

# Meeting Details

## **TEXAS Saturday 25 to Tuesday 28 October 2014**

### **Sunday, October 26, Dinner and Plant Tour**

6:00 PM – 8:00 PM, Dinner at Saltlick Bar-B-Q  
Address: 18300 FM 1826, Driftwood, TX 78619  
Phone: 512-858-4959

Followed by a HMA Plant Tour at Ramming Paving Company  
Address: 1101 FM 2770, Buda, TX 78610

### **Monday, October 27, Meetings, Lab Tour, Lunch**

8:30 AM – 4:30 PM, TxDOT Cedar Park Campus  
Address: 9500 Lake Creek Parkway – Building 51, Austin, TX 78731

### **MEETING AGENDA**

8:30 AM – 9:15 AM Welcome/Introductions and Overview of Texas Construction  
Harold Mullen, TXAPA, Robert Lee, TxDOT, Daren Hazlett, TxDOT

9:15 AM – 11:00 AM Tour of TxDOT Laboratories  
TxDOT

11:00 AM – 11:30 AM Overview of Topics and Discussion  
Dr. Dave Newcomb, TTI

11:30 AM – 12:15 PM Lunch at TxDOT

Following Lunch We Will Split Into Two Different Streams, Construction and Pavement Engineering

#### *Construction Stream*

12:15 PM – 3:45 PM Safety - Doug Wilcox, Ramming Paving Company  
Operations – Best Practices - Mike Brown, APAC – Wheeler; Jeff Greene, American Materials Company  
Traffic Control - Mike Brown, APAC – Wheeler; Jeff Greene, American Materials  
Thin Overlays - Chuck Fuller, Ramming Paving Company

#### *Pavement Engineering Stream*

12:15 PM – 3:45 PM TxDOT Design Procedures and Perpetual Pavement – Joe Leidy, TxDOT  
Thin Overlays and Overlays of PCC – Mike Arellano, TxDOT  
Sustainable Pavement Solutions – Robert Lee, TxDOT; Dr. Jon Epps, TTI  
Product Accreditation – Jerry Peterson, TxDOT

#### *Combine Streams for a Joint Meeting*

3:45 PM – 4:30 PM TxDOT Infrastructure Investment – James Bass, TxDOT (?)  
4:30 PM Adjourn Meeting  
6:00 PM Dinner, location depends on hotel location

## **TEXAS Saturday 25 to Tuesday 28 October 2014**

### **Tuesday, October 27, Meetings and Tour of Certification Center**

7:30 AM – 10:00 AM, Texas Asphalt Pavement Association/Hot Mix Asphalt Center

Address: 149 Commercial Drive, Buda, TX 78610

Phone: 512-312-2099

#### **MEETING AGENDA**

- |                    |   |
|--------------------|---|
| 7:30 AM – 8:15 AM  | Tour of Hot Mix Asphalt Center Certification Laboratories<br>Jimmy Whited, TXAPA  |
| 8:15 AM – 9:30 AM  | Introduction of Innovation and New Technology – Panel Discussion<br>Mike Brown, APAC – Wheeler<br>Jeff Greene, American Materials Company<br>Gene Smith, Pavers Supply Company<br>Chuck Fuller, Ramming Paving Company<br>Robert Lee, TxDOT |
| 9:30 AM – 10:00 AM | Open Discussion and Question and Answer   |
| 10:00 AM           | Adjourn Meeting   |

## **TENNESSEE Tuesday 28 to Wednesday 29 October 2014**

Australia International Knowledge Transfer 2014

Astec Inc. | Roadtec, Wednesday October 29<sup>th</sup>

The many challenges with new mix designs

### **Tuesday October 28<sup>th</sup>**

5:35 ETA at Chattanooga Airport

6:30 Group arrives at Marriott Convention Center

7:00 Dinner

### **Wednesday October 29<sup>th</sup>**

6:45 Full Breakfast at Hotel

7:40 Bus to Astec Inc.

