

**Agency, Industry, and University Partnerships: Workforce Development and Implementable Solutions**

**Southeastern Asphalt User/Producer Group (SEAUPG) 2017 Annual Meeting and Exhibits**  
November 14-16, 2017, Jacksonville, FL

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### Acknowledgements

- **Agency:** Mississippi DOT, US Army Corps of Engineers, TxDOT, NSF
- **Industry:** 40 Contributing Entities of the Construction Materials Research Center (CMRC)
- **University:** Students, Faculty, Staff, Administration

### Session Layout (90 minutes)

- Session Overview & Mississippi, Texas Perspectives – 40 min
- Panel Member Perspectives – 20 min
- Panel Members Take Questions from Audience – 30 min
- Panel Members
  - Agency – Griffin Sullivan (MDOT)
  - Agency - Robert Lee (TXDOT)
  - Industry – Harold Mullen (TXAPA)
  - Industry - Braden Smith (Hunt Refining)
  - University – Amit Bhasin (UT Austin)
  - University – Isaac L. Howard (MSU)

### How Does MS develop workforce and implement useful items into practice?

1. Pursue active participation of the entire infrastructure community through CMRC by having something for everyone, but with the understanding that everything is not for everyone
  - CMRC’s current involvement by category: undergraduate students, graduate students, university administrators, faculty/staff, contractors, consultants, material suppliers, agencies, transportation commissioners, trade organizations, associations, foundations, equipment manufacturers

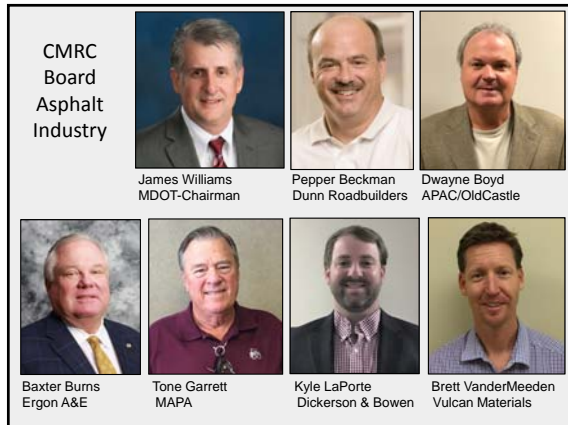
### How Does MS develop workforce and implement useful items into practice?

2. Avoid totally self serving ideas such as exemplified below
  - I don’t benefit from that article, so I won’t help
  - I don’t benefit from those students learning so I am not going to help with that class
  - I don’t get promoted because of doing outreach so I am not speaking at your event

### How Does MS develop workforce and implement useful items into practice?

3. Focus on the main statement in our charter  
CMRC aims to be an industry, agency, and university partnership and a sound program at all levels that couples discovery and education
  - Partnerships communicate – our main vehicles are an email list, meetings twice per year, and a Board of Advisors



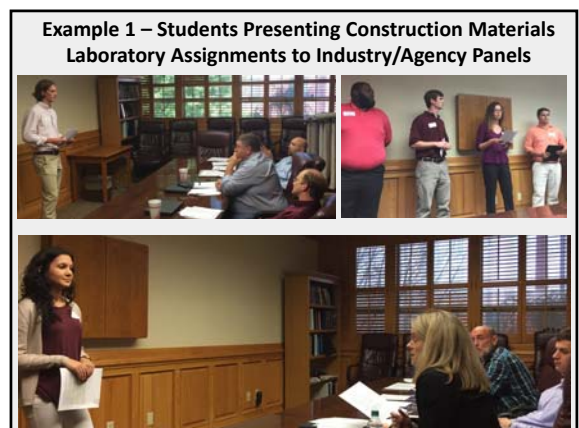
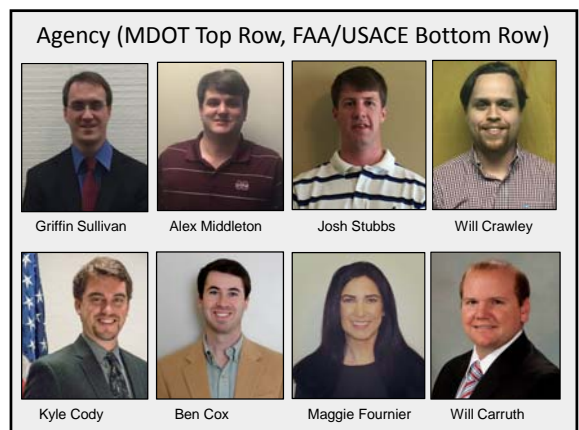


