Asphalt Pavements & Mixtures: National Issues

J. Richard Willis

Arizona Pavements/Materials Conference

November 20, 2019
The Elephant in the Room
Plastics
• Social media buzz
• Traditional media
  • CNN
  • BBC
  • Washington Post
  • The Economist

How We Got Here?
• Conducted “literature review”
• Reached out to NAPA
• Conducted basic binder testing
  • Pelletized recycled plastic
  • Stiffened binder
  • Witnessed separation
  • Needed additional testing
November 28, 2018 - Hearing

Addressing America’s Surface Transportation Infrastructure Needs

Senator John Barrasso (R-WY)

In the meantime…

https://www.epw.senate.gov/public/index.cfm/hearings?ID=F737228C-05D7-4483-8FB1-EED1AC36454F
• Topic of Congressional Interest
• Two meetings with Senate staff
• EPW Committee request
• Began working with NCAT
• 2\textsuperscript{nd} phase work – separation
• Most of products separated
• March 26, 2019 meeting in DC
• Major players attending
• Discussed path forward
• American Chemistry Council
• Working with Asphalt Institute
• What do we know?
• What do we need to know?

Continued Work
Pavement Design
PAVEMENT DESIGN
Simplified

Web-Based Pavement Design Tool

Designing the right pavement for the job just got easier thanks to PaveXpress, a free web-based pavement design tool for roadway and parking lot pavements.

Projects created in PaveXpress can be printed, shared, and saved, and design options can easily be evaluated in a side-by-side comparison. As a browser-based tool, PaveXpress is always up to date and can be accessed from any computer or mobile device, regardless of screen size or operating system.

PaveXpressDesign.com
The evolution of PaveXpress....

• New Flexible
• New Rigid
• Parking Lots

• Overlay design
• Condition Survey
• NDT

• Cost Module
• LEA Module
• UI/UX Update

Newest modules:
Integration with PerRoad LCCA framework (ie: RealCost)
Porous Asphalt Pavement Design
Simplified LCCA
• Recent study by Gary Sharpe of Palmer engineering
• Compares PaveXpress to AASHTO
• Program replicates AASHTO design with 95% accuracy
  • Deviations due to rounding and computations versus reading nomographs
Perpetual Pavements

“an asphalt pavement designed and built to last longer than 50 years without requiring major structural rehabilitation or reconstruction, and needing only periodic surface renewal in response to distresses confined to the top of the pavement”

- APA, 2002
The Misconception

- More = better
- Just keep adding thickness
- Truth vs. Practicality
- 1993 AASHTO Design Guide
Workforce Development

- 3 Focus Areas
  - Communication
  - Partnerships
  - Delivering promise to employees
Communications Task Group

- Goal
  - Stage-Setting Research
  - Message Testing
  - Widescale Research
  - Web Presence
• **Goals**
  
  • Identify strategic partnerships
  • Initiate contact with organization
  • Develop blueprint for national, state, and local partnerships
Promise Task Group

• Goals
  • Identify the promises that matter using market research
  • Highlight best practices
THANK YOU!

RWILLIS@ASPHALT PavEMENT.ORG