8:00 Introduction & Overview of Astec Industries Inc. – Ben Brock

Split Pavement Engineering Group and Construction Group at 9:00

Training Center Conference Room (Pavement Engineering)

Break - snacks

9:15 *History of Recycling* – Charlie Potts

10:45 Experiences with High Recycle Mix Designs – David Madden

12:00 – 12:45 Lunch – Training Center Lobby

Corporate Conference Room (Construction Group)

9:15 How to use More Recycle – Don Brock

11:00 Double Barrel and High Rap

– Malcolm Swanson *or* Greg Renager / Mike Varner

12:00 – 12:45 Lunch – Training Center Lobby

Groups Combine

12:45 Tour of Astec Inc. – Malcolm Swanson

2:00 Bus departs to Roadtec

2:30 Tour of Roadtec – Eric Baker

3:30 Challenges Paving with High Recycle – Eric Baker

4:00 Bus departs for airport

**OHIO Wednesday 29 October to Saturday 1 November 2014****THE INTERNATIONAL CONFERENCE ON PERPETUAL PAVEMENT 2014**

More than 250 experts from 30 states and 19 state departments of transportation attended the first two International Conferences on Perpetual Pavement (ICPP), held in 2006 and 2009, to discuss optimal design and construction approaches for asphalt pavements 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.

Following the success of the first two conferences, ICPP 2014 will provide a venue for participants to catch up with developments in this fast-moving field, and for state and local government to learn how to take advantage of the benefits of perpetual pavement.

Perpetual pavements contain a surface layer of high quality asphalt that resists rutting and traffic wear, intermediate layers of high modulus asphalt that provide structure and also resist rutting, and a fatigue-resistant bottom layer for crack resistance. Perpetual pavements are becoming popular with transportation agencies seeking to reduce lifecycle costs and eliminate user impact associated with pavement reconstruction, because maintenance is limited to periodic resurfacing.

Agency experts who have led the construction of perpetual pavements will share their experiences, including proper design and construction, for those who are considering the use of perpetual pavement. Topics will include design verification and calibration, modeling, instrumentation, construction, monitoring, and discussion of practical design approaches.

**AGENDA****Wednesday, October 29, 2014**

**05:00 – 07:00 (pm)**      **Registration and Reception**

**Thursday, October 30, 2014**

**07:00 – 08:15**      **Registration/Breakfast**

**08:15 – 09:00**      **Opening Session:**

- Dennis Irwin, Dean, Russ College of Engineering and Technology, Ohio University
- David Humphrey, Administrator, Ohio Department of Transportation (ODOT) Office of Pavement Engineering
- Cliff Ursich, President and Executive Director, Flexible Pavements of Ohio
- Douglas Davis, Muskingum County Engineer and Vice President, County Engineers Association of Ohio

**09:00 – 09:30**      **Keynote Speaker: Mike Acott**, President, National Asphalt Pavement Association, *"Perpetual Pavements: Meeting Customer Needs"*

**09:30 – 10:30**      **Keynote Speaker: M. W. Witczak**, Professor Emeritus, Arizona State University, and Professor Emeritus, University of Maryland, *"Is It Time to Re-Define the Meaning of Perpetual Pavements?"*

**10:30 – 11:00**      **Break**

**11:00 – 11:30**      Aric Morse (ODOT), *"Perpetual Pavements in Ohio"*

**11:30 – 12:00**      David H. Timm (Auburn University) and Mary M. Robbins (NCAT), *"Perpetual Pavement Research at the NCAT Test Track"*

**12:00 – 12:30**      Wes Yang (New York State Department of Transportation) and Issam Khoury (Ohio University), *"New York's Experience with Perpetual Pavement"*

