26th Annual Transportation Research Conference

Featuring: Roadway Safety Showcase and Transit Transformers Workshop

May 20–21, 2015
Saint Paul RiverCentre, Saint Paul Minnesota

Final Program
Welcome to the Conference

The University of Minnesota’s Center for Transportation Studies is pleased to present its 26th Annual Transportation Research Conference, which acts as a forum for researchers and practitioners from Minnesota and the Upper Midwest to share their research findings in a variety of transportation-related areas. Concurrent sessions are focused in four categories that match the Center’s research emphasis areas—Transportation Safety and Traffic Flow, Transportation Infrastructure, Transportation and the Economy, and Transportation Planning and the Environment—with a fifth category covering Education and Outreach issues.

New this year, day two of the conference consists of two special events: the half-day Transit Transformers Workshop and the all-day Roadway Safety Showcase. The Transit Transformers Workshop will focus on how new transit service concepts and design will transform the Twin Cities’ area transit system. The Roadway Safety Showcase will feature researchers from the Roadway Safety Institute sharing their work on tribal nation road safety, rail-grade crossings, technology and roadway innovations, safety policy, and human factors.

Reception

A reception with hors d’oeuvres and a cash bar will take place following the final concurrent sessions on May 20, offering attendees a further opportunity to socialize with fellow participants and presenters.

Conference Presentations Online

PowerPoint presentations for which we receive permission from presenters to post will be available in PDF format approximately one week following the conference. These presentations will be available at: www.cts.umn.edu/events/conference/2015.
**Conference Credit**

**Professional Development Hours (PDHs)**
This conference awards up to 12 Professional Development Hours (PDHs). A credit form is included in your conference folder.

**AICP Maintenance Credits**
This conference has been approved for 21.75 AICP maintenance credits. A complete list of sessions approved for credit is included in your conference folder and also on the conference website.

**Twitter and Facebook**
To participate in Twitter conversations around this year’s Research Conference, please add the hashtag #ctsresconf to your tweets. For the latest news and events from the Center for Transportation Studies, follow @UMNCTS on Twitter and like us on Facebook at www.facebook.com/UMNCTS

**Mobile App**
Enhance your conference experience by downloading the conference app on your iPhone or Android device. Download Guidebook in your app marketplace, then search for “CTS Transportation Research Conference.”

With the app you can:
- View the conference program
- View conference abstracts
- Engage in Twitter conversations
- Upload conference photos
- Keep track of AICP credits and PDHs

**Wireless Access**
Conference attendees can access free wireless Internet by searching for the network RC_FreeWiFi (no password required).

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Download Guidebook and search for CTS Transportation Research Conference
Keynote Presentations

**A Traffic Manifesto: Reducing Congestion for All**

*Wednesday, May 20, 2015: 8:30–10:15 a.m.*

*Ralf-Peter Schäfer*, vice president of Traffic & Travel Information Product Unit, TomTom

With more than a billion vehicles on roads around the world, traffic congestion affects millions of people each day. It eats up precious time that could be better spent on the job or at home with family, and it has psychological and physical health implications. In the world of business, it is responsible for the loss of billions of dollars in productivity. Governments are struggling to meet growing demand and reduce emissions with declining funding and resources.

Traffic congestion can seem inevitable, or at least too expensive and difficult to solve. TomTom, a global leader in navigation and mapping products, is challenging this conventional thinking. In its Traffic Manifesto, TomTom advocates using big traffic data analytics and smart mobility to reduce traffic congestion for all—starting now.

At the conference opening plenary session, Ralf-Peter Schäfer, vice president of TomTom’s Traffic and Travel Information Product Unit, will describe how a growing community of connected navigation devices can move people through traffic faster. Millions of vehicles generating data and working as a collective—perhaps as little as 10 percent of them—could guide drivers to the least-congested routes and thus reduce congestion for everyone. Schäfer will also outline how these systems can be used to improve traffic planning and management, geomarketing, and connected services for road travelers.

