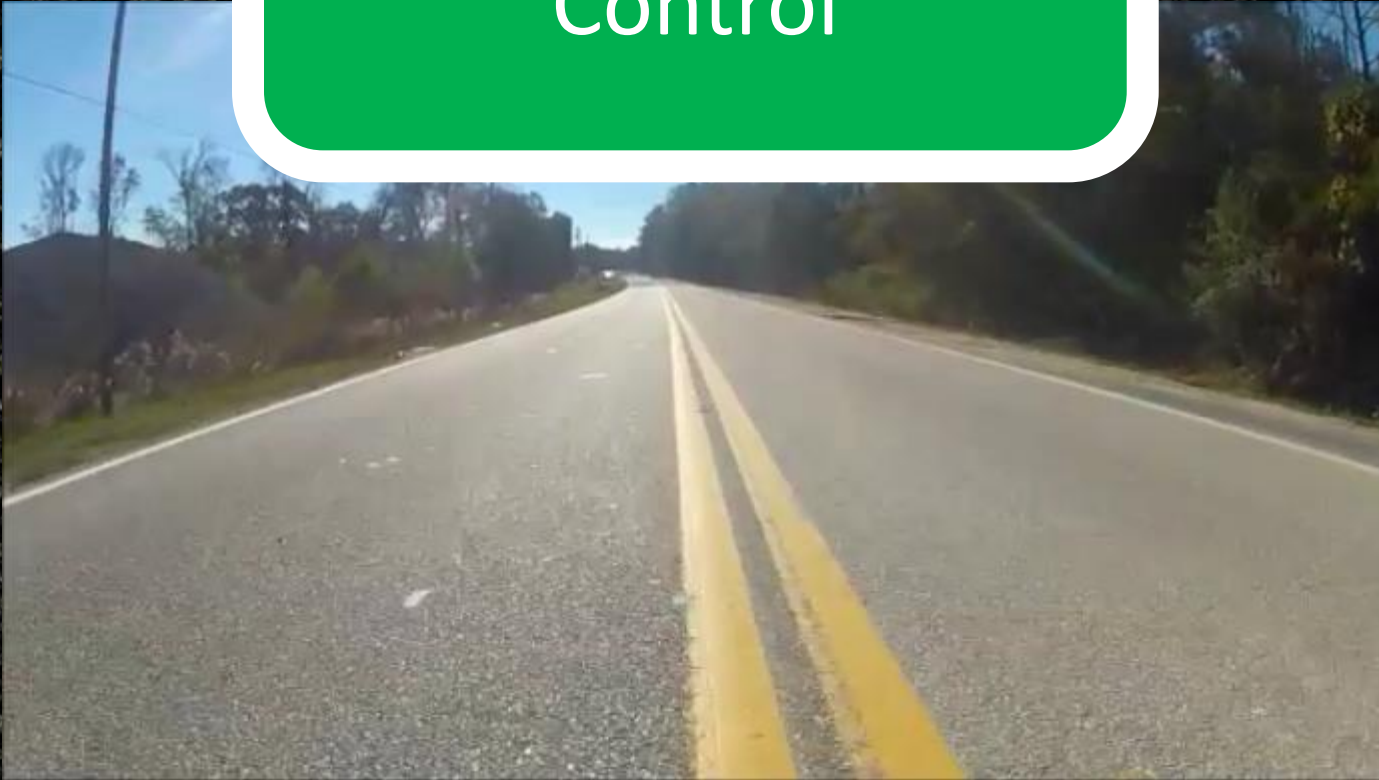
L1 – Rejuvenating Fog Seal



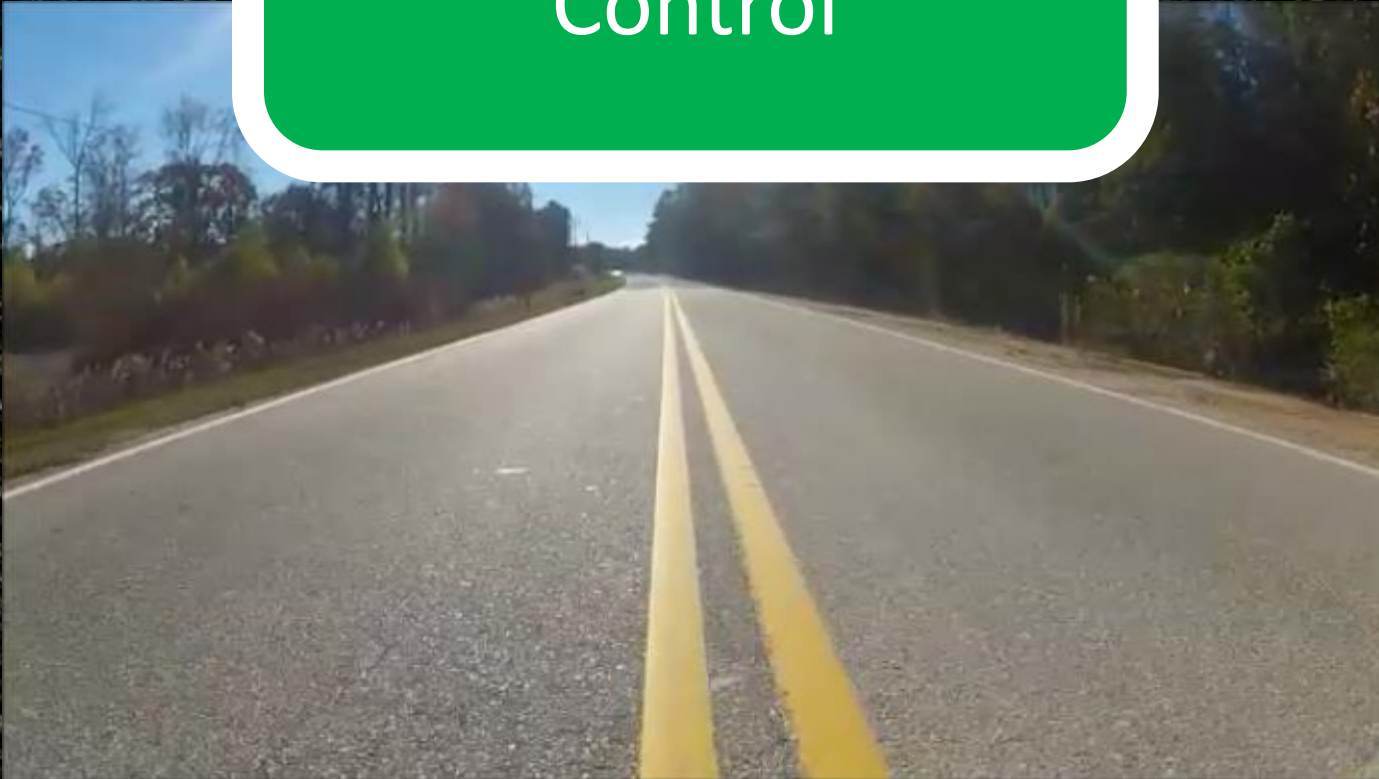
L2 – FiberMat Chip Seal



