Schedule

Last updated: 6/26/2024

Sunday June 23, 2024	
8:00 am – 4:00 pm	**Registration Open** *(Orange Ballroom Foyer)*
8:30 – 11:30 am	**Morning Workshops** *See bottom of the page to view workshop description information* **Safe System Approaches to Reduce Head-On Crashes** *(Magnolia Room)* ▪ Presenters **:** Dick Albin, FHWA| Jamie Robertson, Safe System Solutions Pty Ltd, Australia| Mats Pettersson, Swedish Transport Administration|

	Raphael Grzebieta, TARS, UNSW Sydney & Dept. Forensic Medicine, Monash University **Building on Successes of Managing Pavement Friction to Support Safety Performance and Safer Roads - An International Perspective** *(Citrus AB Room)* ▪ Presenters: Pricilla Tobias, ARORA and ASSOCIATES| Veronique Cerezo, Associated senior researcher Laboratory EASE, University Gustave Eiffel, France| Alfonso Montella, Università degli Studi di Napoli Federico II, Italy| Eelke Vromans, Unit Manager Consultancy & Road Testing, Netherlands|Roland Spielhofer, Austria Institute of Technology, Austria| Mark Stephenson, WDM, United Kingdom **Current Methods for Risk-Based Safety Planning** *(Cypress Room)* ▪ Presenters: Matt Hinshaw, FHWA| Adam Larsen, FHWA| Ian Hamilton, VHB| Scott Himes, VHB| Zachary Hans, D Institute for Transportation at Iowa State University| Chris Kwilinski, FHWA
9:30 am -10:00 am	**Break** *(Orange Ballroom Foyer)*
11:30 am - 1:30 pm	**Lunch on your own**
1:30 - 4:30 pm	**Afternoon Workshops** *See bottom of the page to view workshop description information* **Management of Road Safety and Institutional Development in Low and Middle-Income Countries** *(Magnolia Room)* ▪ Presenters: Dr. Said Dahdah, Global Head for Road Safety at the World Bank| Dipan Bose, Senior Transport Specialist, South Asia

	Safer Roads through Management of Pavement Friction and Safety Performance *(Citrus AB Room)* ▪ Presenters: Priscilla Tobias, ARORA and Associates| Joseph Cheung, FHWA| Edgar de León, VTTI| Mike Vaughn, KYTC| John Senger, IL DOT| Emmeth Duran, Florida DOT| Peter Cenek and Peter Robinson, New Zealand NZ Transport Agency **Future Methods of Risk-Based Safety Planning** *(Cypress Room)* ▪ Presenters: Adam Larsen, FHWA| James Bradford, International Road Assessment Programme (iRAP)|Adnan R. Qazi, Arkansas Department of Transportation (ARDOT)| Yinhai Wang, University of Washington| Matt Hinshaw, FHWA| Scott Himes, VHB| Ian Hamilton, VHB| Frank Flanders, Georgia DOT| Jeff Lewis, Utah DOT
2:45 pm - 3:15 pm	**Break** *(Orange Ballroom Foyer)*
Monday June 24, 2024	
7:00 am – 5:00 pm	**Registration Open** *(Orange Ballroom Foyer)*
7:00 – 8:00 am	**Breakfast w/ Exhibitors** *(Orange Ballroom AB)*

8:00 – 9:45 am	**Plenary Welcome** *(Orange Ballroom CD)* **Welcome & Introductions** ▪ Dick Albin, FHWA, Conference Chair ▪ Brenda Young, Florida DOT ▪ Kenn Beer, Safe System Solutions, Ltd, Australia ▪ Rob Ritter, FHWA Associate Administrator for Safety ▪ Katie Mueller, National Safety Council
9:45 - 10:15 am	**Break w/ Exhibitors** *(Orange Ballroom AB)*
10:15 am –12:00 pm	**Sessions** **Always Crashing in the Same Car - Crash Testing Criteria:** Kristin Schuster, Michigan DOT (Moderator) *(Magnolia Room)* ▪ European Standard EN 1317-Current Status and Revision| Marco Anghileri, Politecnico di Milano ▪ Development of a MASH Performance-Based Specification| Roger Bligh, TTI ▪ Implementation of Crash Worthy Infrastructure, MASH vs EN1317 an Australian Perspective| Leigh Brown, Valmont Highway International ▪ Influence of Vehicle Model and Age on Road Restraint System Certification According to EN 1317| Marco Anghileri, Politecnico di Milano ▪ Update on NCHRP Project No. 22-43: Proposed AASHTO Guidelines for Implementation of MASH Sign Supports, Breakaway Poles, and Work-Zone Traffic Control Devices| Dhafer Marzougui, George Mason University **Wreck on the Highway - Roadway Departure Crash Types and Data:** Adam Larsen,FHWA (Moderator) (*Cypress Room)* ▪ Enhancing Rural Roadway Safety in Florida: A Data-Driven Analysis Approach| Shraddha Sagar, University of Florida

