

Oregon Traffic Control Devices Committee

May 16, 2014

Meeting Minutes

[Marion County Public Works](#), 5155 Silverton Road NE, Salem, Oregon

Members Present: [Mike Caccavano](#), City of Redmond, Chairperson; [Ed Chastain](#), Lane County, Vice Chair; [Bob Pappé](#), Secretary, ODOT State Traffic Engineer; [Brian Barnett](#), City of Springfield; [Alex Georgevitch](#), City of Medford; [Joseph Marek](#), Clackamas County; [Pam O'Brien](#), DKS Associates; [Jim Rentz](#), OSP; [Cynthia Schmitt](#), Marion County; [Jeff Wise](#), ODOT Region 5

Others Present: Nick Fortey, FHWA; Eric Anderson, Julia Uravich, Marion County; Scott Beard, Charles Radosta, Kittelson & Associates; Steve Gallup, Chris Henry, City of Eugene; Cecilia Hague, Washington County; Kevin Hottmann, City of Salem; Bret Jones, Kelly Sandow, Sandow Engineering; Jabra Khasho, Tina Nguyen, City of Beaverton; Haregu Nemariam, Haregu Nemariam Engineering; Carl Olson, DKS Associates; Willie Rotich, City of Portland; Craig Black, Scott Cramer; Kevin Haas, Katie Johnson, Mike Kimlinger, Justin King, Eric Leaming, Kathi McConnell, Gary Obery, Amanda Salyer, Heidi Shoblom, ODOT Traffic/Roadway Section; Dan Dorrell, ODOT Region 3 Medford

Introduction – Approval of Minutes – Additional Agenda Items

Chair Mike Caccavano called the meeting to order at 9:00 a.m. and called for introductions from all attending. Cindy Schmitt oriented attendees on facilities available. Bob Pappé then moved, Alex Georgevitch seconded, and the committee approved the [March 2014 OTCDC Meeting Minutes](#). Mike Kimlinger said he had a NOA item on distracted driving and rumble strips if time allowed at the end of the meeting.

Business from the Audience/Public Comment on Non-Agenda Topics

None to report.

Pooled Fund Study Update

Mike Kimlinger reported on his trip to Boston for [Pooled Fund Study](#) meetings. In attendance were 19 of 21 member state DOT's, FHWA, ATTSA, one county representative (Broward County, Florida) and one city representative (Los Angeles, California). Massachusetts and Minnesota are new member states this year.

Updates on FHWA activities related to the MUTCD and Research included a reminder that the NPA for the 2016 MUTCD will be published in the Fall or Winter of 2016. Comments on

the MUTCD Strategic Plan (what the MUTCD should look like and who it is written for) will be solicited this summer. FHWA will be focusing more human factors research on roadway departure, visibility, and older road users than it has in the past. There was a reminder that [NCHRP 600](#) (Human Factors Guidelines) is out there to help with TCD decisions and FHWA will be launching a two day training to supplement the document.

Each member state presents issues they are interested in or having challenges with. Those that are of interest to a majority may become research proposals.

1. Guidance on when to use high visibility crosswalks; Hierarchy for determination of best treatments for crosswalks (pedestrians/bikes)
2. Symbol Signs: Interoperability (toll facilities from state to state), Flashing Yellow Arrow, Truck Symbols (construction and weight limit signs), ATVs, DDI Symbols, Tractor Symbols, Alternative Fuels, Hurricane symbol size
3. TCDs for Wrong Way Movements
4. Best practices for multilane roundabout guidance
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5. Guidelines for Sizing Traffic Signs
6. LED Applications to Enhance TCDs
7. Bike markings (cycle tracks, buffered, route marking, bike boxes, and shared lanes)
8. Ped warning sign light patterns (HAWK) (gaining better understanding and compliance)
9. Look at Standard Alphabets font for helping older drivers (Font Study)
10. Bicycle Signal Research
11. Curve signing with higher speed limits vs. lack of signing with lower speeds
12. Yellow change interval formula (building on ITE)

The top 4 in the list have the most interest among member states. FHWA will develop proposals and bring them back to the group for final approval in a few months. There is interest in the “HAWK” Ped hybrid beacons and treatments to help with compliance but other concerns had more interest.

Current projects that were reviewed at the meeting:

- Ped countdown signals legibility and comprehension (responses to displays, and which give best results) Some of the research teams testing choices are unclear and will be discussed in next web meeting.
- Evaluation of Elongated sign replica pavement markings to supplement post mounted signs at locations like problem curves. (Field installation of markings this summer)
- Warning sign legends for incident management (Still in data gathering phase)
- Line markings for lane reductions. (Underway, no new update)
- Study to produce better guidance for Guide Sign Design (FHWA also looking at this). [Kevin Sylvester](#) said they are producing a companion (or appendix to) the [Standard Highway Signs](#), so TCD-PFS will tailor or work to complement FHWA's'.