Following his presentation, a panel of experts will share their perspectives on the implications for the future of the Minnesota road network system and its users.

**The Panama Canal Expansion: Myths and Realities for the North American Economy**

*Wednesday, May 20, 2015: 11:45 a.m.–1:30 p.m.*

*Jean-Paul Rodrigue*, professor, Department of Global Studies and Geography, Hofstra University

Large infrastructure projects are prone to misconceptions—particularly, their benefits, which tend to be exaggerated, and their costs, which tend to be under evaluated. The Panama Canal expansion is no exception. In early 2016, the estimated $6.2 billion-dollar project will add a new set of locks that will enable the existing canal to handle larger ships. Such an increase in capacity has triggered many expectations about its potential impacts on global trade, in particular for ports on the American East Coast. The common belief is that the expansion will bring additional traffic and economic
opportunities for the markets the canal services. The question, however, remains: what can be considered unfounded myths, as opposed to the realities of the impacts of the project?

Jean-Paul Rodrigue will address these issues in the conference luncheon presentation on May 20. Rodrigue, a professor in Hofstra University’s Department of Global Studies and Geography, will focus on the impact to the structure of North American trade and economic development prospects. “Is the expansion of the Panama Canal a marginal or significant change, and for whom? Myths and realities are likely to clash,” he says.

**Workshop and Showcase**

**Transit Transformers Workshop**

**Thursday, May 21, 2015: 8:30 a.m.–12:00 p.m.**

This fast-paced, half-day workshop will focus on how new transit service concepts and design will transform the Twin Cities’ area transit system. The first part of the workshop will highlight case studies, community partnerships, and changing design approaches and examine how they apply to the Twin Cities’ regional BRT and LRT stations, the community areas around them, and their multimodal connections to those community settings. The concluding workshop session will explore topics such as the economics of car sharing, transit access and equity questions, and improvements to regional transit service plans.

**Roadway Safety Showcase: Safety Innovations for Today and Tomorrow**

**Thursday, May 21, 2015: 8:30 a.m.–3:30 p.m.**

This showcase will convene transportation safety researchers and practitioners to share research results that address the most pressing roadway safety challenges. Join us to hear the latest findings from researchers at the Roadway Safety Institute, the Region 5 University Transportation Center (UTC) led by the University of Minnesota. Attendees will also hear from featured guest Greg Winfree, US DOT Assistant Secretary for Transportation, who will share the US DOT perspective on transportation safety and research. The showcase will also provide opportunities for information exchange, networking, and the development of potential collaborations.

The showcase is the first all-day event of the Roadway Safety Institute. The Institute conducts activities that further the mission of the UTC program of the US DOT—to advance technology and expertise in the many disciplines that make up transportation through education, research, and technology transfer activities at university-based centers of excellence. Driven by the goal of preventing crashes to reduce fatalities and life-changing injuries, the Institute’s activities focus on user-centered transportation safety systems.
## PROGRAM AT A GLANCE

### WEDNESDAY, MAY 20, 2015

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<th>Track 2: Infrastructure</th>
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<td>7:30–8:30 a.m.</td>
<td>Meeting Room 6</td>
<td>Meeting Room 5</td>
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<tr>
<td>Registration and Buffet Breakfast</td>
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<tr>
<td>8:30–10:15 a.m.</td>
<td>Welcome – Laurie McGinnis, director, Center for Transportation Studies</td>
<td>Ralf-Peter Schäfer, vice president of Traffic and Travel Information Product Unit, TomTom</td>
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<tr>
<td>Keynote Presentation: A Traffic Manifesto: Reducing Congestion for All</td>
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<td>10:15–10:30 a.m.</td>
<td>Break</td>
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<td>10:30–11:45 a.m.</td>
<td>Session 1: Trucks and Technology: Weigh-in-Motion, Rollover Warning Systems</td>
<td>Session 2: Bridges for Rail and Road</td>
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<tr>
<td>11:45 a.m.–1:30 p.m.</td>
<td>Luncheon and Presentation</td>
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<tr>
<td>Grand Ballroom A</td>
<td>Opening Comments – Charles Zelle, commissioner, Minnesota Department of Transportation</td>
<td>Keynote Presentation: The Panama Canal Expansion: Myths and Realities for the North American Economy Jean-Paul Rodrigue, professor, Department of Global Studies and Geography, Hofstra University</td>
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<tr>
<td>1:30–1:45 p.m.</td>
<td>Break</td>
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<tr>
<td>1:45–3:00 p.m.</td>
<td>Session 6: Mindless Driving</td>
<td>Session 7: Managing Assets and Projects</td>
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<td>3:00–3:15 p.m.</td>
<td>Break</td>
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<td>3:15–4:30 p.m.</td>
<td>Session 11: Safety for All</td>
<td>Session 12: Ground Improvements</td>
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<tr>
<td>4:30–5:30 p.m.</td>
<td>Reception with Hors d’Oeuvres and Cash Bar</td>
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### THURSDAY, MAY 21, 2015

