

## Binder Issues Affecting the Durability of RAP and WMA Pavements

8:00-8:10 am Welcome and Opening Remarks

### Morning Session

Moderator — **Jean-Pascal Planche** *Western Research Institute*

8:10-8:45 Field and Laboratory Evaluation of Plant Produced Highly-modified Thin Lift Overlay Mixtures Incorporating RAP — **Walaa Mogawer** *UMass-Dartmouth*  
**Bob Kluttz** *Kraton Polymers*

8:45-9:20 Impact of 20% RAS Binder Replacement on Short Term and 5 Day Aged Mixture Properties — **Gerald Reinke** *Mathy Construction Company*

9:20-9:55 Rheology Considerations for Recycled Products — **Geoffrey Rowe** *Abatech, Inc.*

9:55-10:15 Break

10:15-10:50 Effect of RAP Binders and WMA Additives on Fracture Properties of Binders — **Hussain Bahia** *University of Wisconsin, Madison*

10:50-11:25 Proposed New Phenomenological Model for Dynamic Modulus Prediction of Asphalt Paving Mixtures — **Mike Farrar** *Western Research Institute*

11:25-12:00 Effect of Rejuvenator on Performance Properties of HMA mixtures with High RAP and RAS Contents — **Nam Tran** *NCAT*

12:00-1:00 pm Lunch

### Afternoon Session

Moderator — **Nelson Gibson** *Federal Highway Administration*

1:00-1:35 Capturing the Cracking and Durability of Combined High RAP and Warm Mix Asphalt Technologies — **Nelson Gibson** *Federal Highway Administration*

1:35-2:10 Laboratory and Field Performance of Foam WMA — **Jean-Paul Fort** *COLAS Solutions Technical Center*

2:10-2:45 Predicting Christensen-Anderson Model Parameters and Prony Series Relaxation from Two Aging Conditions — **Ronald R. Glaser** *Western Research Institute*

2:45-3:05 Break

3:05-3:40 Effect of Aggregate, Binder, and Warm-Mix Additive Interaction on the Durability of Asphalt Mixtures — **Elie Hajj** *Western Regional Superpave Center*

3:40-4:15 Binder Evaluation of a Bio-Based Warm-Mix Additive — **Christopher Williams/Ashley Buss** *Iowa State University*

4:15-4:50 Update on the Manitoba High RAP Project — **Mike Harnsberger** *Western Research Institute*