There was an overview of Georgia state research on converging chevron thermoplastic pavement markings showing reduced crash rates sustained over several years [at a ramp location](#) (I-85 North) in Atlanta (go to street view at link).

Reports from past projects can be accessed at the [TDC-PFS web site](#). A set of notes is being finalized with further information on the above. We will forward it to everybody when we get it.

The Next MUTCD Part 4 Signal Section

Craig Black reported to the committee on the FHWA's [Part 4 Fall 2013 Compilation of Draft Technical Updates/Considerations](#) for the next MUTCD update, the NCUTCD [Signal Technical Committee's recommendations](#) on it and [ODOT's comments](#) in response to them both. ODOT's comments have already been submitted, under a short time window for response. Craig went over the highlights of the attachments, reviewing each document in turn on each item with the committee, clarifying where questions came up. Scott Beard and Kevin Haas also responded to questions regarding proposed changes and the process at the NCUTCD.

At various points, committee members had comments such as it being handy to have some operational guidance retained in the Manual for the good of small local jurisdictions without much experience in dealing with some part of traffic control device installation and operations. In that regard, it was not possible to include such concerns in ODOT's response to the NCUTCD on this event. Comments to the NCUTCD are only open to (or through) voting member organizations, including NACE, ITE, state DOT's, etc. ODOT suggested they would be willing to give notice of this kind of thing in the future where time allows and take comments from local jurisdictions to be passed on as having been from a local jurisdiction on an as-time allows basis. Local jurisdictions may also want to pass their comments on through some of the other member organizations mentioned. When the FHWA puts out their NPR for updates to the MUTCD further into the process, then the field is open to comments directly from any interested jurisdiction.

Ballbanking Spreadsheet Update

Eric Leaming briefed the committee on [updates to his Ballbanking Spreadsheet](#). It's intended to help improve curve advisory speed consistency and efficiency. Version 1 had previously been demonstrated for the committee. It is used with the [Reiker](#) inclinometer. Version 2.0 is [available on line](#) free from ODOT. It fixes bugs and incorporates user suggestions gathered during field use of the previous version. It is built for Windows 7 and Excel 2010. The Windows XP system software and Excel 2003 available at the meeting did not allow for all the bells and whistles of the program so Eric wasn't able to demonstrate all of it.

The new release incorporates an inexpensive general GPS unit location and speed information while collecting ballbank values. This information is used to create maps of the curve location and plots of approximate speed during data collection. These data should help the analysis process once data collection is complete to make a more informed decision on proper curve advisory speed posting. The data is provided in lat-long format. ODOT can provide conversion files if needed to calculate mileposts.

ODOT has a limited number of inclinometers and compatible GPS units for local agencies to check out on a first-come first-served basis. To learn more about this service, and to receive email notifications when future updates are available, contact ODOT Traffic Standards at ODOTCurveSigning@odot.state.or.us.

Regarding the next generation, Mike Kimlinger said Reiker has another innovation coming out in the summer that incorporates a GPS unit into their accelerometer and will feed out actual acceleration in their accelerometer that will include speed and radius instead of degrees that can be recorded to a tablet which can then be uploaded to the cloud back at the office. Reiker has an application on their website that can then take this data and create a map on it which makes the curve investigations possible with one pass through the curve rather than three or more as is currently the case. The map application utilizes all the data fed into it and the AASHTO equation for side friction around curves and predicts what the recommended speed should be based upon the equations. It creates an interactive map that can be zoomed in on that's based on Google very similar to the Version 2 except that now you will enter the beginning of the curve, end of the curve and it produces a report of the curve from there.

ODOT Traffic-Roadway Section will get its first demo product on June 3rd for testing. If it works as intended, it will be shared with ODOT regions within a month. This is expected to give a significant reduction in manpower and subsequent increase in safety for investigators. The utilization of Reiker's cloud and program require a yearly fee (\$1,500 per unit) to the company. The newest version will cost 6K and must be purchased in bulk (50 units) so hopefully something will be worked out in the future to buy less at a time as ODOT has been able to do with the current version of the inclinometer. However, he also hopes ODOT will be able to produce their own facility similar to Reiker's within a couple of years. ODOT already has quite a bit of what's needed in hand.

ODOT has five inclinometers, three with GPS attached available for loan, along with the Version 2 software. Eric or others at ODOT Traffic-Roadway are available for questions and technical support. There is also a section of the Silver Falls Highway that ODOT has used as a test section that we have a fair amount of data on so local jurisdictions can check their numbers against while learning to use the software program.

ODOT can make the data ODOT has collected available on specific highways to the State Police or other law enforcement agencies for their own accident investigations.

