



2020 Northwest Transportation Conference

“The Future Is Now”

MONDAY, March 9, 2020 Registration, CH2M-HILL Alumni Center, 9:00 am

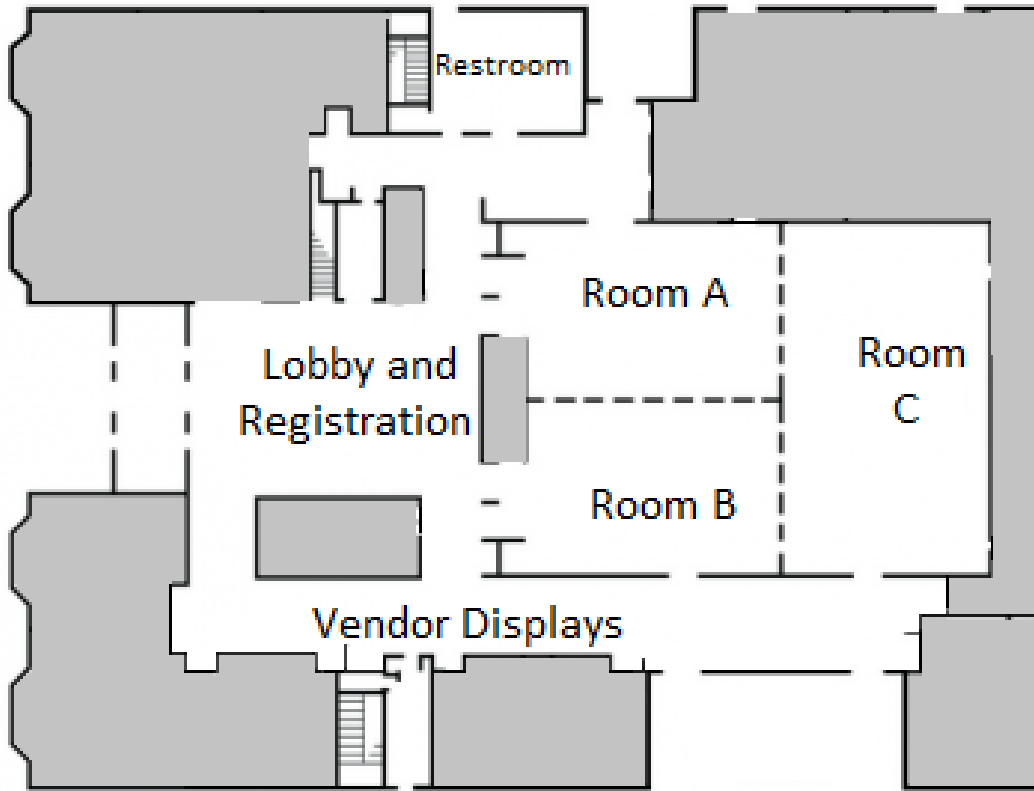
10:00 to 12:00	Vendor Fair – Exhibits Open	Opening Plenary Session: Welcome and Introductions-CH2M-HILL Alumni Center Ballroom Welcome from OSU, FHWA, and ODOT Keynote: Mac Lynde, ODOT Deputy Delivery and Operations Division Administrator Looking Forward – Oregon’s Transportation Future		
		Luncheon, 12:00-1:30pm; Presentation by Zach Barlow “History of the NWTTC”		
1:30 to 3:00		Guest Speaker Blain Leonard, Utah DOT Transportation Technology Engineer Topic: Innovation, Technology, and Transportation in 2020 and Beyond Followed by Panel Discussion including Jonathan Hopkins, Director, Strategic Development, NW US, Lime; Jacob Sherman, New Mobility Program Manager, Portland Bureau of Transportation; and Adrian Pearmine, National Director for Smart Cities and Connected Vehicle, DKS & Associates		
		Break, 3:00 – 3:30		
3:30 to 5:00		Room A	Room B	Room C
		1A. Drivers of Change: Planning for Emerging Technology, Economic, & Demographic Changes over the next 30 years	1B. Mobile Lidar Data: Rockfall and Pavement Markings	1C. Engineering Automation Tools: UAS, GPR, and GPS

TUESDAY, March 10, 2020 Registration, CH2M-HILL Alumni Center, 8:00 am

8:30 to 10:00	Vendor Fair – Exhibits Open	Room A	Room B	Room C
		2A. Innovative Technologies in Transportation Safety	2B. Senior Drivers & Pedestrians: Services and Safety	2C. Bridge Decks
		Break, 10:00 – 10:30		
10:30 to 12:00		3A. Management and Ops of Traffic Signals	3B Workshop on Micro mobility Impacts on Urban Transportation	3C. More on Bridges
		Luncheon, 12:00-1:30pm		
1:30 to 3:00		4A. Implementing Oregon’s Smart Mobility Network	4B. Pedestrian Crossings	4C. Sustainability and Resilience
	Break, 3:00 – 3:30			
3:30 to 5:00		5A. Preparing for Connected and Autonomous Vehicles	5B. Project Management Standards and Tools	5C. ODOT’s Urban Design Initiative: A Blueprint for Design