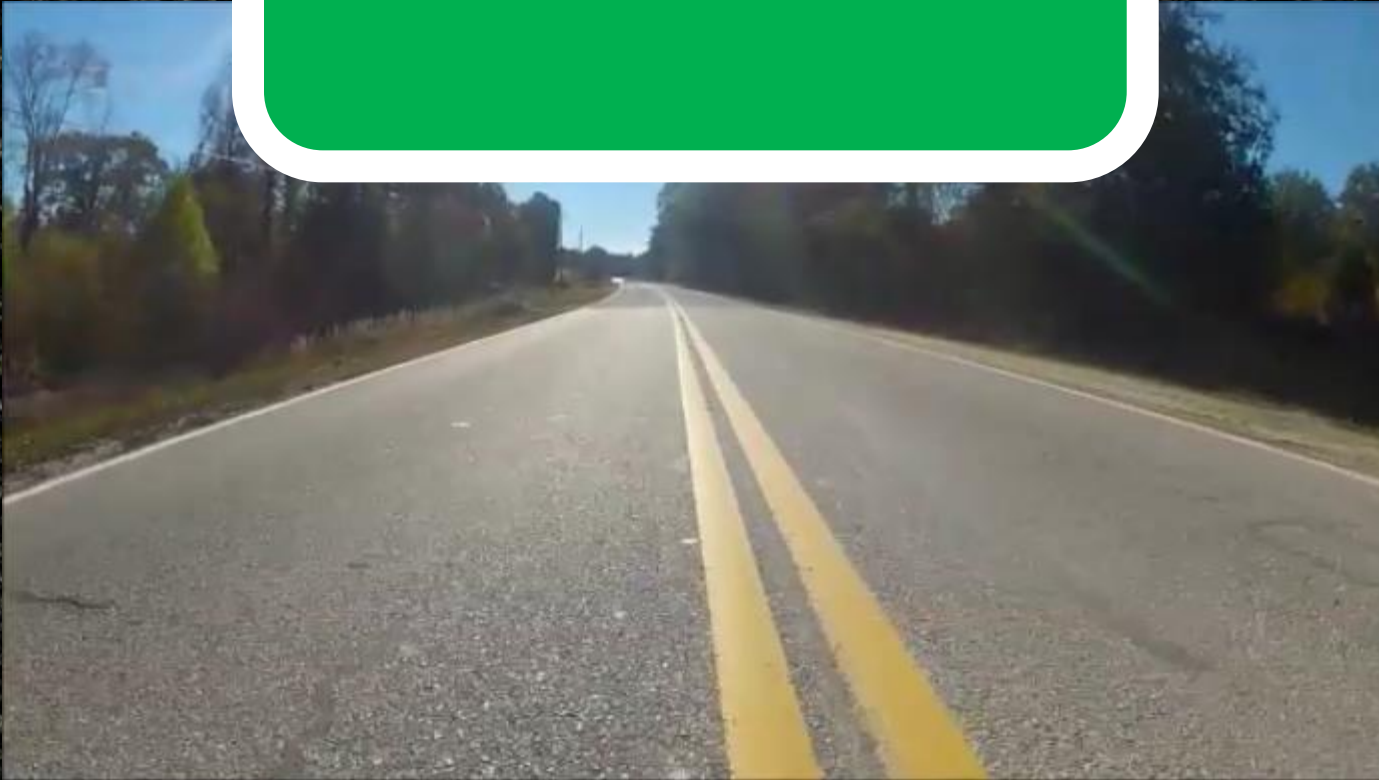
L3 – Untreated Control



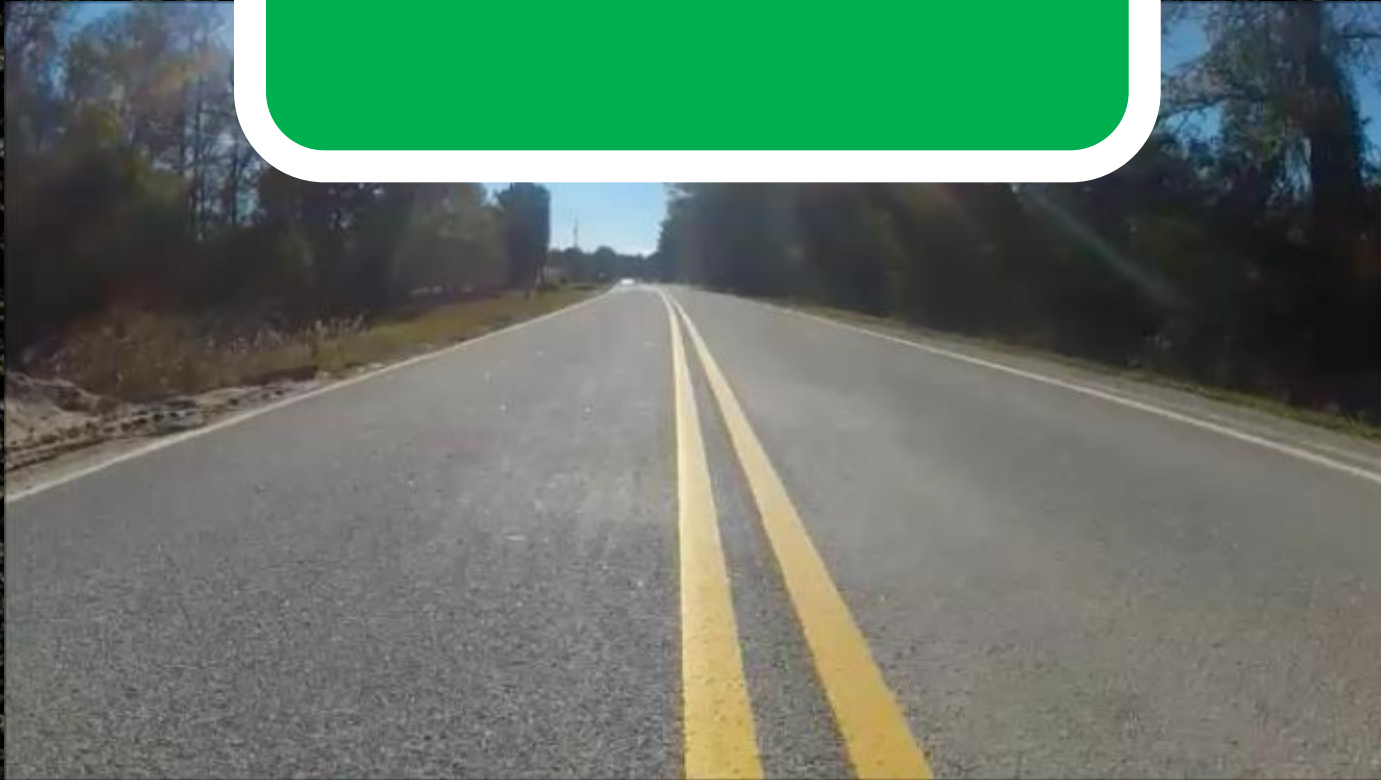
L4 – Untreated Control



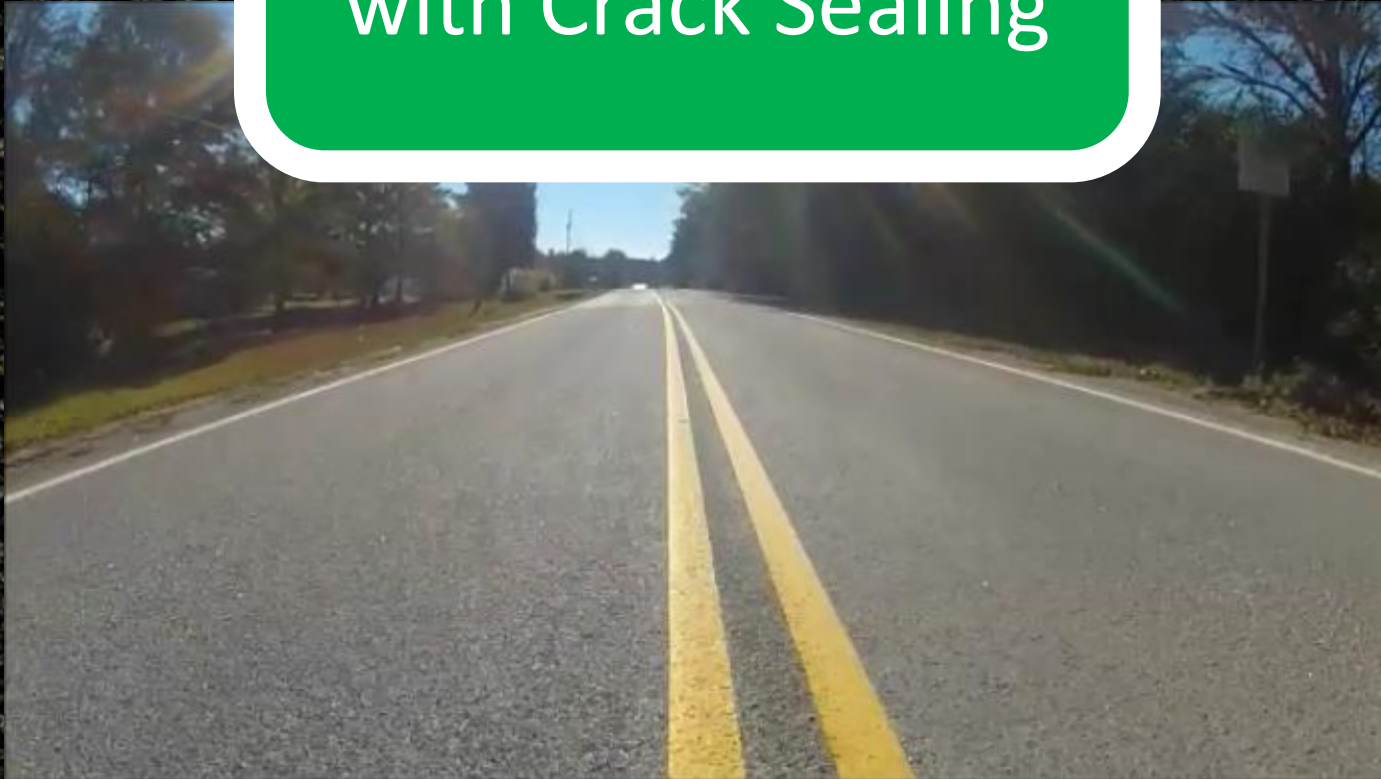
