



2018 National Work Zone Management Conference

**Sponsored by the
National Work Zone Safety Information
Clearinghouse**

In partnership with U.S. Federal Highway Administration and American
Road and Transportation Builders Association–Transportation
Development Foundation

Welcome to Dulles!

Over thirty years ago, the American Road & Transportation Builders Association Transportation Development Foundation (ARTBA-TDF) brought together construction executives and public agency officials for the landmark “National Conference on Highway Work Zone Safety.” It was the first of 15 national and international conferences, and educational workshops to share “best practices” and provide perspectives from “both sides of the barrel” in an effort to help reduce motorist and worker fatalities and injuries in these road construction sites.

The Clearinghouse offers a wide variety of services including training materials, webinars, conferences, and workshops. Most notably the Clearinghouse website (workzonesafety.org) fulfills nearly 200,000 information requests annually and is operated in partnership with the U.S. Federal Highway Administration and the Texas A&M Transportation Institute.

We hope you will attend as many sessions as possible, so you can benefit from the experience and knowledge of our nationally-recognized presenters who have volunteered to share their best practices and insights with you!

For more information on the Clearinghouse and its services, contact Brad Sant (bsant@artba.org) or Melanie Laird (mlaird@artba.org) or visit our website, workzonesafety.org.



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Conference Schedule

Day One: Tuesday, September 11th

7:00 a.m. –
12:00 p.m.

Registration Desk Open

Continental Breakfast until 8:00 a.m.

8:30 a.m.

Work Zone Data Initiative Symposium (WZDI Symposium) Session 1: Setting the Stage: The Need for Work Zone Activity Data (WZAD)

Room: Salon A

Presenter: Todd Peterson, FHWA

Work zone activity data (WZAD) – “when, where, and how work zones are deployed” – is becoming increasingly integral to operations and maintenance activities within transportation agencies. In response to this need, the Federal Highway Administration (FHWA) is conducting the Work Zone Data Initiative (WZDI). Session 1 will provide an overview of this effort, in which FHWA is working with stakeholders across the country to develop a recommended practice for managing WZAD and creating a consistent language for communicating this information.

8:55 a.m.

WZDI Symposium Session 2: The Fundamentals of WZAD

Room: Salon A

Presenter: Jeremy Schroeder, Athey Creek Consultants

WZAD is a key need for current and future data-driven transportation systems management and operations (TSMO) efforts. This includes project planning and coordination efforts, impact analysis and performance assessment, public- and private-sector traveler information dissemination, and the successful deployment and operation of Connected and Autonomous Vehicles (CAVs) in the future. Through the WZDI's extensive research and stakeholder outreach efforts, WZAD content, uses, and users were identified and defined throughout the work zone life cycle. This session explores these fundamental concepts as well as how WZAD fits into broader agency operations and processes.

9:20 a.m.

Break

9:30 a.m.

WZDI Symposium Session 3: What's Happening Now?

Room: Salon A

Facilitator: Melisa Finley, TTI

Presenters: Ariel Gold, USDOT ITS Joint Program; David Rush, VDOT

This session explores how WZAD is used today at the Federal and State level. Presentations include the USDOT's Work Zone Data Exchange (WZDx), an effort between Federal, state, and private sector data providers and users to jumpstart the voluntary adoption of standardized basic work zone data specifications. It also includes an overview of Virginia DOT's in-field mobile application for real-time WZAD data entry. Participants will have the opportunity for a two-way discussion with leaders of these efforts to ask questions and better understand how WZAD is being implemented today.

10:20 a.m.

Break

10:30 a.m.

WZDI Symposium Session 4: Framing the WZAD Discussion

Room: Salon A

Presenters: Denny Stephens, Vital Assurance; Melisa Finley, TTI; Jerry Ullman, TTI

This session explores how an agency is able to integrate WZAD concepts into a data repository (i.e., a work zone data system (WZDS)) in order to manage, maintain, store, and communicate WZAD. Real-life current examples will be discussed including the opportunities and challenges that come with implementation.

11:20 a.m.

Break

**11:30 a.m. -
1:30 p.m.**

Luncheon

Room: Junior Ballroom

Opening Remarks:

Commissioner Stephen Brich, VDOT

WZ Clearinghouse Update:

Brad Sant, ARTBA; Jerry Ullman, TTI

Agency Updates:

Federal Highway Administration: Paul Pisano, FHWA

Occupational Safety and Health Administration:

National Institute for Occupational Safety and Health: G. Scott Earnest, NIOSH

1:30 p.m.

WDZI Symposium Session 5: Listening to the Users

Room: Salon A

Presenters: Melisa Finley, TTI; Jerry Ullman, TTI

Join the WZDI team for an open discussion on current WZAD applications. This session will provide the audience the opportunity to discuss examples of WZAD use within a WZDS – examples on the fly. Topics include information currently information collected in a “perfect world”, and associated challenges and opportunities.

Work Zone Safety Assessment Tool

Room: Salon C

Presenter: Henry Brown, University of Missouri

This presentation covers the development and implementation of a spreadsheet tool for assessing work zone safety impacts. Learn how to utilize this valuable tool to compare multiple work zone alternatives to predict crashes and crash costs in a variety of facility types.