WEDNESDAY, March 11, 2020 Registration, CH2M-HILL Alumni Center, 8:00 am

8:30 to 10:00	Vendor Fair – Exhibits Open	Room A	Room B	Room C
		6A. Transportation Worker Safety and Traffic Data	6B. Project Tracker, Oregon Transportation Safety Data Explorer, and Legacy ITS Devices	6C. Transportation Data Tools for Bikes, Vehicles, and Pedestrians.
		Break. 10:00 – 10:30		
10:30 to 12:00		7A. Planning Analysis: A Glimpse into the Range of Analytical Capabilities	7B. Traffic and Probe Vehicle Data	7C. Safer Roads and Bike/Ped Safety
		Lunch Bags, 12:00-12:30pm		End of Conference



CH2M HILL ALUMNI CENTER
OREGON STATE UNIVERSITY

725 SW 26th St,
Corvallis, OR 97331

Detailed Breakout Session Information

Monday, March 9, 3:30pm-5:00pm

1A. Drivers of Change: ODOT's Planning Research in Emerging Technology, Economic, and Demographic Changes over the Next 30 Years

Moderator: Cole Grisham, ODOT Sr Transportation Planner

- a) *ODOT is developing a statewide Oregon Transportation Plan (OTP) update, which will replace a version adopted in 2006, and a statewide Oregon Highway Plan (OHP), which will replace a version adopted in 1999. In preparation for this effort, ODOT planning staff are working to understand how Oregon is expected to change across a wide variety of factors, including technologically, economically, demographically, and many others.*

Presentations by: Michael Rock, ODOT; Adam Argo, MUP, AICP, ODOT; & Cole Grisham, MUP, AICP, ODOT

1B. Practical Uses of Lidar at ODOT: Rockfall and Pavement Markings

Moderator: Kira Glover-Cutter, PhD, ODOT Research Coordinator

- a) *Forecasting increased rockfall activity following seismic events*
Presentation by: Michael J. Olsen, PhD, P.E., Oregon State University
- b) *An Efficient Approach to Automated Detection and Classification of Pavement Markings from Mobile Lidar Data*
Presentation by: Jaehoon Jung, PhD Research Associate, Oregon State University
- c) *Following the Path or Mobile Lidar data: R5 Mapping of Pavement Markings*
Presentation by: Rhonda Dodge, MSCE, ODOT & Jennifer Lanzarotta, MS ODOT

1C. Engineering Automation Tools: UAS, GPR, and GPS

Moderator: Chris Glantz, CPM, PLS, ODOT Deputy State Surveyor

- a) *The Oregon Department of Transportation's (ODOT) Engineering Automation (EA) section is has been responsible for bringing many new technologies to ODOT. This session will cover unmanned aircraft systems (UAS), ground penetrating radar (GPR), and GPS guidance of snowplows. The speakers will discuss each of these new technologies, where they are used within ODOT, how they have affected our work for the better, and the lessons learned during implementation.*

Presentations by: Chris Glantz CPM, PLS, ODOT; Chris Pucci PLS OPMA, ODOT; & Brett Murphy ODOT

Tuesday, March 10, 8:30am-10am

2A. Innovative Technologies in Transportation Safety

Moderator: Carl Olson, P.E., ASPE, Traffic Engineer Clackamas County

- a) *Automated Flagger Assistance Devices (AFAD)*
Presentation by: Justin King, P.E., ODOT
- b) *Video Analytics to Identify Safety Risks at Intersections*
Presentation by: Brian Chandler, P.E., PTOE, RSP2IB, PMP, DKS
- c) *Using ITS to Automate Workflows*
Presentation by: John Fasana, Washington County

2B. Senior Drivers & Pedestrians: Services and Safety

Moderator: Mark Joerger, MS, ODOT Sr Research Coordinator

- a) *Addressing Oregon's Rise In Deaths and Serious Injuries For Senior Drivers and Pedestrians*
Presentation by: Chris Monsere, PhD, P.E., PSU
- b) *Oregon DMVS - Older Driver Issues*
Presentation by: Kristofer Kyes, ODOT
- c) *[If time allows] A Global Perspective on Road Safety*
Presentation by: Mark Joerger, MS, ODOT

2C. Bridge Deck Session

Moderator: Matthew Mabey PhD, P.E., ODOT Research Engineer

- a) *Presentations in this session will report on Oregon DOT's efforts to monitor chloride profiles in bridge decks, utilizing no invasive bridge deck monitoring technologies, and developed strategies to increase bridge deck service life.*
Presentations by: Corey Withroe, ODOT, Burkan Isgor, PhD, P.E., OSU; & Andrew Blower, E.I.T, ODOT