**How Does MS develop workforce and implement useful items into practice?**

4. Focus on Developing Skills of Graduates

Our main goal is to produce engineering graduates that are balanced and well grounded in fundamental principles because that in turn leads to the list below when students are taught by way of producing this list

- Implementable products from research or outreach/service
- Publications
- Presentations, demonstrations....at conferences/meetings
- Recognition
- Financial support
- Interest in the program (future students, industry, agencies...)



### Example 2 - The Paving Process Class

EUTAW  
PHILLIPS CONTRACTING  
NEEL-SCHAFFER  
apac  
Hent  
MISSISSIPPI Department of Transportation  
MDOT

Hill State Boulevard

### Example 2-The Paving Process Class

James Williams  
MDOT

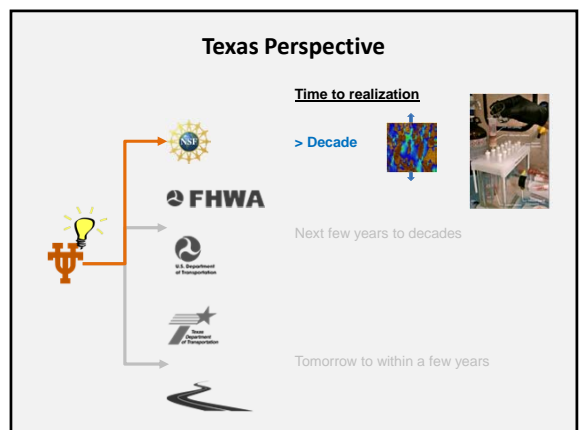
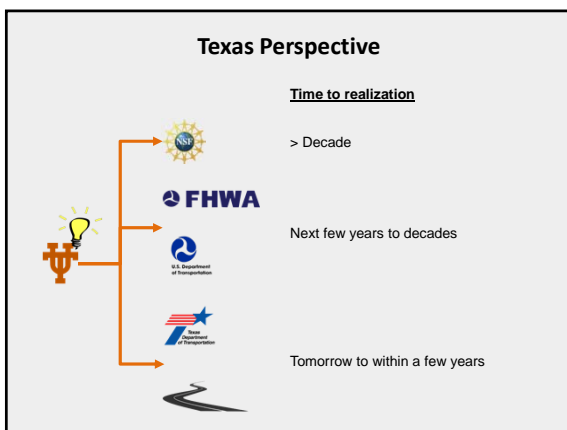
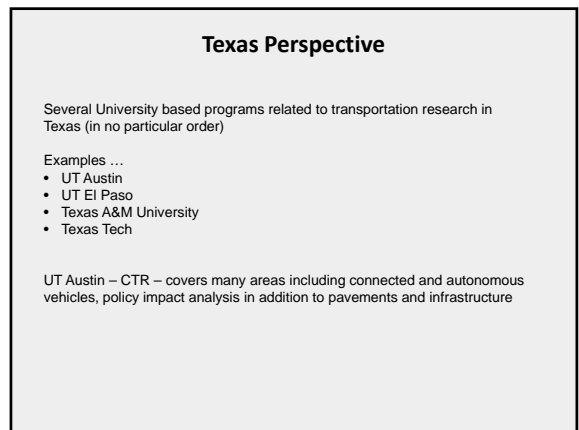
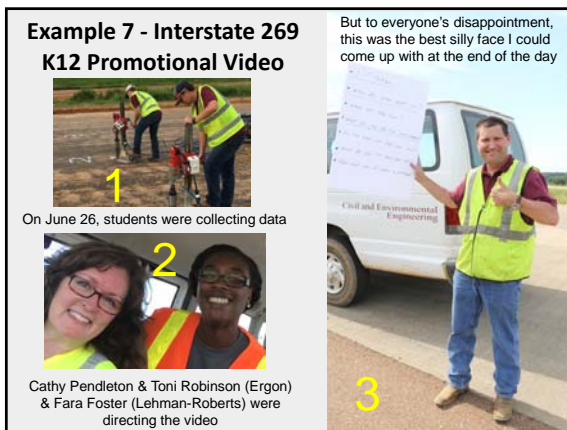
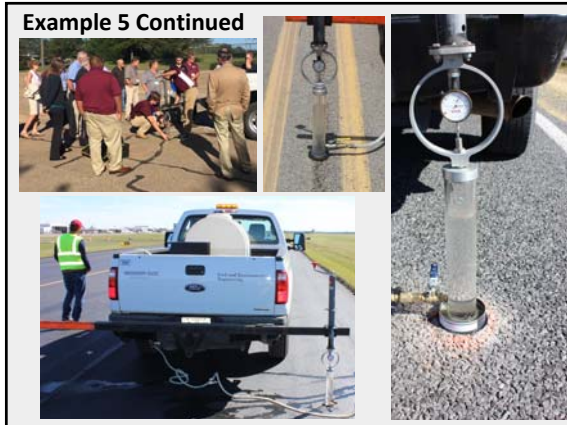
### Example 3 – Student/Industry Interactions