2:30 p.m.

WZDI Symposium Session 6: A Look at the Data

Room: Salon A

Presenter: Todd Peterson, FHWA

FHWA is providing free resources, technical assistance, and pilots to interested agencies. Come to this session to learn about the multitude of opportunities for which your agency can take advantage. Stay for one-on-one discussions with the WZDI project team!

Stakeholder Communications

Room: Salon C

Presenter: John Habermann, TTI

This presentation will cover the different ways data from work zone infrastructure is used to communicate expectations to stakeholders and how this data is used to make construction phasing decisions that will cause minimum impacts to stakeholders. Active communication is more than posting a press release on a social media website. This presentation will demonstrate, teach, and coach participants through the challenging yet rewarding work of maintaining healthy relationships with those impacted by cones, barrels, lane closures, ramp closures, utility work, etc.

3:20 p.m.

Break

3:30 p.m.

WZDI Symposium Session 7: Next Steps and How to Get Involved

Room: Salon A

Presenter: Todd Peterson, FHWA

FHWA is providing free resources, technical assistance, and pilots to interested agencies. Come to this session to learn about the multitude of opportunities for which your agency can take advantage. Stay for one-on-one discussions with the WZDI project team!

Safe and Effective Traffic Control

Room: Salon C

Presenter: Steve Kite, NCDOT; Ricky Stone, Ver-Mac

North Carolina is using "anti-glare" lighting technology in its work zones to help control speeds and improve worker and driver visibility. Also, these devices are also assisting in helping alert distracted and drowsy drivers of approaching work zones. We are identifying these lights as "Presence" lights which are being used as illuminated traffic control devices instead of standard lights. Early indications are driver speeds are being reduced 5 to 6 MPH during their use. This presentation will also share data from Michigan and Tennessee that have used them in similar applications with similar results.

4:30 p.m.

WZ Series Part 1: Automated Motorist Warnings

Room: Salon C

Presenter: Ross Sheckler, iCone; Matthew Stachel, Truxblox

Learn about the latest developments in aiding connected and navigated vehicles through smarter work zones. Transportation agencies across the country have been experimenting with upgrading legacy work zone traffic control equipment with cellular connectivity. This presentation will examine successful deployments, concepts of operations, and lessons learned from these efforts.

5:30 p.m.

End

**5:30 –
7:00 p.m.**

Reception
Exhibitor Area

Day Two: Wednesday, September 12th

7:00 –
8:00 a.m.

Breakfast with Exhibitors

8:00 a.m.

Work Zone Traffic Management: Traffic Critical Projects

Room: Salon A

Presenter: Daniel Sprengler, Iowa DOT

Over the past 5 years the Iowa Department of Transportation has increased its effort of work zone management. This presentation will cover the Iowa DOT Traffic Critical Projects program that analyzes available work zone traffic capacity against traffic demands. Prominent features include the success of permanent traffic recorders along with ITS and RWIS sensors that provide a wealth of information to monitor traffic volumes, as well as the development of a web-based, hourly volume traffic forecasting tool which predicts traffic capacities for various work zone activities and lane configurations.

Automated Vehicles in Work Zones

Room: Salon C

Presenters: Fred Bergstresser, Royal Truck; Solomon Haile, CODOT

This presentation provides a brief history of the development of the Autonomous Truck Mounted Attenuator (ATMA) truck and its use and development in the UK and with Colorado Department of Transportation will be presented. The importance of this innovation is that it removes the driver from a vehicle that is designed to be hit (TMA). Proper build of a TMA truck and its use in mobile maintenance operations will be discussed along with current and future developments.

9:00 a.m.

Smarter Work Zones: Traffic Operations Systems

Room: Salon A

Presenter: Solomon Haile, CODOT

This presentation will review the successes of smarter work zone planning through the implementation of systems such as Portable Variable Speed Limit Signs (PVSL), truck entrance and exit warning systems, queue detection systems, and variety cameras on the I-25 project in Colorado.

Work Zone Crash Modification Factors (CMFs)

Room: Salon C

Presenter: Henry Brown, University of Missouri

While the Highway Safety Manual (HSM) provides Crash Modification Factor (CMF) values for various treatments, work zone-related CMF availability is limited. The use of work zone CMFs can help practitioners to estimate safety benefits of work zone countermeasures. This presentation will provide an overview of practitioner guidance that has been developed for both the application of existing work zone CMFs and the generation of new work zone CMFs. The presentation will also provide background information on existing work zone CMFs and will include examples to demonstrate the process for generating and implementing work zone CMFs.

10:00 a.m.

Work Zone Project Management

Room: Salon A

Presenters: Neil Boudreau, MassDOT; Bastian Schroeder, Kittelson and Associates

This session will present a case study that demonstrates a successful approach to work zone project management from the planning stages up through and post-construction. The Massachusetts Department of Transportation used accelerated construction techniques to replace the superstructure of Commonwealth Avenue in Boston. This unique bridge consists of three independent, longitudinal sections that carry Commonwealth Avenue and the MBTA rapid transit line over Interstate 90 and the Commuter Rail line. The project presented significant impacts on the regional transportation system and the local surface roads. (cont.)

