FHWA Emulsion Task Force (ETF)
Micro surfacing

James S. Moulthrop, P.E.
Executive Director
FP² Inc.

Rocky Mountain West Pavement Preservation Partnership Meeting
October 8, 2014
Phoenix, AZ
Presentation Outline

- Subcommittee membership
- Products developed in AASHTO format
- Status
Design Group – Mixtures Members

• Co Chairs
  ➢ Jim Moulthrop
  ➢ Gary Hicks

• Members
  ➢ Chris Anspaugh
  ➢ Deborah Deep
  ➢ Tim Folwell
  ➢ Larry Galehouse
  ➢ Tom Wood

• Members (con’t)
  ➢ Greg Harder
  ➢ Mark Ishee
  ➢ Ian Jack
  ➢ Bob Jerman
  ➢ Chris Lubbers
  ➢ Rusty Price
  ➢ Troy Tindall
Products Developed

- Standard Specification for Materials for Micro Surfacing
- Standard Practice for Micro Surfacing Design
- Standard Specification for Micro Surfacing Construction
- Micro surfacing Best Practices
Process Used

• The Need - improve current practice and specification in AASHTO format for nationwide use
• Go by-Specification Developed by MNDOT for cold climate applications
• Development-draft prepared and circulated for review by the ETF mix group
• Comments were received, debated and incorporated
• Final draft standards and specification sent to the ETF members and to AASHTO
Elements of the Materials Spec

- Scope
- Referenced Documents
- Terminology
- Significance and Use
- Emulsified Asphalt Requirements
- Aggregate Requirements
- Mineral Filler
- Water
- Additives
Elements of Design Practice

- Scope
- Referenced Documents
- Summary of Practice
- Significance and Use
- Evaluation of Materials
- Determining Mixing Time
- Determining Set and Cure Characteristics
- Determining Binder Content
- Determining Asphalt to Aggregate Compatibility
- Determining Vertical and Lateral Displacement
- Report
- Key Words
Elements of Construction Spec

- Description
- Materials
- Mix Design
- Equipment
- Construction
- Quality Control
- Acceptance
- Method of Measurement
- Basis of Payment
Elements of Construction Spec

- Equipment
  - Mixing
  - Proportioning Devices
  - Spreading Equipment
  - Secondary Strike-off
  - Rut Box
  - Brooms
  - Rolling
Elements of Construction Spec

- Construction
  - Weather Limitations
  - Calibration
  - Preconstruction Meeting
  - Pavement Surface Preparation
  - Test Strip
  - Application of Mixture
  - Workmanship
  - Opening to Traffic
Elements of Construction Spec

- Quality Control
  - Aggregate
  - Emulsified Asphalt
  - Project Documentation
Elements of Construction Spec

• Acceptance
  ➢ Aggregate
  ➢ Emulsified Asphalt

▪ Method of Measurement
▪ Basis of Payment
Best Practices for Micro surfacing

• Supports the specifications and practice
• Provides guidance
• Identifies gaps in current knowledge and research needs
• Stand alone document for micro surfacing
• Still under review
What’s Next-Micro Surfacings

• Re-distribute the updated version of Best Practices to the mix group for comments
• Once the comments are incorporated, distribute it to the ETF for their review
What’s next for the Mix Group?

- Slurry Seals
  - Materials spec
  - Design practice
  - Construction Guide
  - Best practices
- Need to develop a team to do this work

- Cold Patching materials
  - Materials spec
  - Design practice
  - Construction Guide
  - Best practices
- Need to develop a team to do this work
Questions?
James S. Moulthrop, P.E. (PA, AZ)
Executive Director
FP², Inc.
8100 West Court
Austin, TX 78759

(512) 970-8865
(866) 862-4587
jimmoulthrop@gmail.com