APA Deployment Update

January 17, 2017

Amy Miller, P.E.
National Director, APA
PEC Task Groups

- Best Quality & Competitiveness
- Environmental Sustainability
- Legislative
- Pavement Type Selection
- Pavement Design
- Pavement Preservation
- Private Sector Markets & Local Roads
• State of the Practice
• Recalibration Procedure for the Structural Asphalt Layer Coefficient (AASHTO 93)

Reports and Synopses Posted on: www.ncat.us
Research & Technology

Pavement Economics Committee
- Six Task Groups

Other Research
- Asphalt Institute
- NCAT

Future Research

Market Research & Communications

Go-To-Market Task Group

Deployment Activities

Deployment Task Group
Factsheets
Infographics
Videos
Presentations
Advertisements
Media Outreach
More
## Go To Market Effort

### The Challenges
- Grow Market Share
- Competitive Materials
- Road Owner Perceptions
- Make Asphalt Sexy

### The Strategy
- Focus on Human Concerns
- Leverage Market Research
- Connect What Drivers Want With What Road Owners Know Asphalt Delivers
It doesn’t matter if you’re driving in a race car, heading your child to school, or driving your father to the hospital. It’s your family, and you want to get to where you’re going safely and quickly. That’s why almost all NASCAR tracks are asphalt, and why I prefer it no matter my speed.

—Dario Scheck | NASCAR Pritzlaff Motorsports Inc. | Father

**Advertisements**
Focused on:
- Speed of Construction
- Noise
- Smoothness
- Sustainability
- Safety

Print & Web Formats
Six videos currently available
Viewed 109,638 Times

Feel-good positive messages about asphalt, others focus on specific attributes or work to educate viewers about asphalt.
ASPHALT MAINTENANCE CAN BE DONE OUTSIDE OF RUSH HOUR
About 75 percent of the oil consumed in the United States is used as vehicle fuel. Despite increases in vehicle fuel economy over the past few decades, fuel costs remain a significant budget item for the public and businesses alike. Numerous factors influence the fuel economy of a vehicle, from its aerodynamic properties, engine, tire pressure, and oil temperature; however, just three basic forces impact fuel economy: vehicle interface friction, air drag, and rolling resistance. While these forces always affect fuel economy, they vary in importance based on the vehicle speed. For example, when a vehicle is traveling at 30 miles per hour, 40 percent of the energy needed to move the car is used to overcome rolling resistance, but at 70 miles per hour, the rolling resistance only comprises about 20 percent of the energy expenditure.

<table>
<thead>
<tr>
<th>Vehicle Energy Consumption by Speed</th>
<th>30 mph</th>
<th>70 mph</th>
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<tbody>
<tr>
<td>Rolling Resistance</td>
<td>40%</td>
<td>20%</td>
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<tr>
<td>Internal Friction</td>
<td>30%</td>
<td>18%</td>
</tr>
<tr>
<td>Aerodynamic Drag</td>
<td>25%</td>
<td>6%</td>
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</table>

The rolling resistance force a vehicle must overcome to maintain speed are linked to its suspension system, bearings, transmission, tire pressure, and the properties of the pavement. Three pavement properties are commonly understood to influence rolling resistance:

- **Surface Texture**: The roughness of the aggregate materials in a pavement.
- **Smoothness**: Surface smoothness that affects perceived ride quality.
- **Pavement Stiffness**: How the pavement deflects under a vehicle's weight.
Five regional councils focused on what works in the field to the benefit of the asphalt pavement industry locally and nationally.
Northeast Review

• Meeting held in March, 2016 – Wilkes-barre, PA
• 50+ attendees
• Developed 3 Initiatives and Action Items
• Regional Council Created
  – Upcoming con-call
Northeast Update

DURABILITY
Goal: To protect market share by enhancing and promoting long-life asphalt pavements.

Action Items - short term:

- Presentation to promote what our states have done to enhance durability. Need to compile what each state has done. Also, describe what is coming….what we are working on for continuous improvement.

- Develop list of key speaking opportunities to present above industry presentation: LTAP, TRB, AASHTO, ACEC, NACE, etc.
● Develop presentations and opportunities to present to design engineers and municipality engineers on mix design opportunities (RAP – move them away from always requiring DOT specs on private work).