(cont.) The traffic management planning was a multi-year effort with an extensive stakeholder engagement process to best mitigate the potential impacts. A work zone model using the Free-Val-WZ program was developed to understand the magnitude of the impacts and drive media outreach. A post mortem and validation analysis was completed to document how well the predictive model compared to actual field conditions and the success of the TMP.

Comparative Travel Time During Construction

Room: Salon C

Presenter: John Habermann, TTI

According to the Federal Highway Administration, the goal of Active Traffic Demand Management (ATDM) is to increase the productivity and efficiency of a transportation system. This presentation will discuss the development, implementation, and lessons learned from the comparative travel time methods used during the Interstate 35 construction project in Temple, Texas.

11:00 a.m.

Moving and Stopped Queue Lengths in Work Zones

Room: Salon A

Presenter: Rahim Benekohal, University of Illinois at Urbana-Champaign

Three types of queuing conditions happen in highway and arterial work zones. This presentation will discuss how to compute queue length for each queuing condition. The presenter will examine how a simple input-output procedure that may work well for a stopped queue condition but may not work well when there is moving queue or a combination of queues.

Integrated Portable Variable Speed Limits in Work Zones

Room: Salon C

Presenters: Solomon Haile, CODOT

The Colorado DOT (CDOT) is ready and testing for implementation of a Portable Variable Speed Limit Sign (PVSL) system in work zone. This presentation will review the development, integration, benefits of the Portable Variable Speed Limit Sign (PVSL) system in the I-25 Gap project in Colorado.

**12:00 –
1:30 p.m.**

Luncheon

Room: Junior Ballroom

MASH Update:

Menna Yassin, FHWA

Visit Exhibitors and Outdoor Demonstrations

1:30 p.m.

Drones in Work Zones

Room: Salon A

Presenter: Jim Sterling, Beaver Excavating; Hoda Azari, FHWA

Three types of queuing conditions happen in highway and arterial work zones. This presentation will discuss how to compute queue length for each queueing condition. The presenter will examine how a simple input-output procedure that may work well for a stopped queue condition but may not work well when there is moving queue or a combination of queues.

Mobile Operations on Two-Lane, Two-Way

Room: Salon C

Presenter: LuAnn Theiss, TTI

Contribute your industry experience and expertise and join us for an in-depth, interactive discussion on safe and effective temporary traffic control for mobile operations on two-lane, two-way roadways. Discussion topics include the challenges associated with balancing temporary traffic control requirements of a work operation versus the time needed to perform the task, and the role of site-specific factors (sight distance, roadway cross-section, traffic volumes, speeds, types of vehicles, etc.) play in deciding how they will perform certain work activities from a TTC perspective.

2:30 p.m.

Work Zone Liability Part 1

Room: Salon A

Presenters: Greg Stefan, Arch Insurance; Paul Albrecht, Barriere Construction

Insurance carriers and contractors who specialize in the transportation and infrastructure construction space too often see the devastating results of accidents and injuries to the construction workforce and the travelling public. One of the most catastrophic, and sadly, one of the most frequent types of incidents involves vehicle intrusions into temporary work zones. These incidents result in serious disabling and fatal injuries to construction workers as well as members of the traveling public. Best practices can be implemented to solve both. Objectives of this session include – 1) Understand best practices to prevent work zone accidents involving workers and the public. 2) Implement proactive course of construction processes and procedures for inspection and ongoing traffic control maintenance. 3) Prepare your company for potential litigation and mitigation of damages associated with General Liability claims.

Large Trucks in Work Zones

Room: Salon C

Presenters: Martha Kapitanov, FHWA; Jerry Ullman, TTI; Emily Anderson and Thomas Kelly, FMCSA

Work zones can create special challenges for drivers of large vehicles, such as commercial motor vehicles, due to space restrictions. Road work must take place within highway rights-of-way and, often, within reduced numbers of lanes. Understanding how work zones can be designed to maintain the efficient movement of large freight transportation vehicles within the restricted right-of-way space and to ensure that DOT and public works staff and highway contractors' employees can safely work within work zones can provide significant benefits for all work zone users.

3:30 p.m.

Work Zone Liability Part 2

Room: Salon A

Presenters: Greg Stefan, Arch Insurance; Paul Albrecht, Barriere Construction

A continuation of Work Zone Liability, Part 1.

4:30 p.m.

WZ Series Part 2: Saving Lives with Portable Positive Protection (PPP)

Room: Salon C

Presenters: Adam Leigh, PSS; Tony Cappella, Hill and Smith; Fred Bergstresser, Royal Truck

A panel of industry experts will lead an open discussion about portable positive protection (PPP) in work zones. The panel features several manufacturers of countermeasures and devices that reduce worker exposure to live work zone traffic. Learn how these innovations can satisfy the needs of PPP and help make workers and the driving public safer.

