Oregon Traffic Control Devices Committee

October 27, 2009

Meeting Minutes

Best Western Hood River Inn
Hood River, Oregon

Members Present: Brian Barnett, Chair, City of Springfield; Ed Chastain, Vice-Chair, Lane County; Ed Fischer, Secretary, ODOT State Traffic Engineer; Robin Lewis, City of Bend; Joel McCarroll, ODOT Region 4; Joseph Marek, Clackamas County; Charles Radosta, ITE, Kittelson and Associates; Massoud Saberian, City of Lake Oswego

Members Absent: Ethan Wilson, OSP; Cynthia Schmitt, Marion County

Others Present: Doug Bish, Debby Corey, Rodger Gutierrez, Gary Obery, ODOT Traffic-Roadway Section; Bill Hilton, ODOT District 10; Sr. Trooper Michael Holloran, OSP; Ken Chichester, Cycle Oregon

Introduction – Approval of Minutes – Additional Agenda Items

Chairperson Brian Barnett called the meeting to order. Committee members and attendees introduced themselves. Ed Fischer then moved to accept the minutes from September 23, 2009. Ed Chastain seconded and the committee voted unanimously in favor.

PUBLIC COMMENT

There were no public comments.

OLD BUSINESS

Bike/Pedestrian Event Signing

As a follow-up from the September meeting ODOT Bike/Ped Facility Specialist Rodger Gutierrez introduced the agenda item regarding bicycle and pedestrian event signing. He was seeking OTCDC approval of the subcommittee recommendation for bike and event sign requirements on Oregon roads statewide. This would standardize signing and minimize the variations of bike event signing and requirements by various jurisdictions. As illustrated in the handout, there are three proposed variations on a 48 inch, black on orange diamond-shaped sign The variations would be (Symbol) AHEAD, (Symbol) CROSSING ROADWAY, and (Symbol) ON ROADWAY The symbol may be a bicycle or a pedestrian.

Further text explanation will be needed prior to adding the signs to the Sign Policy and Guidelines. Brian Barnett said local agencies would like to have an optional 36 inch version for below 45 MPH roadways. The committee agreed a table with the sign size/dimensions would need to be added to the Sign Policy pages.

Rodger said that concurrent with the Sign Policy changes, ODOT would like to update the Guidelines for Administration of Bicycle Racing on Oregon Roads. The committee agreed that this could be dealt with separately in order to expedite the sign changes. It is an ODOT document needs just OTCDC and ODOT Office of Maintenance buy-in to update.

The (Bike Symbol) ON ROADWAY sign can be used in construction zones where needed.

DECISION: Ed Fischer moved, Joel McCarroll seconded, and the committee agreed with the first three warning signs in concept as presented and modified. The committee will be asked to approve final Sign Policy pages as modified at the December meeting.

The committee went on to review proposed temporary "Event Bike Route" route marker signs patterned after Sign No. OBM10-8 on page 8-82 in the Sign Manual as illustrated in Rodger's handout. This is to provide an "official looking" sign that will not be mistaken for and removed as unauthorized signing by road maintenance crews during bike events. They would be printed on corrugated plastic wafer board. The signs are to guide bicyclists on the route. Rodger provided a black on orange and a orange on black version for committee review. The committee agreed that black on orange would be the appropriate color combination.

Ed Fischer suggested that the "WV" abbreviations in the Sign Policy for these markers should be changed to "XX" and language that indicates other letters may be used as appropriate. The committee agreed that three letters was the maximum that would be permitted. They also agreed that the Sign Policy should tell event organizers to coordinate mounting and location details with local road authorities. Also, the temporary signs should be at least a foot below any permanent traffic control sign to which they may be added.

DECISION: Ed Fischer moved to accept the concept and to come back with a final version for the Sign Policy and Guidelines to be approved at the December meeting. Joel 2nded. After further discussion, the committee agreed unanimously.

Rodger wanted to delete Sign No OBW 16-2 from Sign Policy and Guidelines as part of the housekeeping for the new signing. The committee agreed this should wait until the final approval of the event signing at the next meeting.

Bicycle Signals

Gary Obery wanted the committee to have further discussion regarding bike signal indications guidance in the Traffic Signal Policy and Guidelines and review the work he's done on the draft document since the last meeting. He said the bike signal phase should be thought of like left turn phasing. The bike signal phase is a special phase to help bikes get through intersections. He said he has changed the warrants since the last time, but he is concerned that the product, which came from CALTRANS, may be too restrictive and is probably based on their Davis experience.

Joel suggested that other criteria warrants might include: if it is a school crossing, on a safe route to school, on a coordinated bike boulevard, etc.

The bike phase would be concurrent with the pedestrian phase but timed differently at a pedestrian hybrid beacon (HAWK). Ed said the more he thinks about it, the less he likes the bike phase at a HAWK signal, particularly as it is used in Portland which is non-compliant in timing with what the MUTCD calls for. Portland leaves the pedestrian walk phase on solid walk for a long period of time and during that time, they leave the solid red for vehicles, stopping all vehicles even when it goes to the pedestrian clearance interval.

The intent of the HAWK is to stop the vehicles to get pedestrians started and once pedestrians have crossed, vehicles can proceed on flashing red. This minimizes the overall delay on vehicles at the signal. Ed would like to operate HAWKs in compliance with the MUTCD. But if the bicycle phase is included, do you give bicycles a clearance interval? How do you take account of the pedestrian clearance if bikes are allowed to use the HAWK signal? Maybe that should be taken out of the draft. Brian asked why a bicycle phase would be needed if there is already a pedestrian phase. Rodger said that that if a bicyclist is the only one using the HAWK and pushes their signal push button, the stop signal for vehicles can be shorter. Joel suggested a bike detector loop could make it unnecessary for a bicyclist to push a button.