Goals - Long term:
● Track research on performance based specifications and tests and keep states updated.
● Put together a consortium to determine if there is an interim step between current state and long-term goal.

PAVEMENT PRESERVATION

● Goal: To protect and recover plant mix asphalt market share.
PAVEMENT PRESERVATION

Goal: To protect and recover plant mix asphalt market share.

Action Items:
- Promote Thinlay to key stakeholders. Develop competitive message focused on northeast states. Develop simple marketing documentation that describes: process, equipment, list improvements, etc.

REGIONAL PROMOTION ACTIVITY

Goal: Give recognition to key projects and the associated designers, contractors and owners to endorse the use of asphalt.
- Annual showcase award from each state to be celebrated at NEAUPG.
# Northeast Regional Council

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>State</th>
<th>Phone</th>
</tr>
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<tbody>
<tr>
<td>Amy Miller</td>
<td>APA</td>
<td></td>
<td>(904) 591-3333</td>
</tr>
<tr>
<td>Greg Harder</td>
<td>Asphalt Institute</td>
<td></td>
<td>(315) 238-7000</td>
</tr>
<tr>
<td>Bruce Barkevich</td>
<td>NYMaterials</td>
<td>NY</td>
<td>(518) 783-0909</td>
</tr>
<tr>
<td>Chris Suttmeier</td>
<td>Peckham Materials</td>
<td>NY</td>
<td>(914) 403-6827</td>
</tr>
<tr>
<td>Charles Goodhart</td>
<td>PAPA</td>
<td>PA</td>
<td>(717) 657-1881</td>
</tr>
<tr>
<td>Dan Bauman</td>
<td>G.O. Hawbaker</td>
<td>PA</td>
<td>(814) 404-7823</td>
</tr>
<tr>
<td>Jim Purcell</td>
<td>NJAPA</td>
<td>NJ</td>
<td>(609) 838-1867</td>
</tr>
<tr>
<td>Scott Laudone</td>
<td>Titcon NY</td>
<td>NJ</td>
<td>(973) 888-7689</td>
</tr>
<tr>
<td>Jim Reger</td>
<td>Mass Agg &amp; APA</td>
<td>Mass</td>
<td>(781) 762-2367</td>
</tr>
<tr>
<td>Mike Barry</td>
<td>Palmer Paving</td>
<td>Mass</td>
<td>(413) 283-8354</td>
</tr>
<tr>
<td>Ron Simbari</td>
<td>All-states Material Co.</td>
<td>Maine</td>
<td>(207) 249-8378</td>
</tr>
<tr>
<td>Marshall Klinefelter</td>
<td>MdAsphalt</td>
<td>Maryland</td>
<td>(443) 220-4954</td>
</tr>
<tr>
<td>Jeff Graf</td>
<td>Maryland Paving</td>
<td>Maryland</td>
<td></td>
</tr>
<tr>
<td>Jim Clendaniel</td>
<td>Del APA</td>
<td>Delaware</td>
<td>(302) 422-3197</td>
</tr>
<tr>
<td>Tim Peffer</td>
<td>Allan Myers, Inc.</td>
<td>Delaware</td>
<td>(717) 442-6113</td>
</tr>
<tr>
<td>Don Shubert</td>
<td>Conn Asphalt &amp; Agg</td>
<td>Connecticut</td>
<td>(860) 529-6855</td>
</tr>
<tr>
<td>Brad Oneglia</td>
<td>O &amp; G</td>
<td>Connecticut</td>
<td>(203) 522-2259</td>
</tr>
<tr>
<td>Alex Phelps</td>
<td>Pike Industries</td>
<td>Vermont/N.H</td>
<td>(603) 530-2237</td>
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Northcentral Review

- Meeting held in July, 2016 – Chicago
- 50+ attendees
- Developed 4 Initiatives and Action Items
- Regional Council Created
# Initial NC Discussion