Morning Break

Tuesday, March 10, 10:30am-12:00pm

3A. Management and Operations of Traffic Signals

Moderator: Stacy Shetler, P.E., Washington County Engineer

- a) *ODOT's Traffic Signal Management Plan*
Presentation by: David Hirsch, P.E, ODOT
- b) *The State of the Practice and Research Needs for Bicycle Traffic Signals*
Presentation by: David Hurwitz, PhD, P.E., OSU & Sirisha Kothuri, PhD, PSU
- c) *Best Practices in Signals Asset Management*
Presentation by: Chris Senesi, MSCE, WSP

3B. Workshop on Micro mobility Impacts on Urban Transportation

Moderator: Josh Roll, MUS, ODOT Research Coordinator

- a) *Micro mobility, in the form of light weight (most often times) electric vehicles, offers cities and their residents the potential for low cost, low carbon transportation options. But it has not all been smooth sailing as private firms compete for limited street and sidewalk space, success has not been uniform and is requiring a more hands-on approach be successful. What do these new travel options mean in Oregon and how can smaller and medium sized communities implement a successful program acceptable to citizens and private operators. These ideas and more will be explored in this interactive workshop, come learn and share your ideas on the challenges and opportunities for these emerging travel options*
Presentation by: Kathrine Hunter-Zaworski, PhD, P.E., OSU

3C. More on Bridges

Moderator: Matthew Mabey PhD, P.E., ODOT Research Engineer

- a) *Presentations in this session will report on Oregon's DOT's efforts to develop a comprehensive set of bridge deck management metric and to assess the expected seismic performance of older bridge bents. Finally, state of the art visualization methods for the analysis of bridge structures will be presented.*
Presentation by: Thomas Schumacher, PhD, P.E. PSU, & Peter Dusicka, PhD, PSU
- b) *Visualization methods of multidimensional data in stresses*
Presentation by: Yue Zhang, PhD, OSU

Tuesday Lunch – Networking and Vendor Exhibits

Tuesday, March 10, 1:30pm-3:00pm

4A. Implementing Oregon's Smart Mobility Network

Moderator: Nathaniel Price, PE, FHWA ITS Operations Engineer

- a) *Pedestrian Detection/Collision Avoidance for Traffic Signals*
Presentation by: Shaun Quale, P.E. Washington County and Travis Larson, IE, OSU
- b) *Next Generation Transit Signal Priority*
Presentation by: AJ O Connor, MPA, Trimet
- c) *Oregon State Police s-UAS for Crash Reconstruction*
Presentation by: Sr Trooper Billy Bush, OSP

4B. Pedestrian Crossings

Moderator: Mark Joerger, MS, ODOT Sr Research Coordinator

- a) *Can we improve driver's interpretation signal displays for an exclusive right-turn bay?*
Presentation by: Hisham Jashami, PhD candidate, OSU
- b) *Rectangular Rapid Flashing Beacons (RRFBs): The (Three-Lane) Sequel*
Presentation by: Chris Monsere, PhD, P.E., PSU
- c) *Pedestrian Methodologies for Safe Communities*
Presentation by: Sirisha Kothuri, PhD, PSU

4C. Sustainability and Resilience

Moderator: Kira Glover-Cutter, PhD, ODOT Research Coordinator

- a) *Ecofriendly Deicers for Protecting Infrastructure, Motor Vehicles, and the Environment*
Presentation by: Mehdi Nazari, PhD, WSU
- b) *When the Highway Goes for a Ride: Monitoring Infrastructure Traversing Coastal Landslides*
Presentation by: Andrew Senogles, OSU
- c) *ADA Accessible Trail Improvement with Volcanic Ash from the Eruption of Mt. Mazama*
Presentation by: Matthew Sleep, PhD, OIT

Tuesday, March 10, 3:30pm-5:00pm

5A. Preparing for Connected and Autonomous Vehicles

Moderator: Galen McGill, P.E., ODOT ITS Manager

- a) *Oregon Task Force on Autonomous Vehicles: 2019 Report to Oregon State Legislature*
Presentation by: Ali Lohman, ODOT
- b) *Putting the "C" back in CAV*
Presentation by: Adrian Pearmine, DKS
- c) *ODOT Connected Vehicle Initiatives*
Presentation by: Blaine Van Dyke, P.E. ODOT

5B Project Management Standards and Tools

Moderator: Jon Lazarus, MBA, PMP, ODOT Research Coordinator

- a) *Elevating Transportation Project Management as a Discipline*
Presentation by: Tamira Clark, ODOT
- b) *Aligning Project Management Standards to Fit an Organization's Long History of Delivery Projects*
Presentation by: Ana Jovanovic, OPMA, JACOBS
- c) *FACS-STIP Tool and Integration into TransGISs*
Presentation by: Laura Wipper, ODOT