## OHIO Wednesday 29 October to Saturday 1 November 2014

- 12:30 – 02:00**      **Lunch: APA Perpetual Pavement Awards: Mike Kvach, Vice President of Deployment, Asphalt Pavement Alliance**
- 02:00 – 02:30**      Benjamin B. Jordan and Shad M. Sargand (Ohio University), *"Asphalt Perpetual Pavement Design: Utilizing Existing Pavement Systems in Ohio"*
- 02:30 – 03:00**      Bevan Sullivan (Fulton Hogan), Ian Rickards, Geoff Youdale and Dougall Broadfoot (Australian Asphalt Pavement Association), *"Development of a Validated Design Procedure for Australian Long Life Pavements"*
- 03:00 – 03:30**      Mohab El-Hakim (Stantec Consulting, Ltd.) and Susan Tighe (University of Waterloo), *"Perpetual Pavements in Canada: Structural, Economic and Sustainability Assessment"*
- 03:30 – 04:00**      **Break**
- 04:00 – 04:30**      Noé Hernández Fernández, Victor M. Cincire Romeo and Francisco D. Suarez Mendoza (SemGroup Corporation, Mexico), *"Present and Future of Perpetual Pavements in Mexico"*
- 04:30 – 05:00**      Charles Wienrank (Illinois Department of Transportation), *"Illinois DOT's Maximum Thickness HMA Design Procedure"*

### Friday, October 31, 2014

- 07:00 – 08:00**      **Registration/Breakfast**
- 08:00 – 08:30**      Brian S. Driscoll (Bramhall Engineering and Surveying Co., Inc.), *"Cuyahoga County's Perpetual Pavement Project: 6 Years Later"*
- 08:30 – 09:00**      James A. Crovetti (Marquette University) and Nicholas J. Hornyak (Edgerton Contractors, Inc.), *"The Marquette Interchange Perpetual HMA Pavement"*
- 09:00 – 09:30**      Jianfeng Qin and Shad M. Sargand (Ohio University), *"Analysis of Near Surface Strain Response of Perpetual Pavement"*
- 09:30 – 10:00**      James Greene and Bouzid Choubane (Florida Department of Transportation), Sanghyun Chun (University of Florida), and Sungho Kim (Florida Department of Transportation), *"Unintended Consequences of a Stress Absorbing Membrane Interlayer on Long-Term Pavement Performance"*
- 10:00 – 10:30**      **Break**
- 10:30 – 11:00**      Mena Souliman (University of Texas at Tyler) and Michael Mamlouk (Arizona State University), *"Fatigue Endurance Limit and Designing Perpetual Asphalt Pavements"*
- 11:00 – 11:30**      Mary M. Robbins and Nam Tran (NCAT), David H. Timm (Auburn University), and J. Richard Willis (NCAT), *"Stochastic Framework for Using the Fatigue Ratio Concept in Perpetual Pavement Design"*
- 11:30 – 12:00**      Flávio R. G. Padula (CEFET-MG), J. Richard Willis (NCAT), and Adam Taylor (Auburn University), *"Fatigue Performance 2009 NCAT Test Track Mixtures Using Simplified Visco-Elastic Continuum Damage Modeling"*
- 12:00 – 01:00**      **Lunch**
- 01:00 – 01:30**      B. Shane Underwood, Waleed A. Zeiada and Kamil E. Kaloush (Arizona State University), *"Comparison of Hot Mix Asphalt Endurance Limit using NCHRP 9-44A Developed Methodology to Other Analytical Techniques"*
- 01:30 – 02:00**      R. Buzz Powell (NCAT), David Timm (Auburn University), J. Richard Willis (NCAT), Raj Dongré (Dongré Laboratory Services, Inc.), and Robert Kluttz (Kraton Polymers U.S., LLC), *"Performance and Rational Design of Thin, Highly Modified Structural Pavements"*
- 02:00 – 02:30**      Kamran Majidzadeh, Chhote Saraf, Julie Miller and Manouchehr Motamedi (Resource International, Inc.), and Dennis Albrecht (Ohio Turnpike Infrastructure Commission), *"The Ohio Studies Reveal Significant Cost Saving Potentials in Pavement Thickness Design, Construction and Performance"*

## **OHIO Wednesday 29 October to Saturday 1 November 2014**

### Friday 31 October

– meeting being planned for Construction Stream

08:00 International Perpetual Pavements Conference

Last presentation ends 14:30

09:00 Construction Stream meeting with Flexible Pavements of Ohio members.