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<thead>
<tr>
<th>LCCA</th>
<th>Proper Design Thickness</th>
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<tr>
<td>PaveXpress Implementation</td>
<td>IRI Explorer database</td>
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<td><strong>Rehab Options</strong></td>
<td>EPD’s and Life Cycle Assessment</td>
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<td>Perpetual Pavement</td>
<td><strong>Commercial Market</strong></td>
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<td>HMA Recycling &amp; Utilization</td>
<td>Common Technical Initiatives</td>
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<tr>
<td>Roller Compacted Concrete</td>
<td>Fractured Slab Technologies</td>
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Southeast Regional Meeting

- Initial group met November 14th;
- Meeting planned for February 15-16 in Atlanta, GA.
Trade Shows 2017

- ConAgg/ConExpo: Waiting List; March 7-11, 2017; Las Vegas, Nevada
- National Association of County Engineers: April 9-13, 2017; Cincinnati, Ohio
- RECON – International Council of Shopping Centers: May 21-24, 2017; Las Vegas, Nevada
- American Society of Highway Engineers; June 14-18, 2017; New York, New York
- AASHTO Materials Conference: July 30-August 4, 2017; Phoenix, Arizona
- American Public Works Association: August 27-30, 2017; Orlando, FL
- Greenbuild: November 8-9, 2017; Boston, Massachusetts
Deployment Communication

New Asset of the Month
Fresh from the Go-to-Market Task Group

Asset: Smoothness Advertisement
Intended Audience: Pavement-type selection decision makers, asphalt pavement industry and drivers.
Format: Available in full- and half-page versions, as well as several sizes for use on the Internet.
Where: The Asphalt Vault, available in APA and customizable "add your logo" versions. Usage recommendations: Share on social media, use in print or electronic newsletters and publications, as well as in emails geared to reach state DOT officials, public works agencies, consulting engineers, and design-build firms.

Why Smoothness? FMWA has determined that pavement smoothness is a key factor in ensuring driver satisfaction. Also, a May 2016 report from the International Grooving and Grating Association notes: "Research..."

What is Old is New Again...
Don’t forget this oldie but goodie

Focus: Proper Pavement Design
Intended Audience: Pavement designers, consulting engineers, students, local agencies.
Format: Free, web-based pavement design tool.
Where: www.pavexpressdesign.com. Support materials (instructional PowerPoint, advertisements, brochure, etc) are available via the Asphalt Vault. Usage Recommendations: Put together a lunch-and-learn with local agencies — cities, municipalities, consulting firms, DOTs, DPW, etc — to highlight the tool if you can offer free CEU/RPCH credits to help encourage attendance. A customizable PowerPoint file is available for such a presentation. To understand all the features, view a free, training webinar, found here: PavExpress Webinar. You can also demo the program at local trade shows or when meeting with local engineers or..."
Deployment Communication

- Monthly Con-call – 3rd Tuesday Monthly
  - 20-40 Attendees
  - Standard items: PEC/GTM Update, APA Regional Effort Update, Competition Issues, Legislative Issues, Asphalt Institute Regional Engineer Update
  - Featured Speaker
Deployment of GTM Assets

- Social media webinars for SAPAs
- Monthly social media calendar
Asphalt Vault

- Repository for State Execs
- First full year in use
Any Questions?

Amy Miller
amiller@asphaltroads.org
Asphalt Pavement Alliance

presents

Perpetual Pavement Award

Interstate 180
How To Design A Road To Withstand Time, Traffic, and Taxpayers

Perpetual Pavement Design

Asphalt Surface
Renewed periodically. Maintained to ensure a high level of drivability. Surface type can be customized depending upon needs: open-graded friction courses for safety, stone-matrix asphalt for added durability, Thinlays™ for pavement preservation, etc.

Asphalt Base
Stiff structural layer designed to distribute loads and resist structural rutting. Optimizes materials and costs with use of RAP, RAS, and other recycled materials.

Fatigue-Resistant Asphalt Layer
Flexible layer designed to prevent fatigue cracking and bottom-up cracking. The overall thickness of the structure and the materials of this layer help limit the maximum tensile strain to below the fatigue endurance limit.

Pavement Foundation
The subgrade may be stabilized or unstabilized.
Perpetual Pavements
Criteria:

- 35+ years old
- 13+ years between overlays (average)
- No increase > 4"
Congratulations!

Pennsylvania
DEPARTMENT OF TRANSPORTATION

Interstate 180 MM1.5-MM4.5
THANK YOU!