Worker Safety During TTC: Set-Up and Removal

Room: Salon A

Presenters: Melissa Finley, TTI; LuAnn Theiss, TTI

Deploying and retrieving temporary traffic control devices in work zones is a dangerous task – for many reasons. This presentation explores a number of those work hazards, including ergonomic injuries. The presenters also consider better equipment design considerations to help mitigate risk.

WZ Series Part 3: Internal Traffic Control Part 1: Showing Blind Spots

Room: Salon C

Presenters: Emmett Russell

Blind spots are areas around a vehicle or piece of equipment where the driver or operator cannot see because of the shape and size of the machine. Each type of vehicle has very different blind spots. Operators and especially workers are often surprised to see just how large blind spots are. This presentation demonstrates how to teach workers to identify blind spots to safely navigate work zones on foot.

5:30 p.m.

End

Day Three: Thursday, September 13th

7:00 –
8:00 a.m.

Breakfast with Exhibitors

8:00 a.m.

TRB AHB55 Work Zone Traffic Control Mid-Year Meeting (Open to All)

Room: Junior Ballroom

10:00 a.m. –
12:00 p.m.

FHWA Stakeholder Meeting (Invitation Only)

Room: Salon A

10:00 a.m.

Electrical Safety (Overhead and Buried Powerlines)

Room: Salon C

Presenter: Dennis Burks, HNTB

This safety presentation will provide an overview of the principles and hazards of electricity to increase the participants' ability to recognize, correct, and avoid electrical hazards in the work zone. Information on underground and overhead power lines will be discussed with a demonstration simulating a crane coming in contact with an overhead power line.

11:00 a.m.

Internal Traffic Control Part 2: Drawing Internal Traffic Control Plans

Room: Salon C

Presenter: Brad Sant, ARTBA; Robinson Vasquez, ARTBA

ITCPs can play a significant role in reducing other injury and fatality events in the work zone. This presentation explains how agencies and contractors can write ITCPs for any project, large or small.

12:00 –
1:30 p.m.

Luncheon Discussion: Safety Certification for Transportation Project Professionals (SCTPP)

Room: Junior Ballroom

Presenter: Brad Sant, ARTBA

1:30 p.m.

End

Speaker Profiles

Paul Albrecht, Barriere Construction

Paul Albrecht, CSP, is the Corporate Safety Director at Barriere Construction Co., L.L.C. with over 20 years of experience in the roadway construction industry. Throughout his career at Barriere, Paul has obtained recognition for his experience and knowledge in responding to, investigating, and managing litigation for work zone accidents. In addition, he has successfully implemented and consulted best practices for planning, setting, maintaining, and removing traffic control within the industry. Paul has served on ARTBA's Safety Committee as a subject matter expert for the development of the Safety Certification for Transportation Project Professionals (SCTPP) Program. Currently, his responsibilities include managing the Safety Department with an emphasis in risk management, auditing safety, health and environmental policy compliance, and consulting management in safe operations. He serves as an active member on Barriere's Executive Committee to support management's commitment to safety in strategic planning efforts, safety program initiatives, and trends in safety performance indicators.

Hoda Azari, Ph.D., Federal Highway Administration

Dr. Hoda Azari is the FHWA's Nondestructive Evaluation (NDE) Research Program Manager. Her background is in structural engineering and her expertise is in the area of NDE and structural health monitoring (SHM) of transportation infrastructure. She has done extensive research studies for condition assessment and damage detection of transportation infrastructure and performed forensic investigation services to State DOTs. Dr. Azari is also the FHWA's technical point of contact for application of Unmanned Aerial System (UAS) and Augmented Reality (AR) in highway infrastructure. She has authored and co-authored over 50 technical papers and reports. Dr. Azari serves on the TRB AFF40 Field Testing and Nondestructive Evaluation of Transportation Structures, TRB AHD30 Structure Maintenance, and ASCE Geophysical Engineering Committee.

Rahim Benekohal, University of Illinois at Urbana-Champaign

Dr. Benekohal is a professor of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign. He obtained his Bachelors, Masters, and PhD Degrees in Civil Engineering from the Ohio State University. He worked for the consultant company of RKA in Tarrytown, NY as a Transportation Engineer in 1986-1987. Then, he joined the University of Illinois and has been working there for 30 years. His area of research is traffic modeling, simulation, capacity analysis, transportation systems analysis ITS, and transportation safety. He has published over 300 articles and reports in these fields.

He is Director of the Annual Illinois Traffic Engineering and Safety Conference. He was Director of Traffic Operations Laboratory (TOL) at UIUC, and Co-Director of NEXTRANS the Region 5 University Transportation Center.

Fred Bergstresser, Royal Truck

Fred Bergstresser is Government Account Manager for Royal Truck & Equipment, managing government activities including procurement strategy, government relations, and Royal's representation on NCUTCD Temporary Traffic Control (TTC) Technical Committee, ATSSA Innovation Council, Pennsylvania Automated Vehicle Policy Task Force, and is a founding member of the Automated Vehicle Coalition. Fred leads Royal's Autonomous Impact Protection Vehicle (AIPV) project.