L5 – Crack Sealing



L6 – Chip Seal



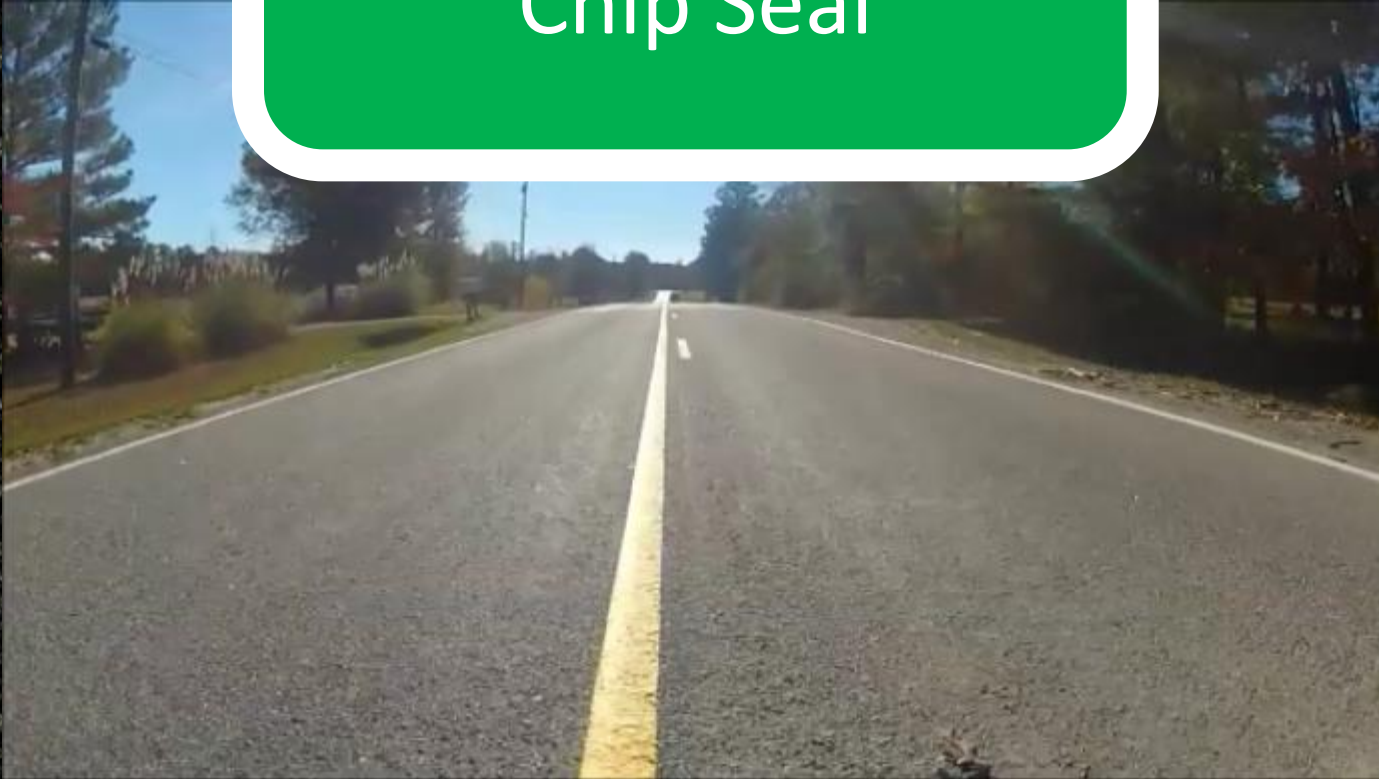
L7 – Chip Seal with Crack Sealing



L8 – Triple Layer Chip Seal