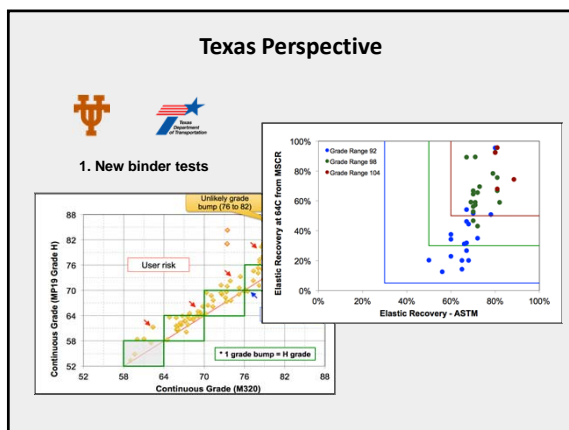
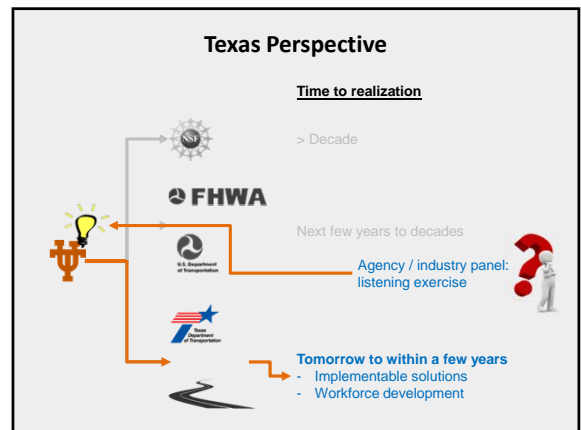
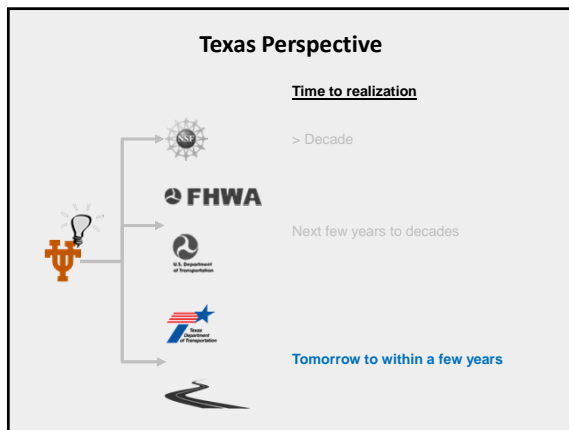
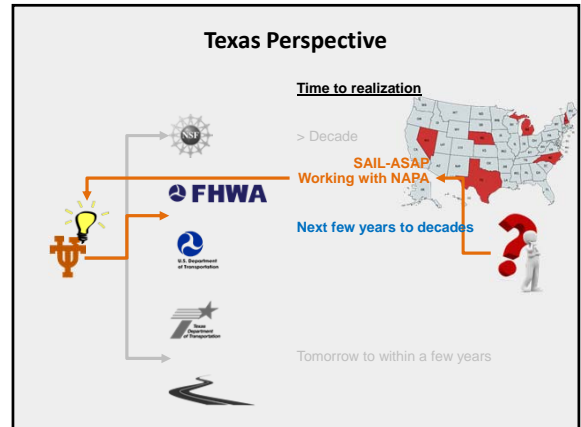
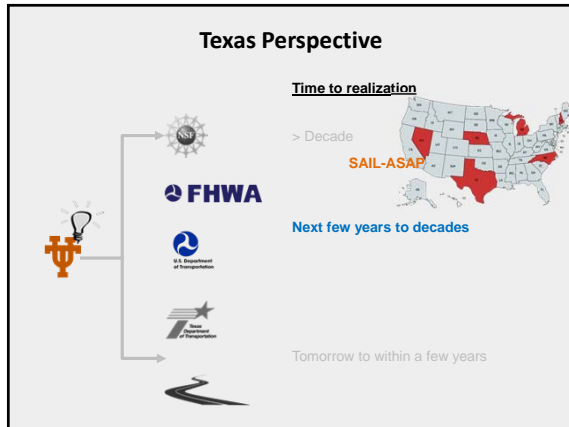
### Example 4 - Research - Emergency Paving Demonstration Turned Field Aging Study