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<th>Time</th>
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<td>8:00–8:30 a.m.</td>
<td>Registration and Continental Breakfast</td>
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<tr>
<td>8:30 a.m.–12:00 p.m.</td>
<td>Transit Transformers Workshop</td>
<td>Roadway Safety Showcase: Safety Innovations for Today and Tomorrow</td>
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<td>Time</td>
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<td>Track 3: Planning and the Economy</td>
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<tr>
<td>8:00–8:30 a.m.</td>
<td>Meeting Room 5</td>
<td>Bang for the Buck: Enhancing Financial Effectiveness</td>
<td>Climate Change and Infrastructure Management</td>
<td>Rapid Fire: Stakeholder/Public Engagement and Communication</td>
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<td>8:30 a.m.–12:00 p.m.</td>
<td>Meeting Room 5</td>
<td>Rapid Fire: Transportation Forecast Models for Planning</td>
<td>Vegetation Management and Environmental Impacts</td>
<td>Technology Innovations in the Field and in Learning</td>
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Program Schedule
Wednesday, May 20, 2015

7:30–8:30 a.m. Registration and Buffet Breakfast

8:30–10:15 a.m. Welcome
Grand Ballroom A

Laurie McGinnis, director, Center for Transportation Studies, University of Minnesota

Keynote Presentation
A Traffic Manifesto: Reducing Congestion for All
Ralf-Peter Schäfer, vice president of Traffic and Travel Information Product Unit, TomTom

Ralf-Peter Schäfer, vice president of TomTom’s Traffic and Travel Information Production unit, will describe how a growing community of connected navigation devices can move people through traffic faster. Millions of vehicles generating data and working as a collective—perhaps as little as 10 percent of them—could guide drivers to the least congested routes and thus reduce congestion for everyone. Schäfer will also outline how these systems can be used to improve traffic planning and management, geomarketing, and connected services for road travelers. Following his presentation, a panel of experts will share their perspectives on the implications for the future of the Minnesota road network system and its users.

Panel Discussion
Moderator: Gina Baas, Center for Transportation Studies, University of Minnesota

Panelists: Andrew Owen, director, Accessibility Observatory, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota; Debra Brisk, assistant county administrator - Public Works, Hennepin County; Brian Kary, freeway operations engineer for the Metro District, Minnesota Department of Transportation

10:15–10:30 a.m. Break

10:30–11:45 a.m. Concurrent Sessions

1. Trucks and Technology: Weigh-in-Motion, Rollover Warning Systems
Meeting Room 6
Moderator: Dan Rowe, Minnesota Department of Transportation

A Statistical Process-Control Approach for Traffic Data Quality Verification and Sensor Calibration for Weigh-in-Motion Systems
Indrajit Chatterjee, Department of Civil, Environmental, and Geo- Engineering, University of Minnesota

Truck Rollover Warning System: One Year Later
Tom Sohrweide, Short Elliott Hendrickson, Inc.

Portable Weigh-in-Motion Evaluation
Scott Petersen, SRF Consulting Group, Inc.

