Asphalt Institute Update

PAPA Annual Meeting
Hershey, PA
January 26, 2016

Gregory A. Harder, P.E.
Asphalt Institute Headquarters
Lexington, Kentucky
AI’s 2016 Leadership...

2016 Chairman
John Janes
Associated Asphalt

2016 Vice Chairman
Bob Sedon
United Refining Company
2015 Roll of Honor Recipients...

Tony Kreich, Heritage Research
Gerald Reinke, Mathy Construction
Emeritus Status

Bob Bailey
Kokosing Materials

Bill Haverland
Associated Asphalt

Dr. Earl Arp
Asphalt Institute

Also achieving this status in 2015:

Tom Reynolds (formerly with BP)
Bill Thorpe (formerly Paramount Petroleum)
Bernie McCarthy (AI staff retiree)
New Mission Statement

Through education, engineering, technical development, environmental stewardship and marketing leadership, the Asphalt Institute promotes the safe use, benefits, and quality performance of petroleum asphalts in a unified voice for our membership.
Asphalt Institute Foundation

• Incorporated June 4, 2014; IRS Code 501(c)3, nonprofit public charity
• First Board Meeting August 15, 2014 (Boston, MA)

• Mission: “To conduct strategic research and educational activities that are designed to advance and improve the liquid asphalt industry.”

• Compliments the Institute’s mission
  – **Strategic Research** to advance our industry
  – **Educational Activities**: Internship program designed to expose students to our industry - one example
Inaugural AIF Golf Fundraiser Tournament
Wayne Jones is teaching two classes at the National Pavement Expo 2016:

- **Materials Selection: Quality + Efficiency = More Profitability, Part 1**
- **Pavement Evaluation and Repair: Quality + Efficiency = More Profitability, Part 2**
Feb. 17-19, 2016  
Orlando, FL  

10x10 booth presence, booth 1318  
trade agreement through advertising  
promoting our roofing proficiency sample program
Mar. 22-24, 2016
Nashville, TN

10x10 booth presence, booth 1045
trade agreement through advertising
promoting our seminars, publications
6,000+ attendees
June 1-3, 2016
Prague, Czech Republic
booth presence
promoting our webinars,
eBooks and online
offerings
• Full schedule of seminars
• Class offerings across the country
• Marketing includes
  • Website
  • Magazine
  • emails
  • Social media
  • Google AdWords
  • RE promotion
EPIC Class ‘16-’17

Experiential
Participatory
Image-driven
Connective

3 facility tours
Elective options
Writing assignment
Group project
Tour Locations

Kleen® PERFORMANCE PRODUCTS

OWENS CORNING® INNOVATIONS FOR LIVING®

FLINT HILLS RESOURCES®

Associated Asphalt Inc.
19.1 M tons reported in US for dues purposes (2013 data)
19.7 M tons reported in US for dues purposes (2014 data)

Reported Modified Asphalt use level 2013 – 2014 is 10% for both
Reported Emulsion use level 2013-2014 is 8% for both

86% to paving operations
14% to non-paving operations
3.5% increase in paving tons (2013-2014; US totals)

AI members receive the full report annually as part of their dues. It is also for sale upon request lallin@asphaltinstitute.org
Pavement Promotion – Structure

Research, Marketing & Deployment Council

**Research & Technology**
- PEC Activities
  - Pavement Design
  - Pavement Type Selection
  - Environmental Sustainability
  - Best Quality & Competitiveness
  - Pavement Preservation
  - Legislative

- Other Research
  - Asphalt Institute
  - NCAT

- Future Research

**Market Research & Communications**
- Market Research & Plan Development
- APA Brand Management
- Communications Plan
- Advertising Campaigns
- Websites
- APA Product Finalization
- Agency Contract Management
- Editorial Placement
- Creation of Marketing Materials
- Benchmarking

**APA Deployment Activities**
- Customer (SAPA) Support (including non-SAPA states)
- Asphalt Vault
- Deploy Research & Marketing Materials
- Big Box Stores
- Field Resource Team Leadership & Coordination
- Trade Shows
- Perpetual Pavement Awards
- Speaking Engagements
- Sponsorship requests

**Pavement Economics Committee**

**Go-To-Market Task Group**

**Deployment Task Group**

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*Figure: Diagram showing the structure of Research, Marketing & Deployment Council with details of PEC Activities, Market Research & Communications, and APA Deployment Activities.*
AI Spending on Deployment

2016:

$400k for APA Deployment
NAPA contribution matches AI
SAPA contribution at $100k (fenced)

Yields $900k for APA Deployment
BBT/NBTC
• Basic Binder Technician training; and
• National Binder Technician Certification

• BBT
  • Training course for newer binder technicians

• Based on same material as NBTC
  • Great preparation for when the technician wants certification