5C. ODOT's Urban Design Initiative: A Blueprint for Design

Moderator: Michael Rock, ODOT Transportation Planning Unit Manager

- a) *Urban roadway design is an ever evolving practice and to stay current, design criteria must also evolve. Collaboration across ODOT through the Urban Design Initiative has updated and enhanced current urban design criteria. Project goals included the provision of greater flexibility, reevaluation of current context-based criteria, and inclusion of current design practices focusing on Performance-based, Practical Design. This endeavor created the Blueprint for Urban Design, a supplement and companion document to current ODOT design manuals*

Presentation by: Rich Crossler-Laird P.E., Rodger Gutierrez P.E., & Jessica Horning, MURP

Wednesday, March 11, 8:30am-10:00am

6A. Transportation Worker Safety and Traffic Data

Moderator: Norris Shippen, ODOT Research Coordinator

- a) *Competing Risks Designing Work Zones: Safety and Mobility Considerations on a Fast Track Project*
Presentation by: Christina Lafleur, P.E., ODOT
- b) *Use of Blue Lights on Paving Equipment in Work Zones*
Presentation by: Ananna Ahmed, OSU
- c) *Near Realtime Data Collection, Storage and Data Imputation of Traffic Data*
Presentation by: Vinay Amatya, PhD, Pacific Northwest National Lab (PNNL)

6B. Project Tracker, Oregon Transportation Safety Data Explorer, and Legacy ITS Devices

Moderator: Jon Lazarus, MBA, PMP, ODOT Research Coordinator

- a) *Transportation Project Tracker*
Presentation by: Sarah Chadderdon, AICP, PMP, ODOT
- b) *Oregon Transportation Safety Data Explorer (OTSDE): A web based GIS tool for visualizing traffic safety, multi modal, and planning data statewide, no GIS skills required*
Presentation by: Kristie Gladhill, P.E. MS, ODOT
- c) *Evolving and Phasing Out Legacy ITS Devices and Systems*
Presentation by: Linda Preisen, P.E., Athey Creek Consultants

6C. Transportation Data Tools for Bikes, Vehicles, and Pedestrians

Moderator: Josh Roll, MUS, ODOT Research Coordinator

- a) *Assessing the Quality of Third Party Data Product – The Potential of Vehicle Count Estimates across the Network*
Presentation by: Josh Roll, MUS, ODOT
- b) *Arterial travel time estimation in metropolitan transportation networks*
Presentation by: Arif Khan, Pacific Northwest National Lab (PNNL)
- c) *Building a Bicycle Data Fusion Model for Oregon*
Presentation by: Joe Broach, PhD, PSU & Sirisha Kothuri, PhD, PSU

Wednesday, March 11, 10:30am-12:00am

7A. Planning Analysis: A Glimpse into the Range of Analytical Capabilities

Moderator: Becky Knudson, ODOT Sr Transportation Economist

- a) *The purpose of this session is to highlight the broad range of planning analysis conducted by ODOT. Analysis is most effective when integrated into a robust process designed to meet clearly defined goals and objectives. Each project is unique, requiring use of appropriate tools and methods to produce relevant and meaningful information. This session presents the S-T-O-RM approach: Strategic, Tactical, Operational, and Reporting & Monitoring analysis*

Presentations by: Tara Weidner, P.E., Brian Hurley, Katie Brown, Robin Marshburn, & Peter Schuytema, ODOT

7B. Traffic and Probe Vehicle Data

Moderator: Xiugang Li, PhD, ODOT Research Coordinator

- a) *Predicting Average Daily Traffic on Local Roads: Parametric or Nonparametric Methods?*
Presentation by: Jason Anderson, PhD, PSU
- b) *Methodology for Setting Speed Limits in Urban Areas*
Presentation by: Jaclyn Schaefer, MS, PSU
- c) *Practical Application of Archived Probe Vehicle Data*
Presentation by: Rich Arnold, ODOT

7C. Safer Roads and Bike/Ped Safety

Moderator: Josh Roll, MUS, ODOT Research Coordinator

- a) *Make our Roads Safer for Everyone*
Presentation by: Massound Saberian, P.E., PTOE, Talbott Associates
- b) *Using Bicycle App Data to Develop Safety Performance Functions (SPFs) for Bicyclists at Intersections: A Generic Framework*
Presentation by: Josh Roll, MUS, ODOT
- c) *Oregon's Bicycle and Pedestrian Safety Implementation Plan Update*
Presentation by: Christina McDaniel-Wilson, P.E., ODOT

REMEMBER TO GRAB YOUR BOXED LUNCH ON THE WAY OUT!

Thank you to our Speakers, Moderators, Sponsors and Vendors for making this conference possible.