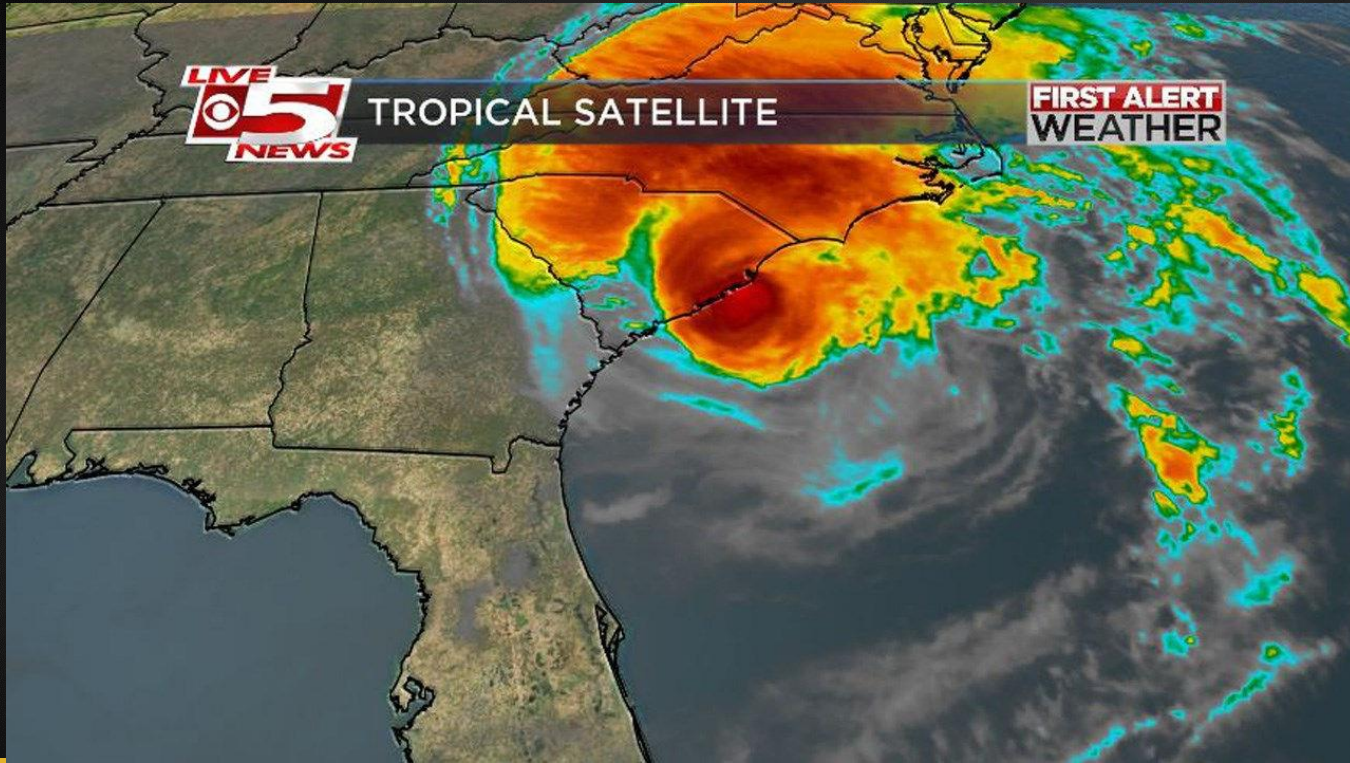


ENSURING QUALITY MIX DESIGNS MICRO SURFACING AND SLURRY SEAL

Bob Jerman
ISSA Technical Director
October 13, 2016

CONTINGENCY PLAN

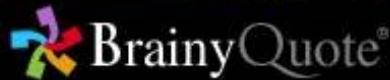


ENSURE - Guarantee, make certain.



**In this world
nothing can be
said to be certain,
except death and taxes.**

Benjamin Franklin



ENHANCING QUALITY OF MIX DESIGNS

MICRO SURFACING AND SLURRY SEAL

Dave Welborn
ISSA Director
October 13, 2016

Two Perspectives

1. Tangibles

- Raw Materials
- Guidelines/Specifications (ISSA/AASHTO)
- Lab Accreditation

2. Intangibles

Tangibles – Raw Materials

- Aggregate
- Emulsified Asphalt (Emulsion)
 - Asphalt, Water, Emulsifier, Acid/Base, Polymer, Asphalt Additives
- Water
- Mineral Filler
- Additives

Tangibles – Raw Materials

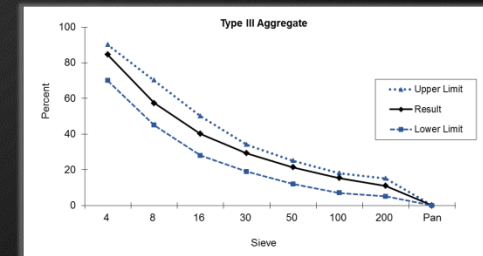
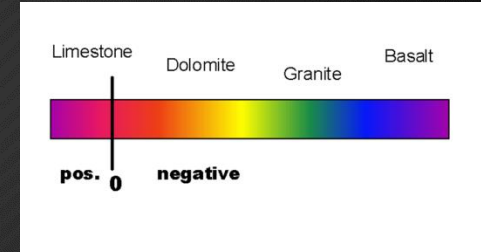
“It’s a System!”