Bicycle and Pedestrian Safety Implementation Plan Update

Amanda Salyer, on loan from ODOT Region 2 for a year, gave a presentation on the Oregon Pedestrian and Bicycle [Safety Implementation Plan](#) that was just published. ODOT has been working with Kittelson and Associates to develop plan that is the third in a series directly related to the focus areas in the Oregon Transportation Action Plan (TSAP). Most of that work was done by Kittelson. The first two plans, already completed, were the Roadway Departure Implementation Plan and the Intersections Implementation Plan.

For pedestrians and bikes, the project goals are to provide a data informed approach, to target reducing fatal and serious injury crashes, to increase understanding of ped and bike crashes, and to provide a tool box of effective low to medium cost countermeasures to improve safety to both pedestrians and bike riders. Because there are a much lower number of crashes to these modes of transport than there are for vehicles, we don't have the data to develop as robust a toolbox of proven countermeasures as we do for motor vehicles.

The idea is to build an alternate to the traditional; hot spots based method of identifying need for countermeasures by looking at the bigger picture, look at crash types first and try to identify potential sites that would be more likely to need treatment in a more proactive fashion. But again, the sporadic nature and lower number of crashes makes it harder to identify trends of crashes. Therefore, there are fewer reliable and/or proven low cost countermeasures. Also, volumes for both modes are not widely available and the roadway data available across jurisdictions is inconsistent. We'll be looking at risk factors such as high speeds, multilane roadways, transit stops and multiple accesses and then select countermeasures that may address common risks.

Stakeholders were consulted for feedback and guidance mid-way through the project.

Amanda reviewed the difference between the two systemic methods (traditional and risk based), and went over the process chosen to identify risk factors, which was to review crash data patterns, select factors that represent crash trends as supported by data and develop a matrix with score for each risk factor. She then went over additional steps such as assigning scores and weighting for screening, evaluating risk factors and crash frequencies to identify priority corridors, combine segments in close proximity and search for common overlapping corridors and different corridors.

Prioritized lists are being developed for each ODOT region, with different thresholds in each region to get adequate candidate locations for each region. Amanda went over risk factors considered for each mode, with a resulting example map of priority sites for each mode and an example list of priority sites for each mode. She again emphasized that the two methods complement each other.

Amanda reviewed typical pedestrian and bike countermeasures in various location types, and the relative cost-effectiveness of countermeasures they estimate or can demonstrate. She then reviewed for the committee plans for HSIP funding starting in 2017 (applied for by all, including ODOT and awarded using the risk based approach). Bob Pappé noted that the program may be adjusted based upon federal funding levels approved in the coming years.

For further information, please visit ODOT's [Bicycle and Pedestrian Safety Implementation Plan](#) webpage.

Local Jurisdiction Issues - Discussion

Brian Barnett announced that Richard Perry has left his position as Traffic Operations Engineer for Springfield for a new job in Eugene. So Brian is the interim contact for any such issue in Springfield and he has a job opening for anyone interested.

Cindy reported that the problem with trucks following inadequate GPS mapping into low bridges. They have had some but not complete successes in getting word to the two GPS data providers that GPS manufacturers rely on. As a result, there are still low bridge crashes occurring, particularly in Salem. They are looking at getting GPS units as another method of tracking what bad advice is still out there. She said the collisions are generally from non-commercial type GPS—more automobile-type units. They're now also looking at the possibility of ITS solutions because it is still such an issue. More will be revealed.

Not-on-Agenda Items

Mike Kimlinger brought up the topic of rumble strips and distracted driving. Designed to make noise to caution drifting drivers and get them to correct course before there is a crash, the noise is enough to seriously bother houses in the areas where they are installed, which causes complaints and may end up with the rumble strips having to be removed if sufficient complaints become a political issue. In researching complaint sites, Mike said that they have noted that the bad driving that causes people to activate the rumble strip sound pollution is pervasive, with no appreciable way of predicting who will not drive within their lane as a rule. So other than crashes the rumble strips are preventing, they do not appear to be making some drivers more careful about maintaining their lane. They don't seem to care at all that they are traveling on the rumble strips. He would like members of the committee to think about and observe how drivers are reacting during the interval before our July meeting. At that point, he wants members to be ready to report back on what they're observing in terms of driver behavior and possible methods of installing rumble strips. Ideally, we'll come up with a way that makes rumble strips politically tenable to maintain. Committee response indicated the problem is not restricted to state highways and may become an issue for jurisdictions who are planning installation of rumble strips right now. This will be on the agenda in July for further discussion.

Agenda Items for Future Meetings

Members may contact Kathi McConnell if they have any suggestions.

Adjournment

Mike adjourned the meeting at about 11:45 a.m., so that attendees could participate in the Oregon ITE [luncheon and meeting](#).