- A Geospatial Analysis of Environmental Factors Impacting Rollover Crashes in Wisconsin| Susan Paulus, University of Wisconsin – Madison
- Severity Assessment of Head-on Crashes: A Multinomial Logistic Regression Approach| Hellen Shita, Florida International University
- Mitigating roadway departures through infrastructure improvements| James Bradford, IRAP
- Abley SafeCurves: A data-driven approach to reducing roadway departures| Steve Abley, Abley

We're Not Gonna Take It - Safe System Approaches to Eliminate Severe Crashes: Jeff Jasper, University of Kentucky Transportation Center (Moderator) *(Citrus AB Room)*

- The Safe System Approach| Pat Hasson, FHWA
- The intersection of rural roads and public health| Holly Kostrzewski , NHTSA
- Putting the Safe System Approach to the Test: Protecting Roadside Assistance Workers| Jake Nelson, AAA
- Florida's Safe System Approach| Brenda Young, Florida DOT
- Safe System Framework for RwD| Dr. Md Shakir Mahmud , VHB

Drive My Car- Advanced and Automated Vehicle Technologies: Morgan Dean, Kittelson & Associates (Moderator) *(Orange Ballroom CD)*

- Terranet – Shaping the future of urban road safety| Gustav Wiigh, Terranet
- Exploring the Effectiveness of Advanced Driver Assistance System (ADAS)-equipped Vehicles in Reducing Single Vehicle Run-off Roadway Crashes | Boni Kutela, TTI
- Assisted Human Drivers and Robot Drivers working together to make our roads safer| Seth Chalmers PE, Dibble
- How ADAS works in the Real-World and What it Needs to Work Better| Schuyler St. Lawrence, Toyota Motor North America

12:00 - 1:00 pm	**Lunch** *(Orange Ballroom AB)*
1:00 - 2:45 pm	**Safe Systems Panel -** Pat Hasson (Moderator) *(Orange Ballroom CD)* ▪ Safer Users: Dr. Jeff Michael, Johns Hopkins ▪ Safer Speeds: Corporal Daniel Jonas, Florida Highway Patrol ▪ Safer Vehicles: David Harkey, IIHS ▪ Safer Roads: Brenda Young, FDOT ▪ Post Crash Care: Dia Gainer, EMS officials
2:45 - 3:15 pm	**Break w/ Exhibitors** *(Orange Ballroom AB)*
3:15 - 5:00 pm	**Sessions** **On the Road Again - Barriers to Help Keep Drivers off the Roadside:** Richard Stepp, Florida DOT (Moderator) *(Magnolia Room)* ▪ Performance Evaluation of Longitudinal Barriers on Curved, Superelevated Off-Ramps| Dhafer Marzougui, GMU ▪ Development and Deployment of Road Safety Barrier Capability and Capacity Development Programs in Australia and New Zealand| Kenn Beer, Safe System Solutions Pty Ltd ▪ Determine Adequacy of Existing Roadside Barriers on High-Speed Roadways| Sofokli Cakalli, TTI ▪ Design of a Protection System for a House Adjacent to an Intersection| Brad Porter , Safe Roads Research and Development Canada ▪ Replacement of in service safety barriers: critical design and testing aspects| Francesca LaTorre, University of Florence **Show Me the Way - Signs and Markings to Help Keep Vehicles on the Road:** Ryland Potter, WDM USA (Moderator) *(Cypress Room)*

- Before and After studies on Crash Reduction Effect of Color Guidance Markings near Exit Ramps in Expressways| Sangjin Han, Korea
- Regulations, Standards, and Methods for Maintaining Minimum Pavement Markings Retroreflectivity| Paul LaFleur, FHWA
- Elucidating Perpetual-Motor Tropism as a Form of Collision Etiology: Of Moths and Men| Peter Hancock, University of Central Florida
- Synthesis of the Effectiveness of Low-Cost Countermeasures for Rural Curves| Shauna Hallmark,Iowa State University
- Horizontal Signing, A Proven Low-Cost Horizontal Curve Safety Countermeasure| Frank Julian, retired FHWA

