A National Perspective on Pavement Preservation

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Presentation Outline

• Introduction
• What is FP² Inc.?
• Moving Ahead for Progress in the 21st Century (MAP-21)
• NCAT Group Preservation Experiment
• Emerging Issues
• Summary/Conclusions
Introduction

• Most agencies practice some form of pavement preservation

• Not programmatic at this point

• Lack of funding has had an impact
Introduction

• Some agencies have established a Pavement Preservation Engineer position

• Significant progress in the last 5 years

• Continued support from FHWA and others
What is FP$^2$ Inc.?

• An industry-supported trade association

• Purpose of FP$^2$ Inc.

  ➢ To promote the importance of protecting and preserving the huge investment in our nation’s pavement infrastructure
Supporters

• Who supports FP$^2$ Inc.?
  ➢ Sponsoring associations
  ➢ IGGA, ISSA, AEMA, ARRA, AI, NAPA
  ➢ Contractors, material suppliers, equipment manufacturers, chemical and polymer suppliers
What do we do?

• Purpose

- **Advocacy**: educate public officials at all levels.
- **Promotion**: sponsor key events, publish the Pavement Preservation Journal, distribute educational materials
- **Research**: promote the U.S. Federal Highway Administration System (FHWA) Preservation Roadmap; serve on several Transportation Research Board (TRB) committees
What do we do?

• FP² Inc. financially supports:

• FP² Inc. works closely with:
  ➢ Regional preservation centers in California and Texas
  ➢ Four Regional Preservation Partnerships throughout the United States
  ➢ U.S. Federal Highway Administration
MAP-21

• Signed by President Obama on July 6, 2012
• 27-month duration
• No new $$, still a $13B shortfall from the Highway Trust Fund
• Will be made up from General Fund
MAP-21

• Numerous references to pavement preservation
• Statute requires rulemaking by FHWA in 125 areas in the bill
• FHWA rulemaking due by the end of the 1st Quarter 2013
NCAT Preservation Group Experiment

• Seven State DOTs and FP^2 Inc. are full funding partners.
• Preservation treatments for both the track and an off-site County road.
• Funding level is $120k/year.
NCAT Pavement Test Track
at Auburn University

• 2012 Pavement Preservation Study
2012 Preservation Group (PG) Study

- Quantify life cycle benefit of study treatments
  - Time/traffic to return to pretreatment condition(s)
  - Life extension effect on underlying pavement
  - Test sections on the Track and Lee Road 159

- Sampling/testing for construction quality
2012 Preservation Group (PG) Study

- State Departments of Transportation
  - Alabama x 2 (Transportation + Environmental Management)
  - Mississippi
  - Missouri
  - North Carolina
  - Oklahoma
  - South Carolina
  - Tennessee

- Private Sector Sponsors
  - FP2 Inc.
  - Kraton Polymers
Off-Track “PG” Test Section

NCAT Pavement Test Track

Martin Marietta Quarry + EAP Plant

Lee Road 159
2012 Preservation Group (PG) Study

• Fog seals (with and without rejuvenators)
• Crack seals (routing/filling, hot air lance, go-type)
• Chip seals (single, double, triple, scrub, FiberMat)
2012 Preservation Group (PG) Study

- Cape seals (on chip/scrub seals, FiberMat)
- Micro surfacing (single, double, Capes)
- Plant mix overlays (4.75 screening mix variations)
- Ultra thin bonded wearing course
- Lightweight aggregates for surface treatments
Condition of Lee Road 159

Original 1-Lane Quarry Road Buildup

Widening

Left WP
Good

Right WP
Distressed

Widening
Recommendations for Lee Road 159
Preservation Group (PG) Experiment

- Traffic continuation on 2009 GE+ test sections
- Stop traffic when “trigger” distress(s) reached
- Trigger may be cracking or roughness increase
Preservation Group (PG) Experiment

- Apply consensus treatments to GE+ sections
- State DOT and full funding sponsors make final decisions
- Duplicate / expand study in off-Track research
Proposed Lee Road 159
Methodology
FP² Inc. Contributors to the Project To Date

- AEMA
- All States Materials Group
- Asphalt Materials
- Blacklidge Emulsions
- Bergkamp
- Colas
- Ergon

- ISSA
- MeadWestvaco
- Slurry Pavers
- Ultrapave
- Vance Bros.
- Viking Construction
PG Experiment Contractors

- Fog Seals - Vance Brothers
- Crack Sealing - Crafco
- Chip Seals - Vance Brothers/Etnyre
- Scrub Seal - Vance Brothers/Etnyre
- Microsurfacing - Vance Brothers
- Fiber Mat - Colas
PG Experimental Materials

• Aggregate
  ■ Columbus, GA granite
  ■ Marymead, TN granite
  ■ Calera, AL limestone

• Emulsion
  ■ CMS-1P (QB)
  ■ CSS-1h
  ■ CRS-2hP
  ■ CMS-1P (CR)
  ■ CSS-1hP
Aggregates

- 7’s
- 89’s
- Washed 10’s

Columbus, Georgia Granite
Emulsions
Calibration Area
Calibration Area
Lee Road 159

Fog Seal
Lee Road 159

Crack Sealing
Lee Road 159

Staging
Lee Road 159
Lee Road 159

Chip Seal
Lee Road 159

Scrub Seal
Lee Road 159

Microsurfacing
Emerging Issues

- Rulemaking for MAP-21
- American Disability Act (ADA)
- NCAT continuation
- New Legislation
Summary/Conclusions

- Pavement Preservation is codified in the law
- The National Pavement Preservation Conference in Nashville was a great success
- FP2 Inc. plans to stay on top of emerging issues
- Pavement Preservation is here to stay
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