By private coach

15:00 Streams combine to visit & meet with Asphalt Industry in the afternoon.

## **WASHINGTON DC Saturday 1 to Monday 3 November 2014**

### **Saturday 1 November Mid-Tour Compulsory Dinner**

Venue: The Old Ebbitt Grill – Cabinet Room <http://www.ebbitt.com>  
(4 blocks walking from the hotel) 675, 15<sup>th</sup> Street, NW| Washington, DC 20005

6pm-7pm – Reception (Open Bar including liquor, beer, wine and non-alcoholic beverages)

7pm – Sit for dinner

#### Menu:

Mixed Greens Salad  
Choice of Filet Mignon or Jumbo Lump Crab Cakes  
Seasonal Accompanying Dishes (Chef's Choice)  
Cheesecake  
Sodas, Coffee and Tea  
Red and White Wine Served During Dinner

### **Sunday 2 November 2014 Booked Ice Hockey Match & Dinner**

<http://verizoncenter.monumentalnetwork.com/events/capitals-vs-phoenix>

CAPITALS VS. ARIZONA

NOVEMBER 2, 2014 - VERIZON CENTER

601 F Street NW, Washington DC 20004 P +1 202 628 3200

Doors open at 6 p.m. Game starts at 7 p.m.

**Subject:** Washington Capitals Group Tickets

Our package includes a ticket to the game on the 400 level, a t-shirt for each group member, scoreboard welcome message and an all-inclusive buffet. The buffet would be open one hour prior to the start of the game and it would be available to your guests until the beginning of the 3<sup>rd</sup> period. The buffet also includes beer, wine and soda. Most people will go to the club and eat and drink the hour prior to the game and then during the intermissions. You can take food and drink back to your seats from the club. Your guests are also welcome to stay in the club during the periods. Although there is no view of the ice, we do project the game on TVs in the club

Verizon – Have walked it, easy walk about a mile they say, should take about 20 minutes to walk. You could also take the Metro. To get to the Verizon Center you can take the green, yellow or red line to Gallery Place/Chinatown. When you get off the train follow the signs that say 'To the Arena'. That will drop you off right at the corner. Then you take a left out of there and walk about 100 yards and the Verizon Center is on your right.

## **WASHINGTON DC Saturday 1 to Monday 3 November 2014**

**Australian Asphalt Pavement Alliance Visit  
FHWA Headquarters – Room E75-302  
1:00 – 3:30 pm November 3, 2014**

**Meeting in afternoon planned with Office of Asset Management, Pavement and Construction  
(contact: John Bukowski)**

### **Welcome/Introductions**

### **Discussion Topics**

#### **Advances in pavement engineering & design:**

Use of high levels of RAP – mix design, performance assessment, limits and options – Bukowski/Withee

Use of high modulus asphalt – SBS binders for High Modulus Asphalt - test and assessment - Corrigan

Use of performance of Crumb Rubber Asphalt – Corrigan

Low temperature asphalt – what is planned after WMA - Corrigan

MEPDG – use, adoption, alternative design methods – Crawford/Yu

Structural design – what methods are being used across USA – heavy duty in particular. Typical pavement structures for given loadings - Yu

### **Perpetual Pavements**

Acceptance of concept, use of the design philosophy-TBD

Field evaluation and research feedback

### **Treatments of rigid pavements - full depth asphalt or crack-and-seat with overlay**

PCC rehabilitation and maintenance using asphalt & HMA products - TBD

### **Thin overlay for pavement preservation**

Status, potential usage, introduction and opportunities for Australia – Bukowski/Harman

### **Government decision making for road infrastructure investment**

Approaches: Private sector funding role, boom / bust cycles, economic assessment, competing alternative comparisons - TBD