Keep Yourself Alive - Education and Enforcement Efforts to Improve User Behavior: Chris Kwilinski, FHWA (Moderator) *(Citrus AB Room)*

- Messaging Traffic Safety Through Research, Creative and High Visibility Enforcement Campaigns| Julie Vallese, NHTSA
- The Effect of An Active Seat Belt on Speed Maintenance in A Driving Simulator| Avinoam Borowsky, Ben-Gurion University of the Negev
- Protecting First Responders Through Roadside Safety Efforts| Emily Thomas, NHTSA
- Reaching Teen Drivers though a Safe Systems Approach in Florida| Julie Bond, CUTR
- Enforcement Can Save Lives| Sargent Dan Negersmith, Clearwater Police Department

Electric Avenue - Electric Vehicle Technology and Crashes: Christine Carrigan, Roadsafe (Moderator) *(Orange Ballroom CD)*

- Crash Testing of Roadside Hardware with Electric Vehicles| Bob Bielenberg, MwRSF
- Automotive Safety Development: Its Impact on Safety Hardware| Henning Olsson, CalSpan
- Evaluating EV Safety using Insurance Data| Matt Moore, HLDI
- National Evaluation of Run-off-Road Crashes Involving Battery-Electric Vehicles| Karla Lechtenberg, MwRSF

	▪ EV Fires and Traffic Incident Management| Grady Carrick, Enforcement Engineering Inc
5:00 - 7:00 pm	**Reception w/ Exhibitors** *(Orange Ballroom AB)*
Tuesday June 25, 2024	
7:00 am - 2:00 pm	**Registration Open** *(Orange Ballroom Foyer)*
7:00 - 8:00 am	**Breakfast w/ Exhibitors** *(Orange Ballroom AB)*
8:00 – 9:45 am	**Keynote and Safer Vehicles Panel** *(Orange Ballroom CD)* **Keynote Speaker** ▪ President and Global Chief Safety and Quality Officer, Hyundai Motor Group | Brian Latouf, Hyundai **Safer Vehicles Panel -** Luke Riexinger (Moderator) ▪ Brian Latouf, Hyundai ▪ Nat Beuse, Aurora ▪ Derwood Shepphard, Florida DOT ▪ Anna Meuwissen, Motor & Equipment Manufacturers Association
9:45 – 10:15 am	**Break w/ Exhibitors** *(Orange Ballroom AB)*
10:15 am – 12:00 pm	**Sessions** **Off the Rails - Cable and Beam Guardrail :** John Durkos, Road Systems, Inc (Moderator) *(Magnolia Room)*

- Safety Effectiveness of Cable Median Barriers in Louisiana| Elisabeta (Eli) Mitran, Louisiana DOTD
- Simulated Failure Limitations of Midwest Guardrail System| Brett Van Mierlo, Safe Roads Research and Development, Canada
- Estimate of roadside safety hardware performance with Finite Element Analysis (FEA)| Michael Gremling, CRM Group - ACCS
- A Practical Analysis of Risk Factors for Roadside Barrier Need in Rural Oregon| Ian Hamilton, VHB
- MASH TL-3 Four-Cable Barrier End Terminal| Brandon Perry, MwRSF

Slip Slidin' Away - Friction to Help Keep Vehicles on the Road: Joe Cheung, FHWA (Moderator) *(Cypress Room)*

- The Practice of Continuous Pavement Friction Measurement in FDOT District 7| Pei-Sung Lin, University of South Florida
- Better Together: Safety and Pavement Management Strategies for 'Adequate and Durable' Pavement Friction| Ryland Potter, WDM USA Limited
- How Kentucky Uses CPFM and PFM to Improve Roadway Departure Safety| Mike Vaughn, Kentucky Transportation Cabinet
- The Success of High Friction Surface Treatments in Mexico| Jaime Valdes, OVYSSA
- Using Continuous Pavement Friction Measurement (CPFM) to Support Safety and Pavement Management for Lane-Departure Crash Prevention: A Case Study in FDOT District Seven| Dr. Zhenyu Wang, University of South Florida

Slow Ride - Efforts to Manage Speeds: Dipan Bose, World Bank (Moderator) *(Citrus AB Room)*

- USDOT Speed Management Program| Emily Thomas, NHTSA
- Global Speed Management Guide| Said Dahdah,World Bank
- A Safe Systems Approach to Setting Speed Limits Through the Development of Injury Modification Factors| Morgan Dean, VTI