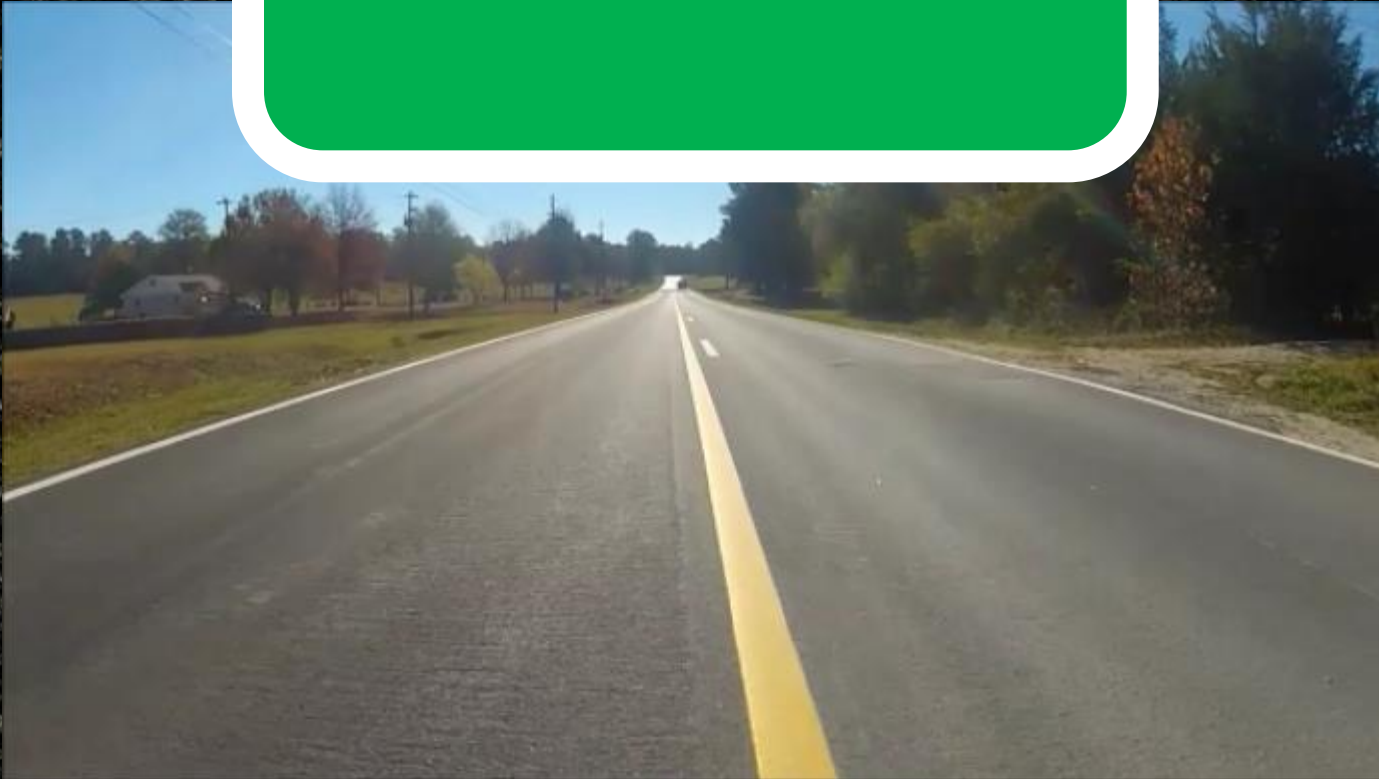
L9 – Double Layer Chip Seal



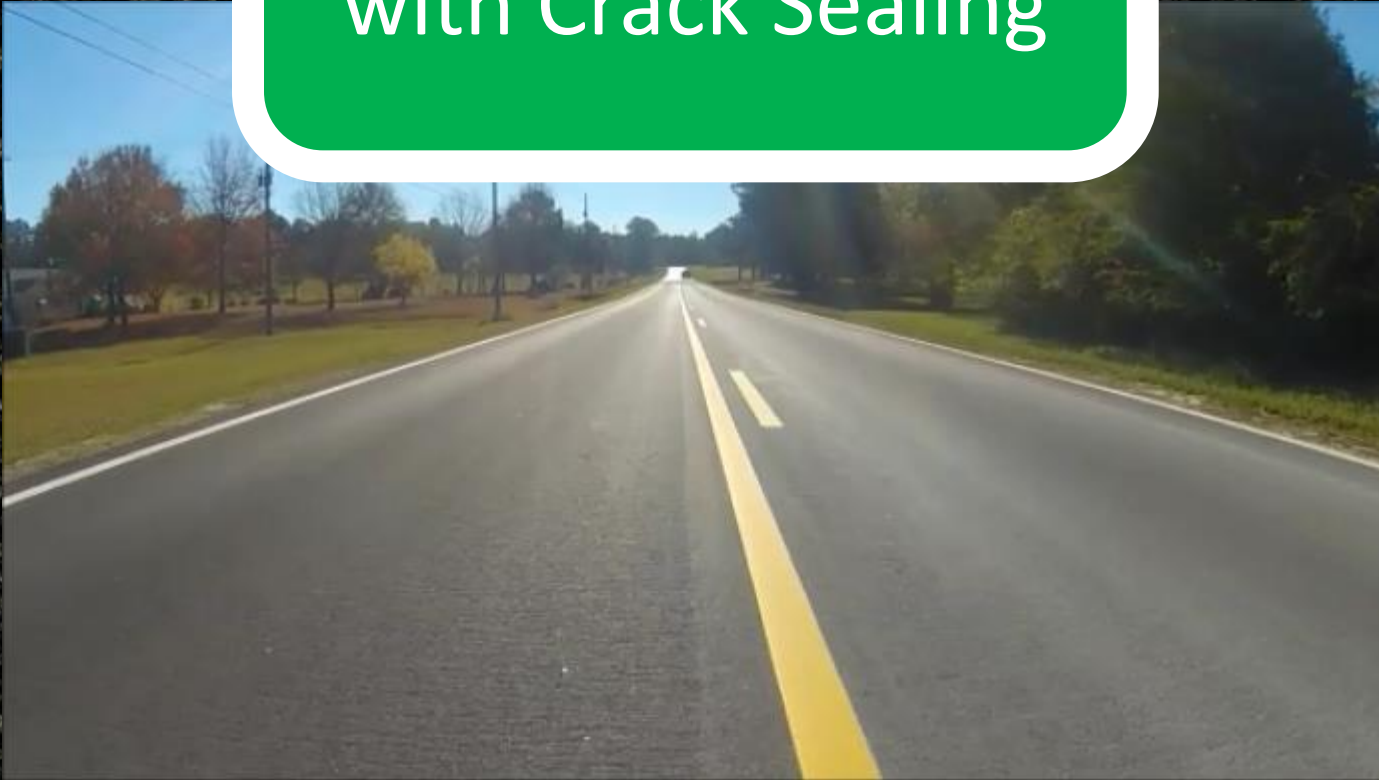
L10 – Cape Seal
(Micro Surface
on Chip Seal)