2. Bridges for Rail and Road
Meeting Room 5
Moderator: Jessica Duncan, Minnesota Department of Transportation

Structures for Twin Cities Light Rail Transit: Case Studies
Sam O’Connell, Metro Transit

Concrete Bridge Deck Crack Sealant Evaluation and Implementation
Matthew Oman, Braun Intertec

3. Economic Development
Meeting Room 4
Moderator: John Tompkins, Minnesota Department of Transportation

Competitive Industry Clusters and Transportation in Minnesota: An Exploratory Study
Lee Munnich, Humphrey School of Public Affairs, University of Minnesota
Using the Tiger Grant Process as a Basis for Collaboration and Community Development  
*Libby Ogard*, Prime Focus, LLC

Updates on Manufacturers’ Perspectives on Minnesota’s Transportation System: West-Central Minnesota  
*Donna Koren*, Minnesota Department of Transportation

**4. Alternative Fuels**  
**Meeting Room 3**

Moderator: *Tim Sexton*, Minnesota Department of Transportation

*Promising Alternative Fuels for Improving Emissions from Future Vehicles*  
*Will Northrop*, Department of Mechanical Engineering, University of Minnesota

*Life Cycle Analysis of Alternative Fuels*  
*Jason Hill*, Department of Bioproducts and Biosystems Engineering, University of Minnesota

**5. Equity in Surface Transportation**  
**Meeting Room 2**

Moderator: *Hafiz Munir*, Minnesota Department of Transportation

Join us for a captivating panel discussion featuring several representatives from local government agencies. This interactive session will focus on socioeconomic issues within transportation.

**Panelists:** *Jon Roesler*, Minnesota Department of Health; *Ryan O’Connor* and *Heather Worthington*, Ramsey County; *Michelle Fure*, Metropolitan Council; *Charles Brown*, Rutgers University

**11:45–1:30 p.m. Luncheon and Presentation**  
**Grand Ballroom A**

**Opening Comments**  
*Charles Zelle*, commissioner, Minnesota Department of Transportation
Large infrastructure projects are prone to misconceptions—particularly, their benefits, which tend to be exaggerated, and their costs, which tend to be under-evaluated. The Panama Canal expansion is no exception. In early 2016, the estimated $6.2 billion-dollar project will add a new set of locks that will enable the existing canal to handle larger ships. Such an increase in capacity has triggered many expectations about its potential impacts on global trade, in particular for ports on the American East Coast. The common belief is that the expansion will bring additional traffic and economic opportunities for the markets the canal services. The question, however, remains: what can be considered unfounded myths, as opposed to the realities of the impacts of the project?

1:30–1:45 p.m. Break
1:45–3:00 p.m. Concurrent Sessions

6. Mindless Driving
Meeting Room 6
Moderator: Alice Ton, Department of Mechanical Engineering, University of Minnesota

The Self-Driving Vehicles are Coming!
Spencer Peck, Law School and Humphrey School of Public Affairs, University of Minnesota

Driver Distraction is Greater with Cell Phone Conversation than with Passenger Conversation—A Social Cybernetic Interpretation
Zhezi Yang, Department of Architecture, and Thomas J. Smith, School of Kinesiology, University of Minnesota

7. Managing Assets and Projects
Meeting Room 5
Moderator: Mike Sheehan, Olmsted County

Planning and Moving Forward with Asset Management
Kirby Becker, Minnesota Department of Transportation

Developing and Implementing an Electronic Project Management System for Engineering and Construction
Josh Haider and Christine Beckwith, Metropolitan Council; Luke Van Santen, Minnesota Department of Transportation

MnDOT Complete Streets Policy Implementation
Chris Berrens, Minnesota Department of Transportation

8. Bang for the Buck: Enhancing Financial Effectiveness
Meeting Room 4
Moderator: Ken Buckeye, Minnesota Department of Transportation

Minnesota Transportation Finance Database: A Signature Database for Research, Policymaking, and Engagement
Jerry Zhao and Adeel Lari, Humphrey School of Public Affairs, University of Minnesota

Discovering Innovative Solutions to Your Economic Woes
Lance Bernard, SRF Consulting Group, Inc.