### **FHWA Office of Asset Management, Pavement & Construction attendees:**

Lubin Quinones, Acting Director

John Bukowski, Materials and Quality Assurance Team Leader

Matthew Corrigan, Senior Asphalt Pavement Engineer

Gary Crawford – Senior Pavement Engineer

Jeff Withee, Asphalt Pavement Engineer

Tom Yu, Senior Pavement Design Engineer

### **FHWA Resource Center Pavement/Materials Technical Service Team**

Tom Harman – Team Manager



## WASHINGTON DC Saturday 1 to Monday 3 November 2014

### Monday 3 November

#### AAPA Tour Key Topics

1. Best practice and safer construction works
2. Advances in pavement engineering and design
3. Treatments of rigid pavements including replacement with full depth asphalt or crack-and-seat with overlay
4. Thinlays for pavement preservation
5. Introducing innovation and sustainable pavement solutions
6. Government decision making for road infrastructure investment
7. Perpetual Pavements

### Morning: Planning awaiting acceptance of visit to FHWA Turner Fairbanks

Suggested topics would be:

#### **2. Advances in pavement engineering & design:**

Use of high levels of RAP – mix design systems and performance assessment, limits and options.

Use of high modulus asphalt – French EME and SBS binders for High Modulus Asphalt - test and assessment

Use of performance of Crumb Rubber Asphalt

Low temperature asphalt – what is planned after WMA

#### **3. Treatments of rigid pavements including replacement with full depth asphalt or crack-and-seat with overlay**

Systems and solutions for PCC rehabilitation and maintenance using asphalt & HMA products

#### **5. Introducing Innovation and sustainable pavement solutions**

Accelerated Pavement Testing (APT) – has this been used for product development, certification of pavement systems and products, instruction of generic and proprietary products/systems into FHWA & State DoT contracts. Ie Avis Techniques or UK HAPAS type accreditation systems.

Accelerated Pavement Testing – are there projects considering fatigue and high temperature pavements, has this been included in pavement design systems.

### Meeting in afternoon planned with John Bukowski in FHWA Head Quarters in Washington

Suggested topics would be:

#### **1. Best Practice for safer construction works**

Workzone safety week – FHWA role in co-ordination and delivery, benefits, stakeholder roles

Safer construction techniques and systems – how recognized and endorsed

Harmonisation of road user / work worker interface across States – is it possible

#### **2. Advances in pavement engineering & design:**

MEPDG – use, adoption, alternates

Structural design – what methods are being used across USA – heavy duty in particular. Typical pavement structures for given loadings.

#### **7. Perpetual Pavements**

Acceptance of concept, use of the design philosophy

Impact on MEPDG

Field evaluation and research feedback

## **WASHINGTON DC Saturday 1 to Monday 3 November 2014**

### **4. Thinlays for pavement preservation**

Status, potential usage, introduction and opportunities for Australia

### **6. Government decision making for road infrastructure investment**

Approaches: Private sector funding role, boom / bust cycles, economic assessment, competing alternative comparisons.

## **VIRGINIA Tuesday 4 November 2014**

### Virginia DOT NOVA District Office

08:30 – 11:30 Meeting with VDOT for Pavement Engineering Stream at:  
VDOT NOVA District Office – Conference Room

Topics: PCC maintenance, porous pavements, quiet surfaces, sustainable pavements, etc. eg. I-81 and NCAT sections

### Virginia Paving NOVA Office

08:30 – 11:30 Meeting with Virginia Asphalt Association contractor members and  
the Construction Stream at Virginia Paving Nova Office

Topics: learn more about the practices VAA members follow in terms of plant safety, field safety, production operations and placement operations.