- Right Raw Materials
- Right Ratios
- Right Order of Addition

Tangibles – Raw Materials

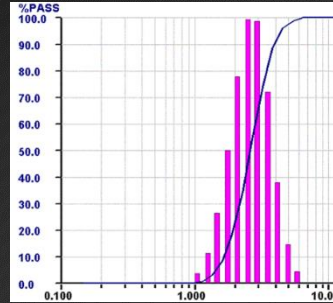
- Aggregate

- “Reactivity” will vary depending on the surface charge and the fines content
- Gradation – Type I, Type II, Type III....or...to meet local specifications.
- Shape (100% crushed recommended, fractured faces), Cleanliness (Methylene Blue and Sand Equivalent), Soundness, LA Abrasion, etc.



Tangibles – Raw Materials

- Emulsified Asphalt



- Asphalt... Crude Source, Extraction/Refining Process Aids, Chemistry, Acid Number, PG-Grade or Pen
- Emulsifier...Anionic/Cationic, Dosage, Chemistry, Performance, Solubility, Ease of Use, Availability
- Polymer...natural or SBR latex, SBS-modified asphalt
- Water...Good Quality, Similar to Water Used in Mix Design

Tangibles – Raw Materials

- Water
- Mineral Filler
- Additives

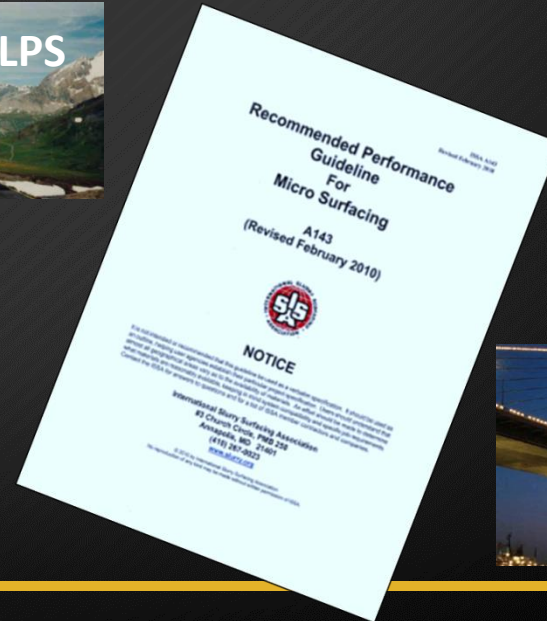
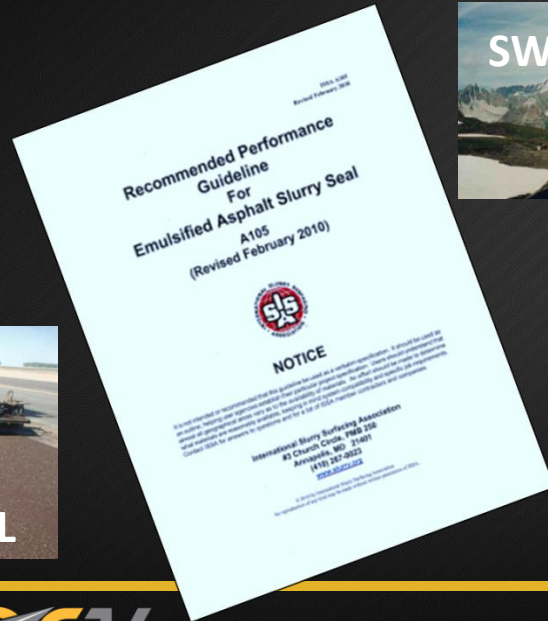
Tangibles – Raw Materials

“It’s a System!”

- Right Raw Materials
- Right Ratios
- Right Order of Addition

Tangibles

Performance Guidelines / Specifications



Tangibles

AASHTO ... New Standards / Specifications

- Micro Surfacing
 - MP028-16-UL Standard Specification for Materials for Micro Surfacing
 - PP083-16-UL Provisional Standard Practice for Micro Surfacing Design
- Emulsion Specification Amendments
 - M140 Emulsified Asphalt
 - M208 Cationic Emulsified Asphalt
 - M316 Polymer-Modified Cationic Emulsified Asphalt

Tangibles

- ISSA / Re: Source Partnership
- Re: Source Pavement Preservation Laboratory Accreditation Program

Intangibles

- Cheaper \neq Better Performance
- Integrity
- Understand “Partnership”
- Passion
- “JIT” Does Not Apply
- Do The Right Thing
- Wear Your “Industry Hat”
- Leave a Worthy Legacy

“Only **YOU** Can Ensure A Quality Mix Design”



Thank You!

Bob Jerman

Technical Service Director
Pavement Technologies

5255 Virginia Avenue
North Charleston, SC 29406
T 843.746.8155
robert.jerman@ingevity.com
ingevity.com