Neil Boudreau, MassDOT

Neil Boudreau serves as the Director of Traffic and Safety and State Traffic Engineer for the Massachusetts Department of Transportation, Highway Division, and has been with MassDOT since 1995, serving in many roles within the Traffic Operations and Safety Management groups. In his current position, Neil serves on the AASHTO Sub-committees on Safety Management and Traffic Engineering and is currently serving as the Chair of the Work Zone Technical Team. In addition, Neil serves as a member of the National Committee on Uniform Traffic Control Devices and is Vice-Chair of the Temporary Traffic Control technical committee.

Neil has been a member of Institute of Transportation Engineers (ITE) for twenty-two years and is a member of the American Traffic Safety Services Association (ATSSA). Neil is currently serving as a member of FHWA's Every Day Counts Smarter Work Zone Implementation Team.

Commissioner Stephen Brich, VDOT

Stephen C. Brich was appointed commissioner of the Virginia Department of Transportation (VDOT) in January 2018. Brich possesses 26 years of extensive experience specializing in the areas of traffic engineering, safety, operations, transportation planning and research. Prior to his appointment, Brich served as a vice president with Kimley-Horn and Associates, focusing on transportation matters in Virginia. He was responsible for leading strategic planning and pursuits relating to surface transportation for Kimley-Horn's three Virginia offices. As VDOT Commissioner, Brich oversees a \$5.4 billion annual budget and a team of 7,700 people who are responsible for designing, building, maintaining and operating the state's nearly 58,000 miles of roadway, 21,000 structures and bridges, six tunnels and three ferry systems. He holds a bachelor's degree in civil engineering from Old Dominion University and a master's degree in civil engineering from the University of Virginia. He is a licensed professional engineer in Virginia and Maryland.

Henry Brown, University of Missouri

Henry Brown is a Research Engineer at the University of Missouri where he works on projects in a variety of areas such as work zones, transportation safety, and asset management. Prior to moving to Missouri six years ago, he obtained his Bachelor's and Master's degrees in Civil Engineering from Purdue University and worked for 14 years as a Highway Engineer at the Indiana Department of Transportation. He is a registered Professional Engineer in both Indiana and Missouri.

Dennis Burks, HNTB

Dennis Burks is the Safety Director of HNTB Corporation, an employee-owned infrastructure solutions firm serving public and private owners and contractors. He also teaches electrical safety as an adjunct instructor at the OSHA Training Institute in Kansas City, Missouri. Mr. Burks has a Master of Science degree in Industrial Safety and Education Specialist degree in Human Services - Public Services. Dennis is a past local chapter President of the American Society of Safety Engineers (ASSE) and the recipient of the ASSE Regional Safety Professional of the Year award. He has written several safety articles that have been printed in various publications.

Tony Cappella, Hill and Smith

Tony began his career in Wilmington, Delaware in 1980 as a surveyor for Vandemark and Lynch. In 1987, he began a twelve-year stint as a field inspector and project manager for all phases of highway construction projects. In 1999, with almost twenty years of hands on experience in the highway industry, Tony turned his attention to sales and marketing, spending 12 years in eastern regional manager positions for Quixote Transportation Safety and Barrier Systems Inc. He managed sales and distribution of roadside safety devices and movable barrier. Most recently, Tony worked for Work Area Protection, where he served as a Director of Attenuator Sales for the eastern half of the United States. Tony participates in a variety of industry organizations and is a reputable highway safety advocate.

Melisa Finley, Texas A&M Transportation Institute (TTI)

Ms. Finley has been engaged in work zone safety and mobility research for over 20 years. She has led projects to improve the safety of maintenance operations, investigate work zone lighting needs and develop requirements, evaluate and establish work zone speed limit policies, quantify errant motorist intrusions into work zones, evaluate the safety of nighttime and daytime work zones, and assess the effectiveness of temporary traffic control devices, such as automated flagger assistance devices (AFADs), driveway assistance devices (DADs), portable traffic signals, and sequential warning lights. These research activities were sponsored by several state departments of transportation, toll agencies, FHWA, NCHRP, and the private sector. She has published over 95 refereed journal articles and technical reports and has made over 65 presentations at various conferences across the United States. Ms. Finley is a member of the TRB Work Zone Traffic Control Committee and the Chair of the TRB Joint Subcommittee on Vehicle Intrusion Mitigation in Work Zones. She is also a member of the ATSSA Temporary Traffic Control Committee and ITE.

John Habermann, Texas A&M Transportation Institute (TTI)

John Habermann is a Research Engineer at the Texas A&M Transportation Institute. Mr. Habermann is currently the Principal Investigator and Lead Mobility Coordinator. For over five years, Mr. Habermann has been actively involved in a 60+ mile reconstruction effort of Interstate 35 through Central Texas. As part of his efforts on I-35, he serves the critical role of a project ombudsman between the various stakeholders and the contractor and TxDOT. He also coordinates communication and outreach efforts with the TxDOT Waco District and neighboring TxDOT districts. Recently, Mr. Habermann has joined the efforts of the I-35 expansion, in the TxDOT Austin District, to transfer lessons learned and best practices from the Waco District. This work is successful due to Mr. Habermann ability to bring together different stakeholders with different needs to learn of their concerns, questions, and constructive feedback. Mr. Habermann continues to participate in research and implementation strategies related smart work zone technologies.