Efficiencies at MnDOT
Deanna Belden, Minnesota Department of Transportation
9. Climate Change and Infrastructure Management

Meeting Room 3
Moderator: Hafiz Munir, Minnesota Department of Transportation

Climate Trends and Climate Change in Our Own Backyard: A Review
Mark Seeley, Department of Soil, Water, and Climate, University of Minnesota

MnDOT Flash Flood Vulnerability and Adaptation Assessment Pilot Project
Philip Schaffner, Minnesota Department of Transportation

Climate Change Impacts on Culverts Beneath Roads and Railroads in Norway
Geoffrie Kramer, RESPEC Consulting & Services

10. Rapid Fire: Stakeholder/Public Engagement and Communication

Meeting Room 2
Moderator: Kathy Quick, Humphrey School of Public Affairs, University of Minnesota

Managed Lane Policy, Design, and Public Perceptions in Minnesota
Lee Munnich, Humphrey School of Public Affairs, University of Minnesota

Stakeholder Communication: Keeping the Public Informed on Large Projects
Sam O’Connell, Metro Transit

Public Engagement Experiences in Local Road Systems Decision-Making in Minnesota
Guillermo Narvaez, Humphrey School of Public Affairs, University of Minnesota

TBI 2020: The Future of Regional Travel Surveys in the Twin Cities
Jonathan Ehrlich, Metropolitan Council

Predicting and Managing Conflict and Risks to Move Projects Forward
Phil Barnes, WSB & Associates; Christopher Moates, Minnesota Department of Transportation

St. Croix Crossing Bridge Project
Jessica Wiens, Hennepin County Public Works (formerly Minnesota Department of Transportation)

3:00–3:15 p.m. Break
3:15–4:30 p.m. Concurrent Sessions

11. Safety for All

Meeting Room 6
Moderator: Gary Davis, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota

Keeping LRT and BRT Moving in Mixed Traffic
Sam O’Connell, Metro Transit

MnDOT’s City Safety Pilot Project
Howard Preston, CH2M HILL, Inc.

Rural Polk County Testing of the California Mumble Strip
Edward Terhaar, Wenck Associates, Inc.; Alan Rindels, Minnesota Department of Transportation

Evaluation Considerations and Geometric Nuances of Reduced Conflict U-Turn Intersections
Leif Garnass and Todd Polum, SRF Consulting Group, Inc.

12. Ground Improvements

Meeting Room 5
Moderator: Mark Maloney, City of Shoreview

Permeable Pavements in Minnesota: This Train is Comin’
Peter Weiss, Department of Civil Engineering, Valparaiso University
Ground Improvements at TH 7/
Louisiana Avenue Interchange
Brent Theroux, Short Elliott Hendrickson, Inc.

Infrastructural Performance Enhancement Benefits from Low Water Cement Ratio
Bernard Izevbekhai, Minnesota Department of Transportation

13. Rapid Fire: Transportation Forecast Models for Planning
Meeting Room 4
Moderator: Hafiz Munir, Minnesota Department of Transportation

Cohort Analysis of Travel Behavior in the Twin Cities
Michael Iacono, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota

A New Activity-Based Planning Model for the Twin Cities
Jonathan Ehrlich, Metropolitan Council

Developing a Large-Scale Hybrid Simulation Model of the Minneapolis Metropolitan Area
Derek Lehrke, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota

Novel Vehicle Mass-Based Automated Passenger Counter for Transit Applications
Andrew Kotz, Department of Mechanical Engineering, University of Minnesota

Identifying Factors That Lead to Bus Accidents at a Large Transit Agency Using Big Data Analytics
Joel Huting, Joey Reid, and Uchechukwu Nwoke, Metro Transit

14. Vegetation Management and Environmental Impacts
Meeting Room 3
Moderator: Mindy Carlson, Center for Transportation Studies, University of Minnesota

Assessing the Use of Willow Shrub Species on Living Snow Fence Designs to Manage the Damaging Effects of Salt
Diomy Zamora, Natural Resource Management and Utilization, University of Minnesota Extension

Developing Salt-Tolerant Sod Mixtures for Use as Roadside Turf in Minnesota
Joshua Friell, The Toro Company

15. Technology Innovations in the Field and in Learning
Meeting Room 2
Moderator: Kevin White, Kimley-Horn and Associates, Inc.