• Learning best practices from start
AI Laboratory Programs

• NBTC
  • Partnership with NETTCP since 2008
  • MS-25, 3rd Edition, 2nd Printing
  • Over 300 certifications/re-certifications awarded in 50 classes in KY 15 different states/provinces/countries
    • Canada, Qatar
AI Laboratory Programs

BET
• Basic Emulsion Technician training
  • Training course for newer asphalt emulsion technicians
  • Hands-on; best practices
  • First course in April 2015
  • Three courses planned for 2016
• Certification program
  • Stand-alone or module in NBTC?
AI Laboratory Programs

BMT
- Basic Mixture Technician training
  - Training course for newer asphalt mixture technicians
  - Hands-on; best practices
    - Aggregates
    - Asphalt mixtures
  - 3 ½ days
- Three courses planned for 2016
- Optional certification exam
- Can be taken on the road
- Precursor for MDT and Bailey courses
AI Laboratory Programs

R18LabQMS

• Lab Quality Management System
• Does not have to be AMRL-certified to use
• NBTC (Technician) + R18LabQMS (Lab) = QUALITY
• Launched in March 2013
  • Version 1.7.0
• 50 Labs (37 Primary Labs; 13 Satellite Labs)
• 90% Re-subscription rate in 2015
AI Laboratory Programs

Roofing Asphalt PSP

• Initiative started by Paramount
• AI assumed role in 2005
FHWA Cooperative Agreement

- Partnership with Regional Engineers
- Five-year, 2.5MM contract
  - Started in 2011, expected to end in early 2017
- Key Issues
  - Compaction
  - RAP-RAS Usage
  - MSCR Use and Implementation
  - Intermediate Temperature Parameter for Binders
  - Mixture Cracking/Durability Tests
Roles of an AI RE

Technical Assistance
Members and Agencies
Implementing New Technologies/Methods

Represent Suppliers on Technical Matters
State, Regional and National Committees
Resolve Issues (i.e. specs)
LCCA and Alternate Bidding

Develop and Deliver Best Practice Information
Publications
Conference Presentations
Training Programs

Always Promoting Quality
as unbiased industry experts
FHWA / AI Co-op Agreement

Deployment of Innovative Asphalt Binder and Construction Technologies

80/20 cost share

Major Tasks for RE’s:

• MSCR Implementation
• Longitudinal Joints
• Intelligent Compaction
• Tack Coat Best Practices
• REOB Literature Synthesis
• Guidelines for Thin-lift Overlays
• Increased In-Place Density
1) Best Practices for Constructing and Specifying Longitudinal Joints

2) Intelligent Compaction

3) Tack Coat Best Practices

New 4) Enhanced Durability Through Increased In-Place Pavement Density
Longitudinal Joint Workshops
2012 - 2015

At the request of the DOT

Winter 2016
41 Workshops Completed, over 3600 in attendance

34 additional presentations to another 3600 over same period
AI’s IC Workshops (4-hrs) and Presentations

- 15 Workshops Since 2013
- 20 Additional Presentations Since 2013

AI has also participated in 18 IC Research/Demo Projects
Dec 2014 – Pilot, VA

Completed (38) Scheduled 2016 (7) Not Scheduled

As of Jan. 26, 2016

Reach:
~ 2500 Workshop Attendees to date.
Plus additional 3000 with TC presentations.
Tack Coat Workshop Objectives

I. Importance of Tack Coats
II. Tack Coat Materials Selection & Handling
III. Tack Coat Specifications & Manuals
IV. Quality & Inspection
V. Testing & Best Practices
VI. Review & Summary
New FHWA Priority Program in 2016

Enhanced Durability Thru Increased In-Place Density

• AI to Develop Full-Day Workshop by April 2016

• Covering Best Practices and New Technologies:
  • Compaction Basics
  • Lift Thickness
  • Mix Design
  • Tack Coat
  • Longitudinal Joints
  • Intelligent Compaction
  • IR Bar
  • WMA
  • Specs

• Start Delivering in Summer 2016
  • 1st Priority is 10 States w/ “demo” projects, then other 40 States
Effect of In-Place Voids on Life

Washington State DOT Study

Percent Service Life

In-situ Air Voids, %

5 6 7 8 9 10 11

High-D Construction!

Typical Construction

Typical L. Joint Construction

Raising-the-Bar from 92% to 94%

5 to 8%

20 to 25%
FHWA Asphalt Pavement Technology Program – **Improved Durability through Increased Field Compaction**

- A 2% increase in field compaction will increase asphalt pavement service-life from 5 to 25%!

- Today’s compaction target is 92% of maximum ($G_{mm}$) or 8% air voids), with varying requirements for the area near the longitudinal joint

- **High-D Pavements** target is 94% across the entire pavement!
  - Just 2% more... makes a huge difference!
Let’s Bring it **ALL** together...

\[ \text{Density} = \text{Durability} \]
IS-230

Major re-write in 2014-2015

• Expanded sections on oxidation, additives, crude sources

• Expanded references

Available in print and PDF format
AI or Eurobitume websites
Questions?