Outside of his work zone traffic management and mobility coordination efforts, Mr. Habermann has led a task, for the TxDOT Freight Division, on collecting, and reviewing the relevant literature, specifications, and current practices for Roadside Truck Parking along interstates and freeways. Mr. Habermann helped develop and conduct structured interviews to determine current practices in Preparing Work Zones for Automated and Connected Vehicles. Mr. Habermann has spent the last 24 years working with and alongside state DOTs and helping them solve relevant problems through stakeholder involvement and teamwork.

Solomon Haile, CODOT

Solomon Haile is a native of Ethiopia but has called Colorado “home” for the past 28 years. He holds both Bachelor and Master’s Degrees in civil engineering and is a registered Professional Engineer in the State of Colorado.

He is presently the Resident Engineer Manager at the Colorado Department of Transportation (CDOT), where he has held a number of engineering positions with increasing responsibility over the past 25+ years. He is the Subject Matter Expert (SME) for Smart Work Zone Operation at Colorado Department of Transportation. He is currently working in developing CDOT’s work zone performance measures, monitoring work zone safety and analysis policy along with variety of other tasks relating to work zones. Under his management CDOT implemented about \$2.5 Million Smart Work Zone operation in Colorado highways. His current responsibilities include managing a team of professional engineers who manages over \$15 Million construction project annually.

Martha Kapitanov, Federal Highway Administration

Martha C. Kapitanov is a member of the Work Zone Management Team in the Federal Highway Administration (FHWA), Office of Transportation Operations. Ms. Kapitanov has worked for FHWA for 20 years, and in her current capacity she provides leadership and guidance to the development and implementation of effective work zone management practices and innovations on a national level. Martha is the FHWA lead for the commercial motor vehicle safety in work zones initiative. She holds a bachelor's degree in Civil Engineering from the University of Puerto Rico.

Thomas Kelly, FMCSA

Mr. Kelly is currently the Innovative Technology Deployment (ITD) Grant Program Manager for FMCSA assigned to HQ in Washington DC, but works from his home in Auburn, ME.

The ITD Program is a key component of FMCSA's drive to improve commercial motor vehicle (CMV) safety. The ITD program supports this safety mission by providing discretionary grant funds to States for improving safety and productivity of motor carriers, CMVs, and their drivers, improving efficiency and effectiveness of CMV safety programs through targeted enforcement, improving CMV data sharing among States and between States and FMCSA, and reducing Federal, State, and industry regulatory and administrative costs. Prior to this position, Mr. Kelly was the FMCSA State Program Manager in the NH Division Office. He also served as the Compliance Division Chief at FMCSA HQ in Washington DC.

He was formerly with the Maine State Police from 1988 to 2012. He retired in January 2012 as the Commanding Officer of Troop K - Commercial Vehicle Enforcement. Mr. Kelly is a past Commercial Vehicle Safety Alliance (CVSA) International Vice President, Region 1 Vice President and Vice Chair of their Training Committee. He is a Graduate of the FBI National Academy and Educated at Andover College, Portland ME (Criminal Justice), St Joseph's College, Standish, ME, the University of Virginia, and other educational institutions.

Steve Kite, NCDOT

Steve is currently the State Work Zone Traffic Control Engineer for the North Carolina DOT. He has been with the Department for 24 years and has served in various roles within the Work Zone Traffic Control Section. He now oversees TMP development for North Carolina's Eastern Region as well as manages the statewide training and certification programs and product services for the Work Zone Traffic Control Section. Steve currently serves as an ATTSA member on the local and national Traffic Control Committees as well as the Innovation Council. He has served as either a TRB committee member or "friend" of TRB's Work Zone Traffic Control committee for the past 15 years. He also regularly participates in the Federal Highway Administrations "Peer to Peer" programs that promote "best practices" among state DOT agencies. Steve is a 1991 BSCE graduate of NC State University, a registered professional engineer in North Carolina and is a Certified Public Manager.

Paula Okunieff, ICF

Ms. Okunieff has over 35 years of experience modeling, specifying, testing and developing transportation and navigation systems that collect, verify and manage fleet and transportation network information. She has over 30 years working on spatial data and ITS standards including developing needs, requirements, use cases and specifications, encoding and testing standard instances, developing extraction, transformation and loading (ETL) scripts to convert formatted input to standard formats, and developing applications that consume ITS standards. She currently serves as the Data Analyst for the FHWA Work Zone Data Initiative.

Todd Peterson, Federal Highway Administration

Mr. Peterson joined the FHWA Office of Operations in 2013, where he has specialized in the integration of technology with highway operations, specifically focusing on leveraging Intelligent Transportation Systems and data for work zone management. He is currently leading the Work Zone Data Initiative, through which USDOT is working with federal, state, and industry stakeholders to develop a common national strategy around management of data pertaining to work zone events.