L11 – Micro Surface



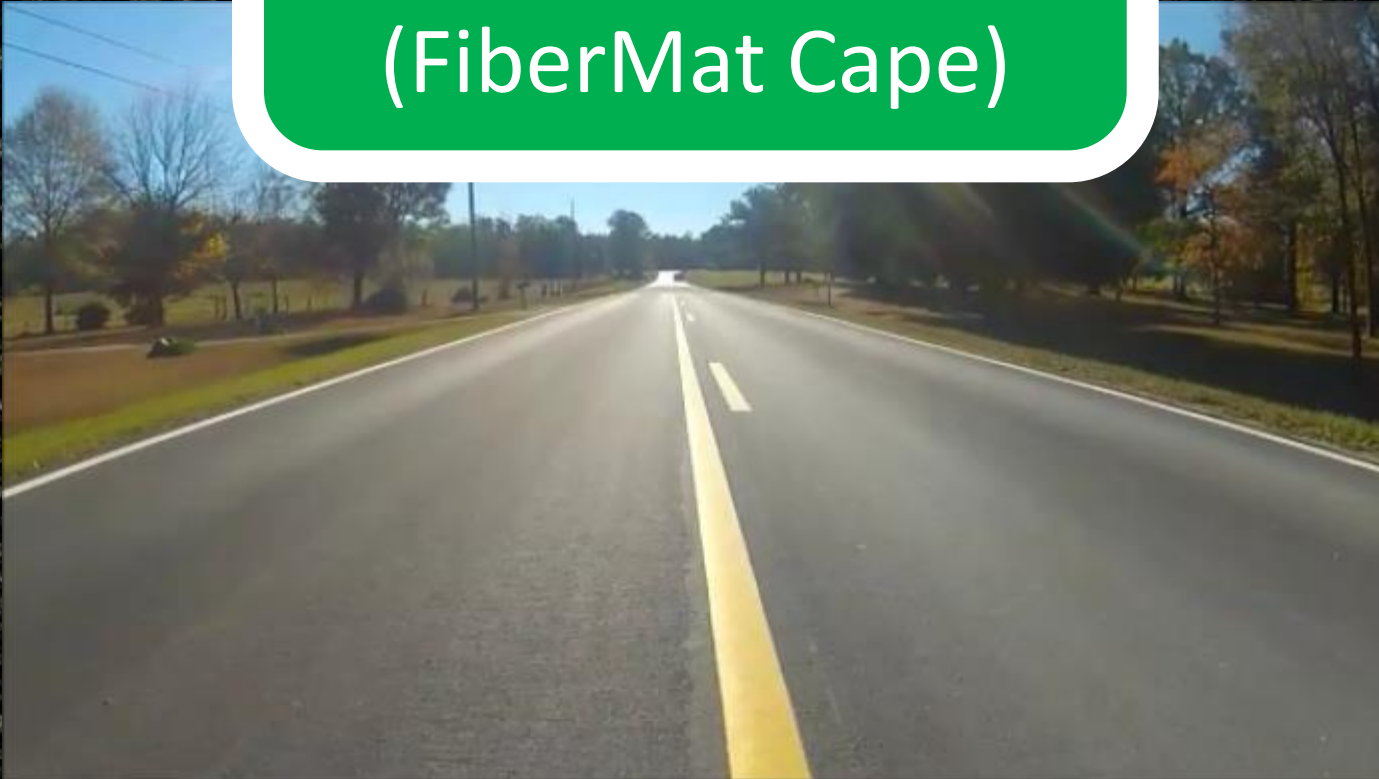
L12 – Micro Surface with Crack Sealing



L13 – Double Layer Micro Surface



L14 – Micro Surface on FiberMat (FiberMat Cape)



L15 – Micro Surface on Scrub Seal (Scrub Cape)



L16 – Scrub Seal



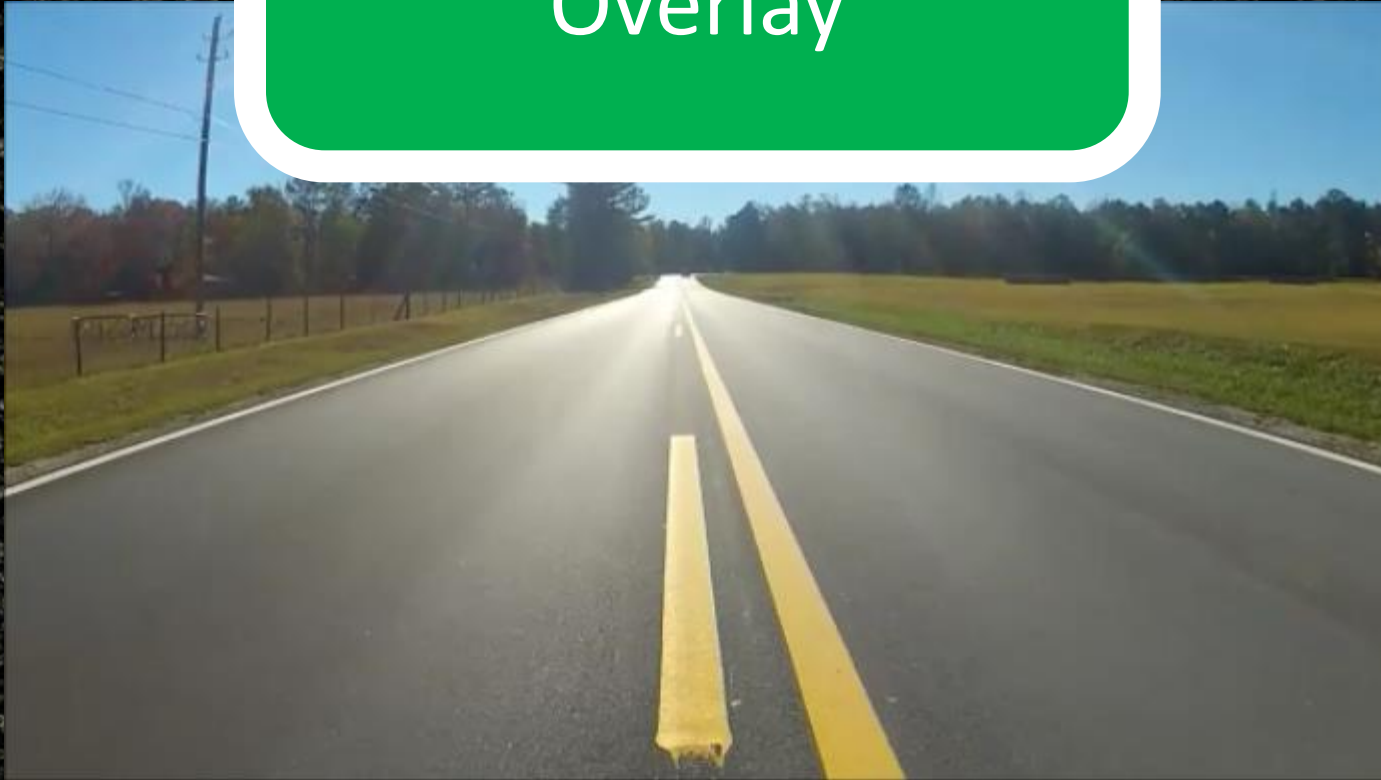
L17 – Subsection Distress Data Demonstration



L18 – Thin HMA Overlay on FiberMat (HMA Cape)