	▪ Speed Safety Camera Program Planning and Operations Guide | Jeff King, FHWA ▪ Evaluation of Work Zone Speed Profiles Using the SHRP 2 NDS| Shauna Hallmark, Iowa State University **I'm in Love With My Car - Computational Models and Tools to Save Lives:** Nauman Sheikh, Texas A&M Transportation Institute (Moderator) *(Orange Ballroom CD)* ▪ Development of a SUV vehicle FE model including suspension validation| Rudolf Reichert, GMU ▪ Development & Validation of a Finite Element Model for the 2022 Hyundai Accent Passenger Sedan (MASH 1100C)| Fadi Tahan, GMU ▪ Stochastic Cognitive Model - Modeling driver behavior for ADAS and AD assessment| Manuela Witt, BMW North America ▪ Overview of the Total HUman Model for Safety (THUMS)| Zhaonan Sun, Toyota Motor North America
12:00 – 1:00 pm	**Lunch** *(Orange Ballroom AB)*
1:00 – 6:00 pm	**Field Trip – SunTraxFieldTrip** *(Busses leave for offsite field trip)* ▪ Welcome - Pamela Foster, FDOT ▪ Speaker 1- Integrating AI and Autonomous Systems for Safer AV Transit Operations| Ian Clark, Beep Inc.| Jordan Dowdy, Beep Inc. ▪ Speaker 2- EV Compatibility: Our Vehicles, Our Roads, Our Roadsides| Bob Bielenberg, MwRSF| Aditya Belwadi, PhD, Tesla| Luke Riexinger, IIHS ▪ Speaker 3- What's Speed Got to Do With It? | Raphael Grzebieta, TARS, UNSW Sydney & Dept. Forensic Medicine, Monash University| Kevin Elliott, ARA
Wednesday June 26, 2024	

7:00 am – 5:00 pm	**Registration Open** *(Orange Ballroom Foyer)*
7:00 – 8:00 am	**Breakfast** *(Orange Ballroom AB)*
8:00 – 9:45 am	**Sessions** **Off the Wall - Concrete Barrier Testing:** Karla Lechtenberg, MwRSF (Moderator) *(Magnolia Room)* ▪ Off the Wall – Concrete Barrier Testing| Talha Ghuman, Safe Roads Research and Development, Canada ▪ Design and Development of a New Anchored Portable Concrete Barrier for Installation on Asphalt and Concrete Pavements| Nauman Sheikh, TTI ▪ MASH TL-4 Engineering Analyses and Detailing of 36-Inch and 42-Inch High Median Barriers for LADOTD| William Williams, TTI ▪ Flood Mitigating Portable Concrete Barriers| Jim Kovar, TTI ▪ Temporary Construction Barrier| Shannon Kenneth, Ministry of Transportation Ontario **Wake Me Up Before You Go-Go - Rumble Strips to Keep Drivers Alert:** Paul, LaFleur, FHWA (Moderator) *(Cypress Room)* ▪ Assessing Safety Effect of Sinusoidal Rumble Strips on Roadway Departure Crash Prevention| Pei-Sung Lin, University of South Florida ▪ Florida's Statewide Sinusoidal Ground-In Rumble Strip Initiative| Derwood Sheppard, FDOT ▪ A Comprehensive Evaluation of Median and Centerline Treatments within the Safe System Framework| Jamie Robertson, Safe System Solutions Pty Ltd ▪ Evaluation of Different Transverse Rumble Strip Patterns at Rural Stop-Controlled Intersections in Minnesota| Shauna Hallmark, Iowa State University ▪ Are you Ready to Rumble? | Ali Hangul, Tennessee DOT