Paul Pisano, Federal Highway Administration

Mr. Paul Pisano is the Team Leader of the Road Weather and Work Zone Management Team in the Federal Highway Administration (FHWA), Office of Transportation Operations. Mr. Pisano has worked for the FHWA for 33 years, and in his current capacity he is responsible for two programs: the program that addresses the effects of weather on transportation safety and operations, and the program that seeks to improve transportation safety and mobility in and around work zones. Paul is the recipient of the 2016 Kenneth C. Spengler Award from the American Meteorological Society, and his education is in Civil Engineering, holding Bachelor of Science and Master of Science degrees from the University of Maryland.

Contact info: 1200 New Jersey Ave., SE, Washington DC 20590, 202-366-1301, paul.pisano@dot.gov

Emmett Russell

Mr. Russell is a 40-year veteran of the construction industry and member of the International Union of Operating Engineers. In the field he has served as a heavy equipment apprentice, mechanic, welder and operator, then lead tunnel mechanic and finally master mechanic. Since 1981 Mr. Russell worked for the International Union of Operating Engineers in various staff capacities, in 2002 he was appointed director of the IUOE Health & Safety Department, the position he held until his retirement in January of 2012. His duties included a broad spectrum of safety and health subjects, including regulatory affairs, legislation, training and consultation services to over one hundred IUOE Local unions. He also served on numerous government/construction industry committees. He is currently providing consulting services to ARTBA.

Brad Sant, ARTBA

Bradley Sant is the senior vice president of safety and education for the American Road & Transportation Builders Association where he oversees safety, training & education programs, certification, and federal contracts, including the National Work Zone Safety Information Clearinghouse. Previously, Brad served as director of hazardous materials training for the International Association of Fire Fighters; director of safety and health for the Building and Construction Trades Department, AFL-CIO; and as director of the National Resource Center for OSHA Training. Brad also recently served as Chairman of the Board of the Safety Equipment Institute, now the ASTM Certification Committee.

He graduated *cum laude* from Utah State University and earned a law degree from Georgetown University Law Center in Washington, D.C. He speaks Spanish fluently.

Jeremy Schroeder, Ph.D., Athey Creek Consultants

Dr. Schroeder has more than ten years of experience in transportation engineering research and analysis and has supported numerous work zone management projects for FHWA, state DOTs, and AASHTO. This work includes systems engineering and development, ITS studies, data analysis, evaluations, and outreach. Dr. Schroeder's experiences include many areas of transportation systems management and operations (TSMO), as well as connected vehicle development and deployment. Dr. Schroeder is a licensed Professional Engineer in Washington, DC, and an active member of the Transportation Research Board Work Zone Traffic Control Committee.

Ross Sheckler, iCone Products LLC

Mr. R. D. Sheckler is the Managing Partner of iCone Products as well as a Partner at Calmar Research and Calmar Holding. Mr. Sheckler serves as the Vice Chair of the American Traffic Safety Services Association's Innovation Council and the Chair of the Work Zone ITS Subcommittee. He received a BSAeroE in a cooperative degree program from Iowa State University in cooperation with McDonnell Douglas Aircraft Corporation as well as a MSAeroE with an emphasis in aircraft design technology in a degree program coordinated with Boeing Commercial Aircraft.

After graduation Mr. Sheckler joined Boeing in Seattle Washington and worked across the spectrum of vehicle design and manufacturing, as a result he was able to build a broad base of experience in structural, aerodynamic and system design. In 2005 Mr. Sheckler and the Calmar team launched Calmar Telematics, an engineering research firm which partnered with the freight industry to turn tracking and engine data into a resource for transportation researchers. In 2008 Calmar Telematics was asked if they could develop work zone monitoring equipment based on the technologies of the telematics industry. From this work iCone Products LLC was launched. The iCone Products team has been a significant factor in the advancement of the temporary ITS industry ever since.

Daniel Sprengler, Iowa DOT

Daniel Sprengler earned his Bachelor of Science degree in Civil Engineering from Iowa State University in 1983. Mr. Sprengler has served as the Work Zone Traffic Control Engineer for the Iowa Department of Transportation since 1993. His primary responsibility is to ensure that project plans contain satisfactory temporary traffic control information. He has instructed department and contractor personnel in basic work zone safety for the past 28 years.

Mr. Sprengler serves as the lead-state's project coordinator for the Smart Work Zone Deployment Initiative, a federal pooled fund study with Kansas, Missouri, Nebraska and Wisconsin. He is active in local and national ATSSA committees, and in the Midwest States Work Zone Roundtable. Although increased traffic demand creates new challenges, advancements in technology present new and innovative solutions for work zone safety.

Mr. Sprengler has been employed by the Iowa Department of Transportation since 1984 and is a Registered Professional Engineer in the State of Iowa.