L19 – Thin HMA Overlay



L20 – Thin HMA
Overlay on
100% RAP Mix Base



L21 – Polymer Thin HMA Overlay



L22 – Bonded Thin HMA Overlay



L23 – 50% RAP
Thin HMA Overlay



L24 – 5% RAS
Thin HMA Overlay



L25 – HiMA Thin HMA Overlay



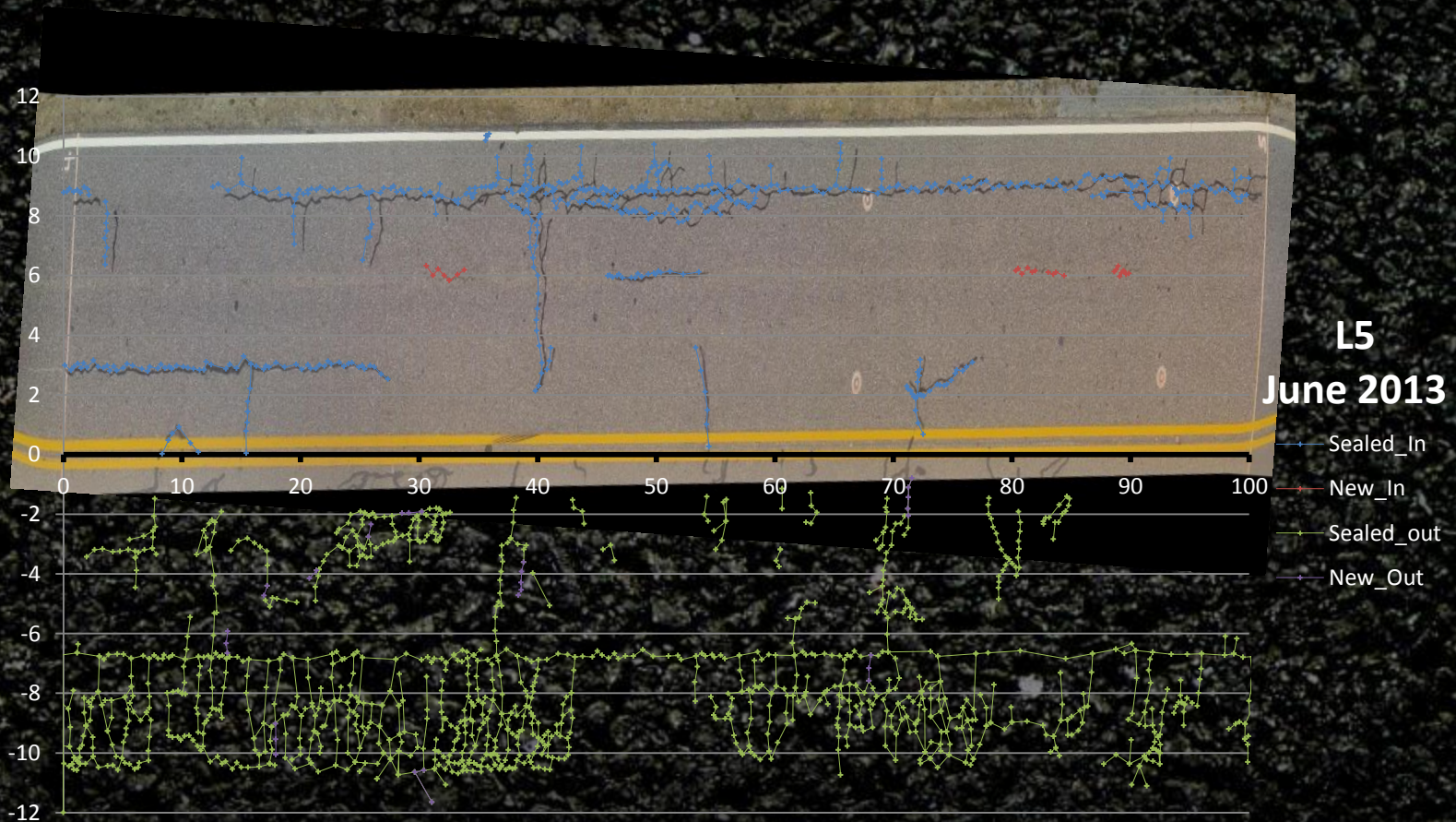
159 Testing Overview

- Weekly
 - ARAN Van (rutting, roughness, texture)
 - Video for crack mapping
 - Visual inspections with notes/pictures
- Monthly
 - Wet ribbed surface friction
 - Subgrade moisture readings
 - Falling weight deflectometer (FWD)
- Other
 - Ground penetrating radar (GPR)

