2019 PAPA Bus Tour

Goals, Objectives and Future Direction

George W. McAuley Jr., P.E.
Deputy Secretary for Highway Administration
PA Department of Transportation

July 31, 2019, District 4-0
PennDOT – A Very Large Enterprise

- 40,000 Miles of Roadway
- 25,400 Bridges
- $10.2 Billion Budget
- $2.4+ Billion Annual Construction Contracts Awarded
- 11,375 Employees
- 11,375 Employees 7,200 Maintenance Employees
- 53 Transit Systems
- 64 Operating Railroads
- 3 Ports
- 128 Public Use Airports
- 102 Billion Annual Vehicle Miles Traveled
- 2,440 Miles of BicyclePA Routes
- 10.3 Million Licensed Drivers & ID Holders
- 11.8 Million Registered Vehicles
Focus Areas

- Safety
- Relationships
- Diversity and Inclusion
- Asset Management
- Evolution
- Innovation
Safety

- Safety Culture Established - 2011
- Reinvigorate Safety Emphasis
  - Fleet changes
  - Executive Safety Council
- Automated Work Zone Speed Enforcement
- Silica Dust
- Industry Statistics?
Relationships

- PennDOT Connects
- Partnering, Future Leaders, Regional Sessions, Winter Schools
- QIC’s, TQI,
- Workforce Development forward?
Diversity and Inclusion

- 2019 – Third Year of Outreach Sessions
- Small/Diverse Businesses
- Training
- Industry efforts?
Asset Management

- Transportation Asset Management Plan (TAMP) draft approved by FHWA
  - PAMS, BAMS
  - Adding Guiderail, Drainage, others?

- Design Roads and Bridges Differently?
- Improved rehabilitation techniques?
- Better Preservation Tools and Processes?
Quality

- TQI
  - Design
  - Construction
  - Procurement

- RAC
  - Reformatted Approach

- STIC
  - Restructured

- QICs
Traffic Speed Deflection Devices (TSDDs)

- Measurement: Deflection Velocity of Pavement
- Speeds up to 60 mph
- 100-200 miles per day
- Determine Existing Structural Condition
- Data Integrated w/PAMS
- Pooled Fund Study TPF-5(385)
- 3 Years @ 300 Miles/Year
- 2019 – 80 Miles of Asphalt Projects- Project Level Assessment

- Other Objectives:
  - Define Data Collection Protocols
  - Use on Composite or Concrete Pavement?
  - Compare to FWD
  - How to Incorporate Data into Pavement Management
  - Define Value Added
Evolution

- Planning
- Design
- Construction
- Maintenance

change is difficult.
not changing is fatal.

WE GOT THIS!
Innovation – RD&D

• Deployment is where we struggle

• Office of Operations and Performance

  ➢ Research
  ➢ STIC
  ➢ New Products
  ➢ QIC’s
  ➢ TQI
What We’ve Done – Where We Are Headed

- Research 3-5 years
- Innovation quickly
- But need to understand plan
- Deployment
- Between R&I
What We’ve Done

- PWL
- Broader applications of RAP
- Late Season Paving
- Mix enhancements for super pave
- Longitudinal joint density
- Thinlay
- Long life
- Binder overlays
- High RAP Binder
What’s Next

- 408 Rewrite
- Thinlay – broader deployment? RAP?
- Fibers in mixes
- RAS
- High RAP wearing
- High RAP 25 mm
- RAP in SMA
- Shoulder applications
- Quality Consistency
Performance Based Acceptance
Hybrid Approach

• Quantities typically not to F&T requirements
• Continue acceptance testing
• QC data consistency – Incentive/Disincentive
• What performance improvement can we achieve?

ISO for Asphalt ➔ PASIN
Pennsylvania Asphalt Improvement Network
Flood Impacts

- In 2019, $42 Million total in Emergency Funding
  - 34 projects let (14 projects approximately $10 million related to 2018 flooding)
- In 2018, $125 Million total in Emergency Funding
- Secondary Road Improvement Program impacts
Pennsylvania’s Interstate System

Annual Funding Need*

- $460M  
  • Current Interstate Funding

- $1.2B  
  • Cyclic Asset Based Need  
  • Maintain existing highway and bridges

- $1.5-$3B  
  • Address Reconstruction Needs  
  • Modernization  
  • Strategic Investments

*Needs are based on current dollars, unadjusted for inflation
AASHTO R & I

• Research to Deployment
  • 3 to 5 years
  • How to keep pace with Technology?

• Tools to enhance Research and Innovation

• Culture to Innovate
  • AASHTO Innovations Initiative
  • Innovation Community of Practice
Moving Forward into 2019

We look forward to working with PAPA and its members in 2019!

Any Questions?