Matthew Stachel, Truxblox

Matt is a serial entrepreneur who started his first company at the age of 12. After spending 22 years in the construction industry, Matt made the leap into the tech industry by founding two tech startups. Staying true to his passion, both tech companies have focused on making a positive impact in the construction and trucking industries. Matt is also a Slow Down Move Over and road safety advocate. He is a member of ATSSA and serves on two of their committee panels. He is also a member of the PennTime Technology Committee along with PennDOT, PA Turnpike and FHWA. In 2017 Matt also received his T.I.M. certification. Matt has also given talks to young and aspiring entrepreneurs at Startup Story Slam, Industry Associations and U. Penn's Wharton School of Business.

In his spare time, you can find him networking in the local tech scene, walking around a truck show, spending time with his niece or cheering for the Philadelphia Eagles.

Greg Stefan, Arch Insurance

Greg Stefan, CSP, ARM, ALCM, is Vice President of Risk Control at Arch Insurance Group. Greg and his team support Arch's Construction Underwriting and Claims teams in account selection, risk improvement, and claim mitigation activities. He is also responsible for high-risk liability claim reduction initiatives including contractual risk transfer, construction defect prevention, and work zone liability management. He regularly consults with contractor management teams in their continuous improvement processes concerning risk management, quality, and safety. Greg is a regular presenter at various construction industry associations and conferences to include CFMA, NAPA, National Work Zone Safety Conference, ARTBA, ATSSA, AGC, etc. Greg has served on ARTBA's Safety Committee as a subject matter expert for the development of the Safety Certification for Transportation Project Professionals (SCTPP) Program.

Denny R. Stephens, Ph.D., Vital Assurance

Dr. Denny Stephens has over 38 years of experience in leading research, development, field deployment, testing and demonstration of new technologies that improve commercial vehicle and automotive safety and mobility, including connected vehicle and autonomous systems. Under contract with ICF, Dr. Stephens is currently leading system engineering efforts for the Wyoming Department of Transportation Connected Vehicle Pilot Deployment. In that role he developed the System Architecture Document for the project which included developing the functional system architecture and developing Enterprise, Functional, Physical, and Communications models. He also developed the WYDOT CV Pilot Operational Test Plan which details plans for end-to-end testing of the WYDOT CV Pilot System to verify and demonstrate to the Team, WYDOT leadership, USDOT, and other stakeholders that the WYDOT Connected Vehicle Pilot Deployment (CVPD) meets functional and performance requirements, is ready for full deployment.

Jim Sterling, Beaver Excavating

James Sterling is a third-generation owner of The Beaver Excavating Company. Beaver Excavating has grown to become one of the largest and most respected mass earthmoving, site development and construction companies in Ohio and the neighboring states. Since its inception in 1953, Beaver Excavating has been delivering world-class service to our customers in the Commercial, Industrial and Heavy Highway industries. Beaver Excavating has been operating multiple drones on a variety of projects successfully and safely since 2015. James Sterling has 20 years of experience in surveying and machine control and currently manages the companies Field Technology and Surveying department.

Ricky Stone, Ver-Mac

Rick Stone is a National Sales Manager at Ver-Mac, where Rick leads Ver-Mac's Lighting and Security product lines sales. He has worked in the highway transportation industry for 12 years. Rick has thirty years of sales and sales management experience and has worked with several large sales organization. He has served on the Maintenance of Traffic Committee for the Florida Transportation Builder's Association. Rick is a veteran who served for seven years in the U.S. Army. He graduated with honors with a degree in Business Management from the University of Maryland. Rick is an avid golfer, and currently resides in Leesburg, Florida with Barbara, his wife of 35 years. To contact Rick, please email Ricky.Stone@Ver-Mac.com or go to Ver-Mac.com.

LuAnn Theiss, Texas A&M Transportation Institute (TTI)

LuAnn Theiss is a Research Engineer in the Operations and Roadway Safety Division of the Texas A&M Transportation Institute (TTI). She has over 14 years of experience as a principal investigator or key researcher on over 25 different studies relating to work zone safety and operations, traffic control devices, and human factors studies. Research sponsors include several state Departments of Transportation (DOTs), the National Cooperative Highway Research Program (NCHRP), the Federal Highway Administration (FHWA), and several private entities.

Jerry Ullman, Texas A&M Transportation Institute (TTI)

Dr. Ullman is a senior research engineer, regents fellow and manager of the work zone research program at TTI. He has over 30 years of research and technology transfer experience and is a nationally-recognized expert on a wide range of work zone safety and mobility issues and solutions. Dr. Ullman is a member of the National Committee on Uniform Traffic Control Devices, ITE, the ATSSA Innovation Council, and is a former chair of the TRB Work Zone Traffic Control Committee. He is a registered professional engineer in Texas.

Menna Yassin, Federal Highway Administration

Since 2017, Menna Yassin has worked in FHWA Headquarters Office of Safety under the Safety Design Team. Her area of focus includes roadside hardware and roadway departure. Prior to FHWA, Menna worked with the Florida Department of Transportation for six years. Menna holds a Bachelors and Masters Degree in Civil and Environmental Engineering from the University of South Florida. She is a licensed professional engineer in the State of Florida.



U.S. Department of Transportation
Federal Highway Administration

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