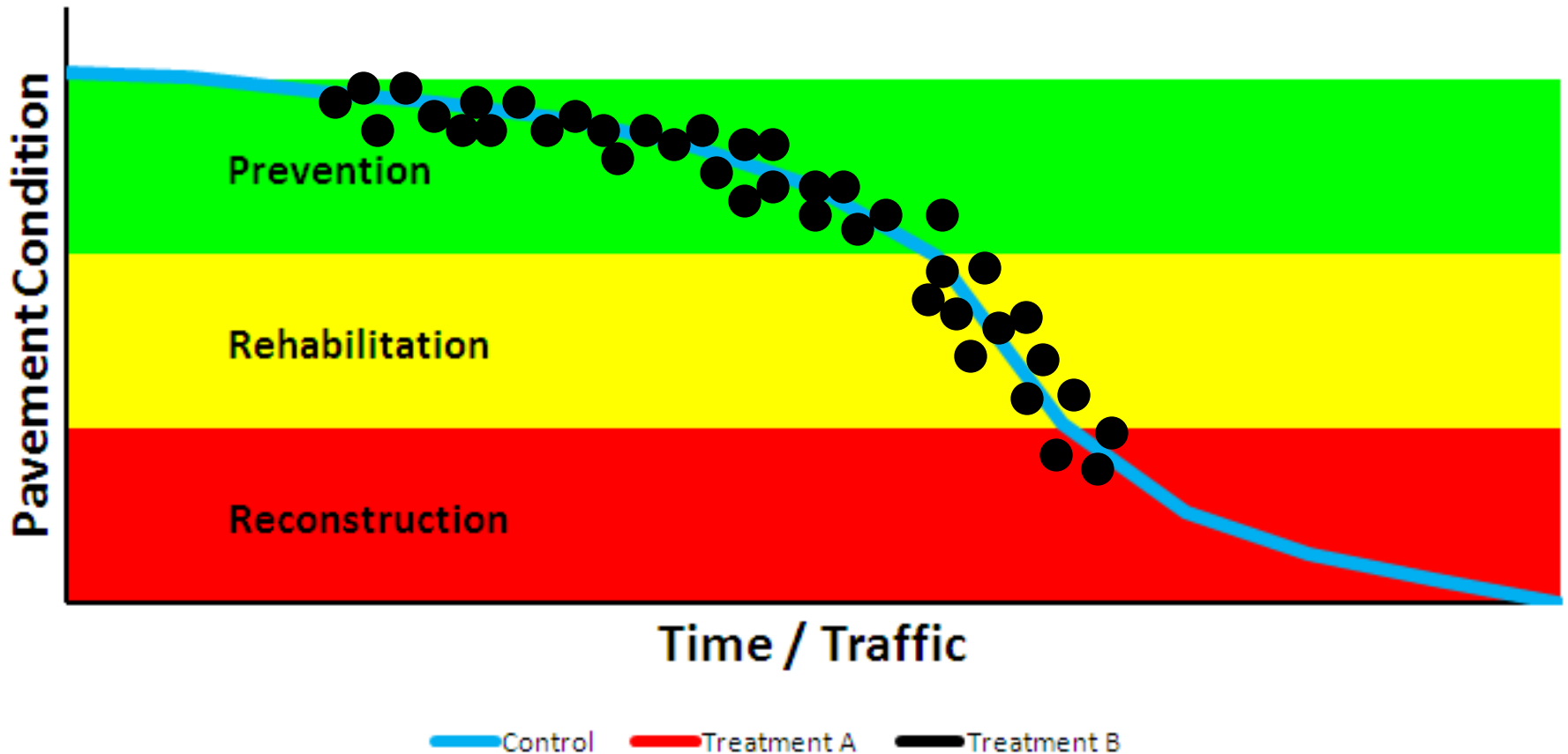
Lee 159



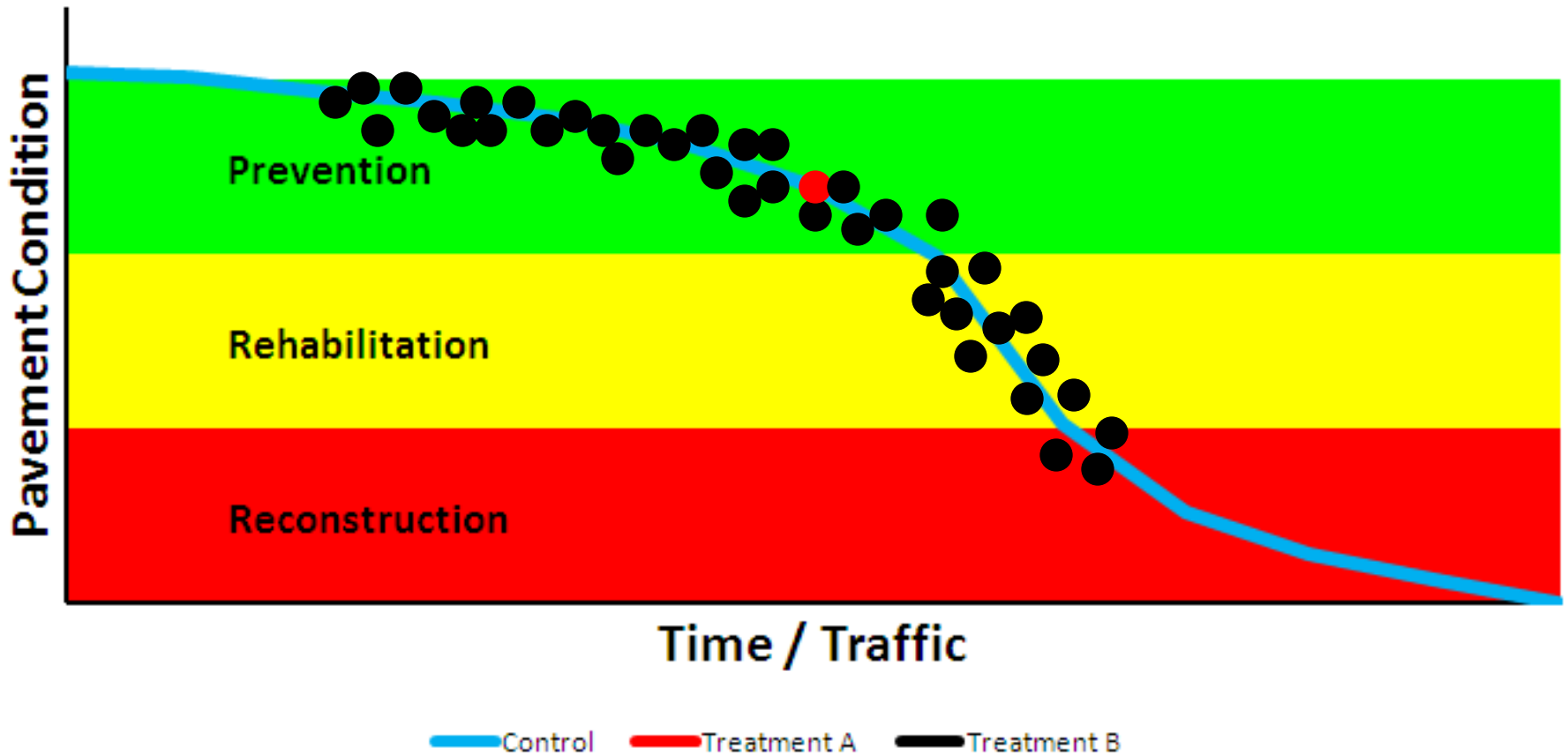
Crack Maps



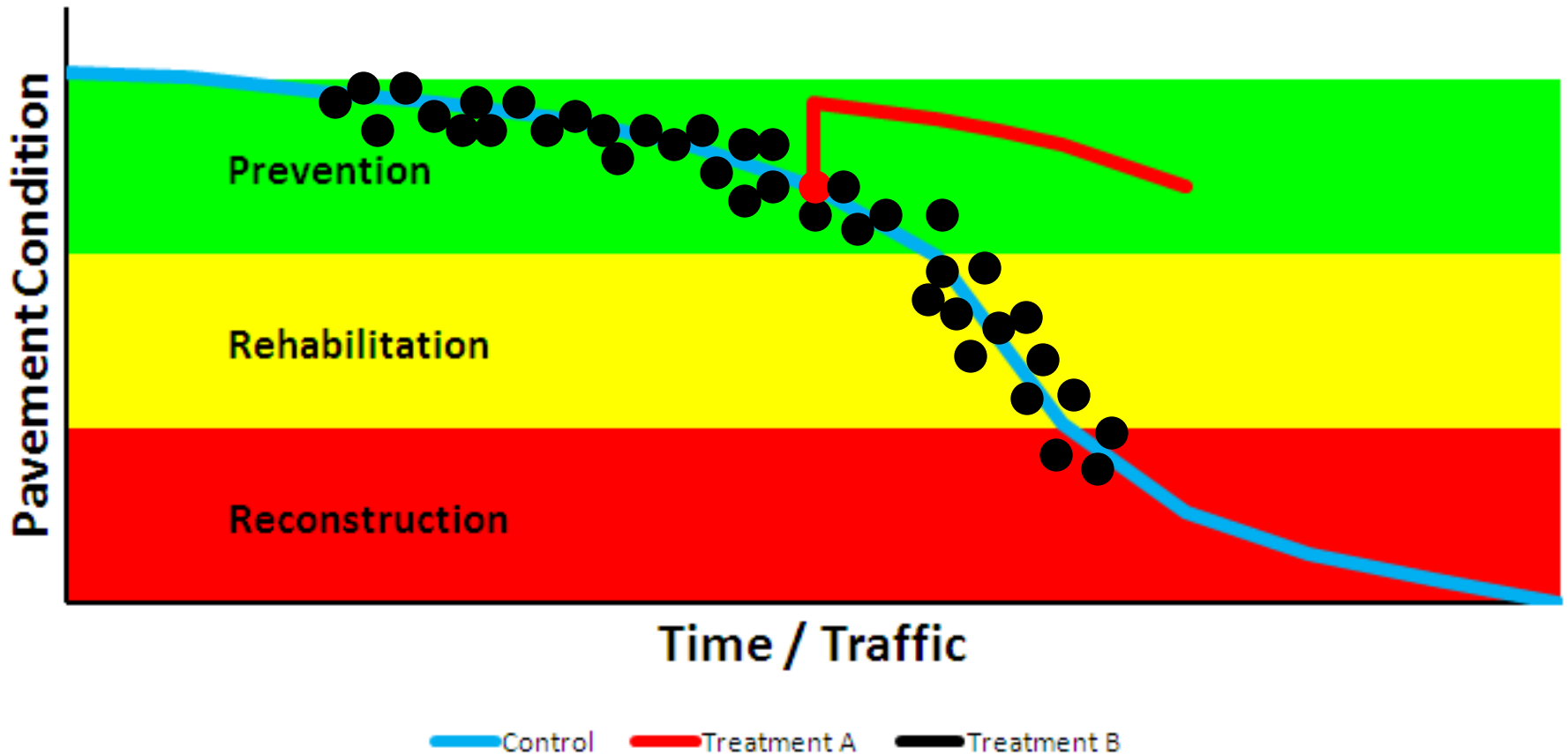
PG Study Implementable Findings



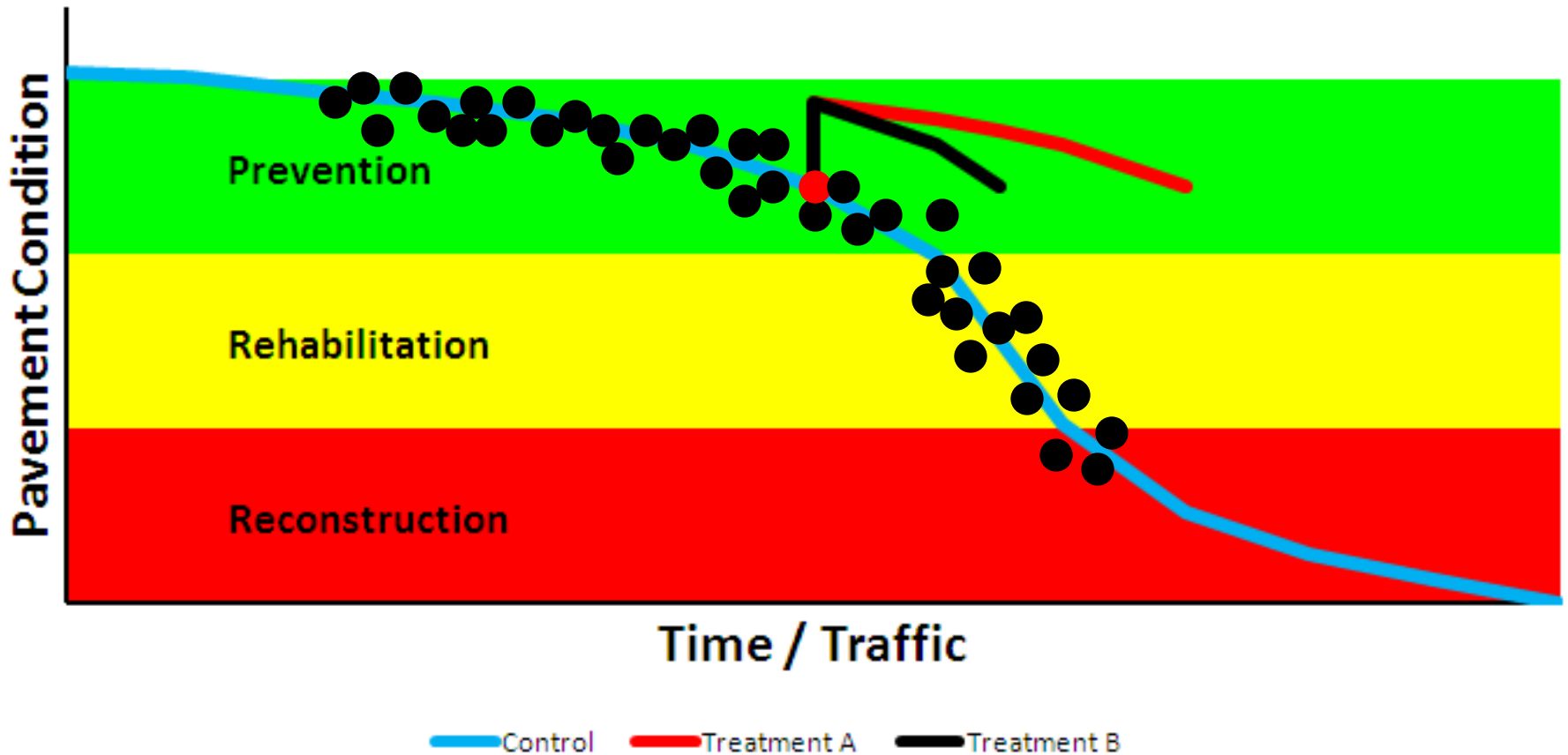
PG Study Implementable Findings



PG Study Implementable Findings



PG Study Implementable Findings



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Cloudy
Feels Like: 61°F
Humidity: 81%
Wind: SE at 8 mph

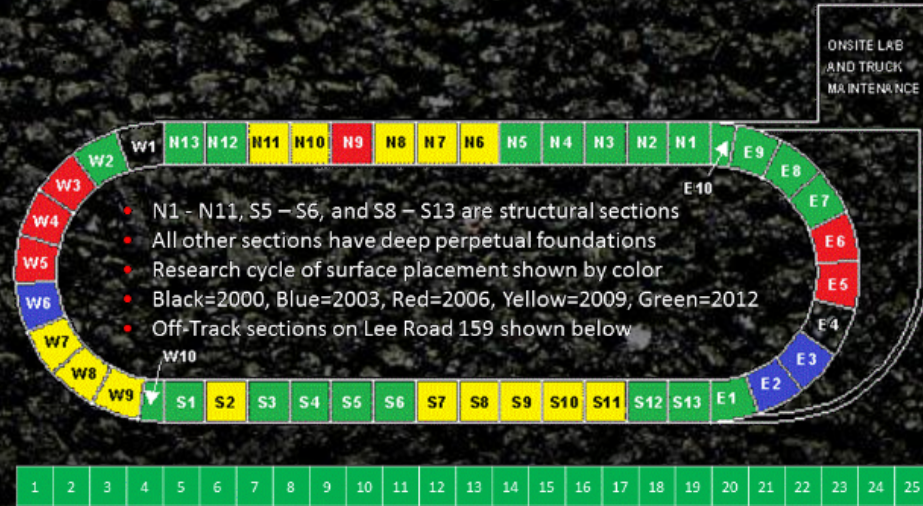
Enter city/zip **GO!**

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HOTLINKS to download PAVE reports, review upcoming NCAT training courses, query historical weather data, view current color radar or preview local forecast.

0. ESALs as of 2300 hours on

Performance data for each section can be viewed by positioning your mouse over the section in question and left-clicking. Based on feedback from our research sponsors, the performance reports have been revised to include crack maps. The 2009 performance reports are now a fully integrated and active part of the web presentation.



End-of-Cycle Track Conference

- WMA & high RAP/RAS/GTR mixes
- Optimized structural design
- Pavement preservation
- Implementation



Pavement Test Track Conference

March 3-5, 2015

The Hotel at Auburn University
and Dixon Conference Center

www.ncat.us



Questions ?



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