	I Hope they Get to Me in Time - Getting Post Crash Care: Pricilla Tobias, ARORA and Associates (Moderator) *(Citrus AB Room)* ▪ 911's Ability to Impact Post-Crash Care| Brian Tegtmeyer, NHTSA ▪ TMC Innovations for Proactive Traffic Management| Sheryl Bradley, The Eastern Transportation Coalition ▪ Traffic Incident Management and Post Crash Care for EMS| Joe Tebo, FHWA ▪ Post-Crash Care—The Severely Injured Victims' Last Chance| Dia Gainor, National Association of State Emergency Medical Services Officials **Takin' It To The Streets - Barrier Placement Alternatives:** Francesca LaTorre, University of Florence (Moderator) *(Orange Ballroom CD)* ▪ Design of Low-Tension Cable Barrier Adjacent To Steep Slopes| Bob Bielenberg, MwRSF ▪ Design and Evaluate MASH Test Level 3 Compliant Guardrail System on 1H to 1V Slope| Sun Hee Park, TTI ▪ MASH Allowable Flare Rates for Portable Single-Slope Concrete Barrier| Sofokli Cakalli, TTI ▪ Design and Testing of MASH TL-3 Anchored Precast Narrow Base Roadside Concrete Barrier| Sofokli Cakalli, TTI ▪ Development of a MASH TL-4 Open Concrete Bridge Rail| Scott Rosenbaugh, MWRSF
9:45 – 10:15 am	**Break** *(Orange Ballroom Foyer)*
10:15 am –12:00 pm	**Sessions** **Bridge over Troubled Waters - Rails to Keep the Vehicles on the Road:** Wade Odell, Texas DOT (Moderator) *(Magnolia Room)* ▪ NCHRP 22-35 – Evaluation of Bridge Rail Systems to Confirm AASHTO Mash Compliance| William Williams, TTI ▪ Investigation and Evaluation of a MASH TL-4 Precast Concrete Bridge Railing| Dr. Tewodros Yosef, MWRSF

- Safety Performance Evaluations of Bridge Rail Design Retrofits Using Finite Element Analyses| Fadi Tahan, GMU
- Crash Testing and Evaluation of Two New York State Department of Transportation Bridge Rails in Accordance with MASH TL4| Ali Atahan, Calspan Corporation
- Development of a MASH-Compliant Thrie-Beam Bridge Rail Retrofit| Carlos Torres, MDOT

Why Can't We Be Friends?- Can Safety and Trees Co-Exist- Jennifer Rasmussen, Safe Roads (Moderator) *(Cypress Room)*

- Risk-Based Clear Zone Guidelines| Sofokli Cakalli, TTI
- Safety Improvements in South Carolina Through Clear Zone Reclamation| Gene Taylor, SCDOT
- Roadside Trees – Is There A Safety Problem?| Scott Rosenbaugh, MwRSF
- Roadside Tree Removal: Digging Deeper to Find Collaborative Solutions| Ellen White, SUNY College of Environmental Science and Forestry
- Discussion - Jennifer Rasmussen, Safe Roads| Willson McBurney, Moffatt & Nichol, Chair of TRB Committee Landscape and Environmental Design (AKD40)| to moderate

Dancing in the Streets- Vulnerable Road Users: Jim Danila, Massachusetts DOT (Moderator) *(Citrus AB Room)*

- Estimating the effect of roadside features on crash severity of powered two-wheeler single-vehicle crashes in Portugal| Carlos Roque, Laboratório Nacional de Engenharia Civil
- Exploring The Role of Arterial Roads Characteristics on Pedestrian and Bicyclist Crashes| Yully Chaves, University of New Mexico
- A Low-Cost Countermeasure to Prevent Motorcycle Lane-Departure Crashes on Rural Horizontal Curves| Zhenyu Wang, University of South Florida
- Crashworthy Barrier-Mounted Devices for Deterring Pedestrian Crossings| Roger Bligh, TTI

	▪ Barrier for Shielding Pedestrians, Bicyclists, and Other Vulnerable Users from Motor Vehicles| Roger Bligh, TTI **I Don't Want to Miss a Thing - Additional Great Topics:** Richard Clausius, ArcelorMittal USA Research LLC (Moderator) *(Orange Ballroom CD)* ▪ Performance Assessment of Isolated, Round, Fire-Damaged RC Bridge Columns Repaired by CFRP Composites under Combined Medium Truck Collision and Air Blast| Qusai Alomari, MWRSF ▪ The use of Finite Element Analysis (FEA) to assess the efficiency of common road restraint systems impacted by falling boulders: a case study in Wallonia (Belgium)| Joseph Marra, GDTech Engineering ▪ The Challenge of Shielding fixed Obstacles in Urban and Rural Areas| Stefano Maria Caterino, SMA Road Safety s.r.l. ▪ Development of new criteria for road restraint systems management| Luca Biagini, GMU
12:00 - 1:30 pm	**Lunch** *(Orange Ballroom AB)*
1:30 – 3:15 pm	**Sessions** **End of The Line - Barrier End Treatments:** Richard Butler, Brifen USA (Moderator) *(Magnolia Room)* ▪ Development of a MASH TL-3 Long Span Structure Connection| Brett Van Mierlo, Safe Roads Research and Development, Canada ▪ Design and Evaluation of MASH Test Level 3 Compliant Transition Design with a Storm Drain Inlet| Sun Hee Park, TTI ▪ Development of a Crashworthy Pedestrian Access Terminal System for W-Beam Guardrail| Mark Ayton, Safe Roads Research and Development, Canada ▪ Minimum Length of Guardrail without Downstream Anchorage| Jim Kovar, TTI ▪ Developing and Implementing VDOT's Limited Scope Guardrail Terminal Maintenance Inspection Program| Matt Barret, Virginia DOT