Online Training and an Update on the Field
Christiane Reilly, College of Continuing Education, University of Minnesota

New Online Training—A Resource for Minnesota Local Agencies
Renae Kuehl, SRF Consulting Group, Inc.

Use of Technology in Great River Road Fieldwork

4:30–5:30 p.m. Reception
Hors d’Oeuvres and Cash Bar
Thursday, May 21, 2015 – 8:30 a.m.–12:00 p.m.

Transit Transformers Workshop
Meeting Room 5

8:00–8:30 a.m. Registration and Continental Breakfast

Part 1: Leveraging Station/Area Design
Moderator: Josh Olson, Ramsey County Regional Rail Authority

Transit Station and Stop Design and Travel Time Perceptions
Yingling Fan and Andrew Guthrie, Humphrey School of Public Affairs, University of Minnesota

Effectively Integrating Bus, Auto, and Bicycle/Pedestrian Connections to LRT/BRT Projects
Sam O’Connell, Kathryn Hansen, and Adam Harrington, Metro Transit

Investing “Beyond the Rails”
Katie Walker, Hennepin County

Evolving Station Design for LRT and BRT
Charles Carlson and Ryan Kronzer, Metro Transit

Prospect North: A Holistic Shared Vision (Public/Private) for Transit-Oriented Development in an Undeveloped Area Adjacent to a New Transit Station
Julie Kimble, Hickey and Associates; Richard Gilyard, Prospect Park 2020

Part 2: Improving Transit Options
Moderator: Shawn Combs Walding, Minnesota Department of Transportation

Analysis of Accessibility and Equity Benefits via Implementation of the Regional Transit Service Improvement Plan
Kyle Burrows, Metro Transit; Chelsey Palmateer, Accessibility Observatory, University of Minnesota

Prioritizing Future Local and Express Bus Service in the Transit Service Improvement Plan
Cyndi Harper, Metro Transit

The Economics of Peer-to-Peer Car Sharing
Guangwen Kong, Department of Industrial and Systems Engineering; Saif Benjaafar, Department of Mechanical Engineering; Xiang Li, University of Minnesota

12:00 p.m. Adjourn
Thursday, May 21, 2015 – 8:30 a.m.–3:30 p.m.

Roadway Safety Showcase:
Safety Innovations for Today and Tomorrow
Meeting Room 3

8:00–8:30 a.m. Registration and Continental Breakfast

8:30 a.m. Welcome

Max Donath, director, Roadway Safety Institute
Greg Winfree, assistant secretary, Office of Research and Technology, U.S. Department of Transportation

8:45 a.m. Improving Road Safety in Tribal Nations
Moderator: Greg Winfree, assistant secretary, Office of Research and Technology, U.S. Department of Transportation
Understanding Transportation Safety Risks on Tribal Lands: A Collaborative Research Project with American Indian Communities
Kathy Quick and Guillermo Narvaez, Humphrey School of Public Affairs, University of Minnesota

Using GIS to Improve Tribal Traffic Safety
Tom Horan, Claremont Graduate University

10:00 a.m. Break

10:15 a.m. Rapid Fire: Technology and Roadway Innovations
Moderator: Sue Groth, Minnesota Department of Transportation

Development of Traffic Information System Using DSRC-Based V2V Communication and Geographic Information System Data
Imran Hayee, Department of Electrical Engineering, University of Minnesota Duluth

Implementation of a V2I Highway Safety System and Connected Vehicle Testbed
John Hourdos, Minnesota Traffic Observatory and the Department of Civil, Environmental, and Geo-Engineering, University of Minnesota