### Example 4 Continued – 5 years and roughly 3,000 cores later

### Example 5 – Research – Pavement Infiltration with Mississippi Permeameter (MSP)

Trailer Jack with Load Ring  
MSP Truck Mount  
Standpipe





### Texas Perspective


gradr Virtual Asphalt Grading Lab

The University of Texas at Austin  
Cockrell School of Engineering


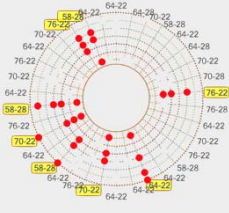
What would you like to do?  
Drag your sample of emulsed binder to a device...

- Aging Device
- Compaction
- Roadway Repair (Ravels, 1995)
- Pavement Stair Stability (TSU)


### Texas Perspective




2. New binder specs




### Texas Perspective




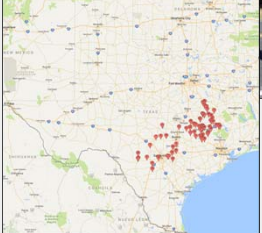
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### Texas Perspective



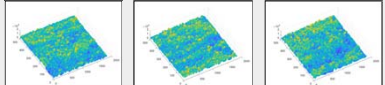

3. Chip seal quality monitoring




### Texas Perspective




3. Chip seal quality monitoring




### Texas Perspective



4. Student scholarship program

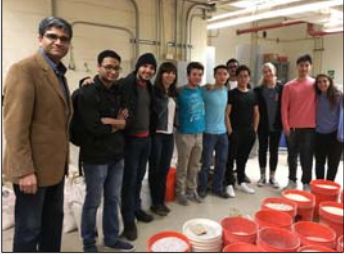


### Texas Perspective



5. Asphalt Road-eo

ASCE Student Chapter organizing with support from TXAPA



### Recommendation

- There are 14 SEAUPG states
- Recommend 2 to 3 different states hold a session each year to talk about how they are partnering, developing their workforce, and working toward implementable solutions. A state would be back up every 5 or 6 years.

### Thank You!



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