Break on Through (To the Other Side)- Breakaway Poles and Signs- Greg Kirchgesner (Moderator) *(Cypress Room)*

- Advances in luminaire poles technologies. The safety effects of high energy absorbing passive safe poles| Carlos Roque, Laboratório Nacional de Engenharia Civil
- Current Trends in Luminaire Pole Testing| Jim Kovar, TTI
- Impact Performance of Barrier-Mounted Luminaire Poles| Roger Bligh, TTI
- MASH TL-3 Evaluation of Pedestrian and Small Traffic Signals| Sofokli Cakalli, TTI
- MASH Evaluation of a U-Channel Sign Support System| Nathan Schulz, TTI

Only the Young - Insights from Young Professional- Talha Ghuman (Moderator) *(Citrus AB Room)*

- Alternative Foundations for High Tension Cable Barrier System| Nathynn Mitchell
- Advanced FE Modeling Technique for Predicting Failure in AASHTO M-180 Guardrail Steel| Qusai Alomari
- An Analysis of Fatal Crashes in Urban and Rural Kansas Related to Golden Hour Gaps in Hospital Coverage| Grace Lipford & Mason Lipford
- Effective Community Engagement and Stakeholder Outreach for a Local Road Safety Plan| Dhawal Kataria
- Impact Geotechnics: Modeling Dynamic Impact Soil-Structure Interaction for Advances in Roadside Safety, Physical Security, and Threat Mitigation| Tewodros Yosef
- Safety in Numbers: Do Current Occupant Injury Risk Assessments Account for Advances in Passive Safety?| Morgan Dean
- Development of an Anchored PCB System on Asphalt using Simulation and Crash Testing| Brandon Perry, MwRSF
- Re-evaluating the Strength of Bridge Deck Overhangs Supporting Concrete Posts| Andrew Loken
- General Discussion on Future of Roadside Safety from the Perspective of Young Professionals

	Question - What Research is Needed?- Luke Riexinger (Moderator) *(Orange Ballroom CD)*
3:15 - 3:30 pm	**Break** *(Orange Ballroom Foyer)*
3:30 - 5:00 pm	**Closing Sessions/Adjourn:** Kevin Elliott, ARA (Moderator) *(Orange Ballroom CD)*
Thursday June 27, 2024	
7:00 am - 12:00 pm	**Registration Open** *(Orange Ballroom Foyer)*
7:00 am - 8:00 am	**Breakfast** *(Citrus AB Room)*
8:00 am - 5:00	**TRB Committee Meetings** **1. TRB AKD20** *(Orange Ballroom A)* ▪ 8:30 am Welcome and Introductions -TBD ▪ 8:45 am Recap of 2nd International Roadside Safety Conference - Dick Albin ▪ 9:00 am Triennial Strategic Plan Updates - TBD ▪ 9:10 am Subcommittee Reports - Chiara Dobrovolny, Christine Carrigan, Nauman Sheikh ▪ 9:30 am TRB/NCHRP Research Update - Brian Roberts ▪ 9:45 am Break ▪ 10:15 am Research Needs Working Session - Luke Riexinger ▪ 11:55 am Closing Remarks ▪ 12:00 pm Adjourn **2. TRB AKD40/AKR20** *(Orange Ballroom B)*

8:30 am : Welcome and Introductions – Willson McBurney, Chair AKD40, Ken Murray, Chair AKR20

- Welcome from TRB Staff
- Introduce the day – Willson McBurney, Chair
- Preparation for the 2025 Annual Meeting
- AKD40 business meeting focus: AKD40 TSP and TRB's *Critical Issues in Transportation*
- AKR20 business meeting focus: Joint Committee relations
- Approval of Committee Meeting minutes – Jeff Lormand, Vice Chair
- Steering Committee Updates
- Vice Chair - (Jeff Lormand)
- Secretary – (Ellen White)
- Committee Communications Coordinator (Siba El Samra)
- Committee Research Coordinator (Ray Willard)
- Outreach Working Group - (Jennifer Taira)
- Mid-Year Meeting Working Group 2025 (Willson McBurney and Christa Schaefer)
- Liaison Working Group Report – (Christa Schaefer)
- Committee/Working Group Coordination, Issues & Needs (All)