A Positioning and Mapping Methodology Using Bluetooth and Smartphone Technologies to Support Situation Awareness and Wayfinding for the Visually Impaired
Chen-Fu Liao, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota

Novel Collision Avoidance System for Bicycles
Rajesh Rajamani, Department of Mechanical Engineering, University of Minnesota

Directing Rumble Strips for Reducing Wrong-Way Driving Freeway Entries
Huaguo Zhou, Department of Civil Engineering, Auburn University

Performance Measures for Bicycle and Pedestrian Safety: Methodologies for Monitoring Traffic Volumes and Assessing Exposure to Risk
Greg Lindsey, Humphrey School of Public Affairs, University of Minnesota
Developing and Validating a Model of Left-Turn Crashes to Support Safer Design and Operations
Gary Davis, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota

11:30 a.m. Lunch

12:30 p.m. Rapid Fire: Safety Policy and Human Factors
Moderator: Captain Eric Roeske, Minnesota State Patrol

Does the Commercial Driver’s Medical Examination Identify Safety-related Medical Conditions?
Stephen Burks, Division of Social Sciences, University of Minnesota Morris

Identifying and Reconciling Stakeholder Perspectives in Deploying Automated Speed Enforcement
Frank Douma, Humphrey School of Public Affairs, University of Minnesota

Alcohol-Related Hot Spot Analysis and Prediction
William Schneider, Department of Civil Engineering, University of Akron

Safety in Numbers? Accessibility, Traffic, and Safety of Non-Motorized Travelers
Andrew Owen, Accessibility Observatory, Department of Civil, Environmental, and Geo-Engineering, University of Minnesota

Assessing Factors Affecting Policy Leadership in Adopting Road Safety Countermeasures
Lee Munnich, Humphrey School of Public Affairs, University of Minnesota

Older Driver Support System (ODSS) Usability and Design Investigation
Nichole Morris, Department of Mechanical Engineering, University of Minnesota

1:45 p.m. Break

2:00 p.m. Improving Railroad Grade Crossing Safety at the Regional Level
Moderator: Michael Pretel, Minnesota Department of Transportation

Accident Prediction Models Using Macro and Micro Scale Analysis
Ray Benekohal, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign

Reliable Planning and Coordination of Emergency Responses to Railroad Incidents
Yanfeng Ouyang, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign

Real-time Prediction and Monitoring of Potential Conflicts at Grade Crossings
Daniel Work, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign

3:15 p.m. Closing Comments
Max Donath, director, Roadway Safety Institute

3:30 p.m. Adjourn
Planning Committee

Phil Barnes, WSB & Associates
Lowell Benson
William Boulay, Dominium
Lynne Bly, Minnesota Department of Transportation
Brandon Brever, Minnesota Asphalt Paving Association
Ken Buckeye, Minnesota Department of Transportation
Biz Colburn
Gary Davis, University of Minnesota
Frank Douma, University of Minnesota
Jonathan Ehrlich, Metropolitan Council
Yingling Fan, University of Minnesota
Bryant Ficek, Spack Consulting
Chris Hiniker, Short Elliott Hendrickson, Inc.
Tony Hull, Toole Design Group, LLC
Chris Kufner, Minnesota Department of Transportation
Brad Larsen, Minnesota Department of Transportation
Mark Maloney, City of Shoreview
Hafiz Munir, Minnesota Department of Transportation
Paul Rowekamp, Minnesota Department of Transportation
Carol Shield, University of Minnesota
Tom Sohrweide, Short Elliott Hendrickson, Inc.
Alice Ton, University of Minnesota
Bruce Wilson, University of Minnesota
John Wilson, Minnesota Department of Transportation

Members and Friends of the Education and Outreach Council
Assisted by Center for Transportation Studies staff

Mark Your Calendar
Toward Zero Deaths Conference
October 29–30, 2015
River’s Edge Convention Center, St. Cloud, Minnesota