## **ALABAMA Tuesday 4 to Thursday 6 November 2014**

### **Australian Asphalt Pavement Association 2010 Study Tour Preliminary Agenda for NCAT Visit**

#### Tuesday, 4 November 2014

6:00 PM Arrive AU Hotel & Conference Center  
8:00 PM Dinner at Ariccia (in AU Hotel)

#### Wednesday, 5 November 2014

8:00 AM	Depart hotel	
8:15 AM	Arrive at NCAT office	
8:30 AM	Welcome and Overview of NCAT	Randy West
9:00 AM	Pavement Design in USA: Current & Future	David Timm
10:00 AM	break	
10:15 AM	Lee Road 159 Pavement Preservation Experiment	Mary Robbins
11:00 AM	Thin Overlays	Don Watson
11:30 AM	Sustainable Pavement Solutions	Randy West
12:00 noon	lunch at NCAT	
1:00 PM	NCAT Test Track Overview	Buzz Powell
2:00 PM	Depart for the NCAT Test Track	
2:30 PM	NCAT Track Tour	Buzz Powell
4:30 PM	Adjourn for the day, return to the hotel	
6:30 PM	Dinner at Amsterdam Café (9 min walk, 700 m)	

#### Requested topics from Rob Vos

1. Best practice and safer construction works
2. Advances in pavement engineering and design
3. Treatments of rigid pavements including replacement with full depth asphalt or crack-and-seat with overlay
4. Thinlays for pavement preservation
5. Introducing innovation and sustainable pavement solutions
6. Government decision making for road infrastructure investment
7. Perpetual Pavements

## **MINNESOTA Tuesday 4 to Thursday 6 November 2014**

Details of this organization in the hands of the local hosts.

Will include inspection of the CAT Learning Centre, fabrication facility & training center / simulator facilities. Meetings with Minnesota DoT and the Minnesota Asphalt Paving Association members covering innovation, PaveIR temperature bar and their drive for safety.

## CALIFORNIA Thursday 6 to Saturday 8 November 2014

Thursday 6 November 2014

14:00-16:30 Meeting to review IKT Topics

Caltrans – Translab (Engineering and Construction)

Topics	Presenter / discussion leader
<ul style="list-style-type: none"> <li>▪ Safety in Construction – Best Practices</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mark Leja and Tony Taveras - <i>CONFIRMED</i></li> </ul>
CRM in Paving Applications – California Overview <ul style="list-style-type: none"> <li>▪ Legislative Mandate, CRM in Paving Applications, Caltrans &amp; Local Agency Use, Advantages, Disadvantages</li> <li>▪ PG+5</li> </ul>	Theron Roschen (Quincy Engineering) - <i>CONFIRMED</i>  Chuck Suszko (Caltrans Construction)

Friday 7 November 2014

Construction Stream

09:00-16:30 Meeting to review IKT Topics

CalAPA Offices West Sacramento

Topics	Presenter / discussion leader
CRM in Paving Applications <ul style="list-style-type: none"> <li>▪ Asphalt Rubber in HMA and Surface Treatments – Production, Paving and Performance</li> <li>▪ PG-TR/M in HMA and Surface Treatments</li> <li>▪ PG+5: Technical and Economic Considerations</li> <li>▪ Maintaining PCC Pavements w/ Asphalt including CRM; and Converting PCC to Perpetual Pavements</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cliff Ashcroft (FNF Construction)</li> <li>▪ Jack Van Kirk (Basic Resources) <i>CONFIRMED</i></li> <li>▪ Edgard Hitti and Jim Ryan (Paramount Petroleum)</li> <li>▪ Don Goss (Valero)</li> <li>▪ James Signore (UCPRC)</li> </ul>

Pavement Engineering Stream

09:00-16:30 Meeting to review IKT Topics

UCPRC Davis California

Topics	Presenter / discussion leader
<ul style="list-style-type: none"> <li>▪ Advances in Pavement Engineering &amp; Design</li> <li>▪ Rigid Pavement Replacement w/ Full Depth Asphalt, Crack and Seat w/ Overlay</li> <li>▪ Thinlays for Pavement Preservation</li> <li>▪ Innovations and Sustainable Pavement Solutions</li> <li>▪ Perpetual Pavements</li> <li>▪ Accelerated Pavement Testing – Costs &amp; Benefits</li> </ul>	John Harvey leading: Staff from Caltrans and UCPRC Davis