10:05 am : AKD40 TSP Goals discussion - Critical, emerging, and cross cutting concerns of practitioners and researchers that align well with AKD40's scope

- Goal 1 – Advance the understanding of landscape and environmental design issues in transportation
- Goal 2 – Develop and promote high-priority landscape and environmental design related research to assist transportation professionals in strategically integrating considerations of the landscape and environment in transportation decisions from planning to design.

- Research Needs Work Session (Ray Willard)

- a. Identify all the items that fall under the Research working group and produce a process and flow chart for each of those
- b. Call for Papers and reviews (Willson)
- c. Call for Posters and follow-up (Christine)
- d. Review all AKD40 RNS for relevance to current topics
- e. Research Needs Statements Update and submittal flow
- f. Synthesis Project Concepts and submittal flow

- Joint Discussion: Inter-committee Opportunities and Needs - Moderator, Ken Murray, AKR20

- Observed synergies and productive technical overlap.
- Unique specialty areas of each committee.
- Common partners and collaborators (AASHTO, FHWA, Associations, international partners)
- Inter-committee collaboration opportunities, venues, and forums
- Other observations

11:00 a.m. - Noon Discussion

- Joint Research Needs Topics Existing research needs statements and their strengths and competitiveness

- New topics
- Joint topics
- Committee specific topics
- Topic leads and co-sponsors
- Other champions
- AASHTO and FHWA partners to advance topic to statements
- Next steps, leads, and supporters

1:00 p.m.-6:30 p.m.

- Off-site tour and Committee dinner

3. TRB AKP50 *(Orange Ballroom C)*

	4. AASHTO TCRS *(Orange Ballroom D)*
9:45am - 10:15 am	**Break** *(Orange Ballroom Foyer)*
12:00 pm - 1:00 pm	**Lunch** *(Citrus AB Room)*
3:00 pm - 3:30 pm	**Break** *(Orange Ballroom Foyer)*
Friday June 28, 2024	
7:00 am - 11:00 am	**Registration Open** *(Orange Ballroom Foyer)*
7:00 am - 8:00 am	**Breakfast** *(Citrus AB Foyer)*
8:00 am - 1:00 pm	**TRB Committee Meetings**

1. TRB AKD40/AKR20 *(Magnolia Room)*

8:30 am: AKD40 business meeting, continued

- Introduce the day – Willson McBurney, Chair
- TRB Announcements – Brian Roberts

2025 Annual Meeting session planning-January 5-9, 2025

- Paper review schedule (Willson McBurney)
- Call for Poster schedule and flow and actions
- AKD40 Poster updates
- Call for Papers
- Invited Speaker sessions
- Workshop sessions
- 2025 Mid-Year Meeting: TBD
- Beyond 2025 Mid-Year Meetings: locations conversation
- TRB's *Dialog With Leaders* program
- TRB's *Blue Ribbon Committee Award* program

- Organization of Working Group Rosters and Leadership Positions
- Other Unfinished Business

11:30 am: Wrap up and Final words

Noon: Adjourn

2. AASHTO TCRS *(Cypress Room)*

10:00 am - 10:30 am **Break** *(Citrus AB Foyer)*

* Workshop description information*

- **Safe System Approaches to Reduce Head-On Crashes**

Head-on crashes are violent events that result in thousands of fatalities around the world each year. In the United States, head-on crashes, account for over 5,000 fatalities which is approximately 14% of all fatalities between 2018 and 2020. These crashes typically occur on high speed, undivided rural roads.

In Australia, around 17% of fatalities are head-on collisions and approximately two thirds of all road deaths occur in regional and remote areas.

With the Safe System Approach, this is unacceptable and since we know that humans make mistakes and our bodies are vulnerable when subjected to the forces of a head-on crash, action is needed to provide more than a pavement marking to separate vehicle traveling in the opposite direction.

There are countermeasures that have been proven to reduce these crashes. These countermeasures include treatments like centerline markings and rumble strips that help drivers stay in their lane, the SafetyEdge^{SM} and wide buffer areas to reduce the potential for a crash if they do leave the lane and barriers to minimize the severity of crashes that do occur. Effective countermeasures on some rural roads of Australia have included installation of median wire-rope barriers but where costs are prohibitive, speed limits have been reduced to survivable Safe System impact speeds. These countermeasures can be deployed proactively and in combination to provide redundancy.

This workshop will examine strategies and evidence base of their effectiveness for deploying these countermeasures to provide for a safer system.

- **Building on Successes of Managing Pavement Friction to Support Safety Performance and Safer Roads - An International Perspective**

Pavement friction is an essential fundamental factor related to the safety performance of a roadway. Pavement friction management is a FHWA Proven Safety Countermeasure and supports the Safe System Approach. The interaction between a vehicle and the roadway pavement surface creates friction which allows drivers to safely perform vehicle steering, stopping, and acceleration maneuvers. These are important elements in reducing crashes related to roadway departure, intersections, and pedestrians.

For decades, countries outside of the U.S. have been measuring, monitoring, and managing pavement friction and it an integral component of determining when, where, and how safety interventions need to take place.

This workshop will present the latest international efforts by multiple counties to manage pavement friction to support improved safety performance. It will include information on crash modification factors, measurement of pavement friction on curves and its relationship to safety performance, and other successful practices.

- **Current Methods for Risk-Based Safety Planning**

Workshop will explore proactive, risk-based methods of safety planning. Participants will learn from examples where the systemic approach to safety has been used to identify optimal locations to deploy low-cost safety countermeasures. Data sources that can support a systemic safety study can go beyond crash data – alternative sources such as LiDAR and roadway attribute inventories will be discussed. This topic will continue to be discussed in an afternoon workshop titled “Future Methods of Risk-Based Safety Planning

- **Management of Road Safety and Institutional Development in Low and Middle-Income Countries**

The proposed workshop as a master class is aimed at engaging a discussion about road safety management in developing countries and strategies for capacity building and technical knowledge sharing. The outcome of the discussion would be for participants from developing countries to understand a global framework that can be applied to individual country/sub-national context for results-based road safety implementation with necessary institutional and governance mechanisms in place. The session would highlight examples from developing countries that provide an opportunity to understand the constraints and opportunities under the road safety management framework. The session would also highlight the role of multi-lateral development partners and other international organizations to collaborate in this multi-sectoral effort to reduce traffic crash related deaths in line with the UN SDG goals.

- **Safer Roads through Management of Pavement Friction and Safety Performance**

Pavement friction is an essential fundamental factor related to the safety performance of a roadway. For decades, countries outside of the U.S. have been measuring, monitoring, and managing pavement friction and it an integral component of determining when,

where, and how safety interventions need to take place. Pavement friction management is a FHWA Proven Safety Countermeasure and supports the Safe System Approach. The interaction between a vehicle and the roadway pavement surface creates friction which allows drivers to safely perform vehicle steering, stopping, and acceleration maneuvers. These are important elements in reducing crashes related to roadway departure, intersections, and pedestrians.

Recent research in the U.S. has focused on developing safety performance functions (SPFs) that include continuous friction and macrotexture measurements on a variety of roadway facility types and categories (i.e., segments, intersections, curves, and ramps). The main objectives were to obtain crash modification factors (CMFs) that make possible the evaluation of pavement friction changes on safety performance and to establish investigatory thresholds for friction based on roadway type and category. The analysis confirmed a strong statistical association between pavement surface frictional properties (friction and macrotexture) and crash rates. As expected, the investigatory levels are higher for higher friction demand sites, such as curves, ramp and access points, and intersections. States have begun to implement this research and are using it to identify and prioritize locations for friction enhancement to address roadway departure crashes. Internationally, there is interest in adding SPFs into their strategic approach to pavement friction management. This workshop will present the approach to developing SPFs and CMFs, establishing investigatory thresholds to improve safety performance, and provide the experience of DOTs with this process as well as the experience from the international perspective. This workshop provides an opportunity to share and transfer knowledge of integrating pavement friction into safety practices. It would allow attendee interaction and discussion of research and practice.

- **Future Methods of Risk-Based Safety Planning**

Participants will get hands on experience with 360-camera technology and demonstration of computer vision that can create safety risk data -- even where no data currently exists. Case studies will demonstrate how such data has been used in risk-based safety planning to equitably address the roadway departure component of FHWA's Focused Approach to Safety.

This workshop will continue the discussion of using alternative sources of safety data including LiDAR, imagery, GIS methods, usRAP, and more.