Gary showed a video of the Broadway Bridge & Lovejoy Bike Signal in action, helping prevent conflicts with right turning vehicles at the intersection. Joe Marek said he almost missed the bike signal head when he rode his bike through this intersection. A near-side signal may be easier to see. To prevent bicyclists from conflicts with pedestrians at intersections like this, Ed Fischer suggested that a Swiss treatment might be useful. The Swiss treatment has two bike signal heads and the bottom of each backplate has arrows denoting either straight ahead or turn so bikes can be given a stop signal to prevent turning movements while pedestrians are crossing.

Gary showed pictures of the bike signals on NW Broadway & Lovejoy, NE Broadway & Williams, and Burnside & 41st in Portland, as well as Sycamore & Russell in Davis, California. He went over the peak hour traffic conflicts on Broadway & Lovejoy and Broadway & Williams He said there were approximately 140 bikes and 577 autos at Lovejoy, which would be over the 50,000 product shown in the draft warrants. It wasn't clear how the signal is actuated. There seemed to be good compliance with the signals according to the videographers who took video of the intersection. Gary said the peak hour conflicts on Broadway @ Williams was approximately 22 bikes and 1155 autos.

Joel didn't see the volume warrant as being useful. Ed Fischer agreed. Joel said both intersections were under Condition C, Geometric warrant. He thinks 95% of bike signals will be done on geometry. The only time the signal is going to be considered at regular signalized intersections is when the geometry or operations are unusual and there is no better option for it.

Ed agreed the Warrant A (volume) should be dropped and then re-letter and drop the 35,000 from B (reported accidents) and C (geometric factors) and focus more on the geometric factors.

The committee also came to the consensus view that the bike signal may be problematic at HAWK signals.

Gary said he'd like to have anyone who has other thoughts to contact him. The committee consensus was to come back again with a more finalized policy and have a field trip in Portland at the next meeting.

Ed would also like the committee to eventually approve the use of the bike symbol in the bike signal lense. He noted that Gary has revised the draft to being about the bike signal phases and he agrees with that. He would like to take the concept to the National Committee in January. He will have to come up with something that will look a lot like what's in the MUTCD, revised to look at bike signal heads. He would like to get committee support for that. He said that we haven't resolved what size is best or whether a backplate is needed, but we ought to make it look different from regular vehicle heads. He's hoping his presentation on his European tour (see below) will help members generate some thoughts. He'd like to tell the NCUTCD that the OTCDC has approved this as what will be used in Oregon for bike signals.

Brian said he was concerned about the target value of a bike symbol inside an 8-inch head – and possibly even a 12-inch head. Ed said that placement and being accustomed to looking for bike signals are factors in what works in Europe.

ACTION ITEM: Gary will continue updating the draft document as discussed in the meeting and bring it back for review/approval at the December meeting in Portland.

Signing for Year-Round Schools

Joe Marek briefed the committee on the challenge they are facing in Clackamas County with a private school with a year-round school schedule. The use of the flashing signs and flashers is not affordable in this or other cases, so he's looking at approving "Year-Round" rider signs for this and similar cases in Oregon. He wanted to know if the committee was interested in looking at this.

It is a challenge to adequately cover all the variations in school scheduling in school zone signs/riders even with generally traditional school schedules, let alone non-traditional operations.

This illustrated the upside of "When Children Are Present" riders that used to be the law. However, there is little enthusiasm to approaching the Legislature to promote returning to that sign outside school crossings away from school grounds.

The committee agreed that a "Year-Round" rider may be the best solution

DECISION: The committee agreed ODOT will design a "YEAR-ROUND" rider to add to the Sign Policy and Guidelines with guidance on appropriate usage and placement. This will then be added to the Oregon Supplement to the MUTCD when the time comes for the next update.

Legislative Concepts

Ed Fischer asked for committee guidance on whether they want to support possible legislative concepts to propose to the 2011 Legislature as a committee. The committee was in favor of going forward on supporting draft legislation to

- Prohibit overtaking or passing within roundabouts
- Add bike signals to the statute describing other signal indications
- Allow U-turns at signalized intersections if safe and unless posted otherwise
- Clarify that designated speed zones supersede statutory speed

The committee decided not to support a change to the law regarding driver response to inoperative signals.

Red Light Running (RLR) Camera Guidelines

Doug Bish, in presenting the draft 2009 Red Light Running Camera Guidelines, recalled that the Legislature changed the law on red light cameras back in 2007. The new law removed the requirement that ODOT provide a summary of evaluations, required that cities provide the evaluations to the legislature, and removed limitations on the number of cameras that may be installed in cities. This draft would replace the 2004 Red Light Running camera Guidelines.

The update also adds information on the justification for Red Light Running cameras and notes that these cameras should be installed only after other means have failed to solve red light running problems because the cameras have a potential to decrease the number and severity of T-bone crashes but may increase rear-end crashes. A recent crash history problem needs to be documented in addition to having attempted other treatments because a proactive approach to Red Light Running cameras may increase the rear-end crash rate without a justified reduction of serious T-bone crashes.

Brian Barnett said there were two subsets of red light running violations – running stale yellow lights, and running red lights in mid-cycle. He doesn't think the cameras do a lot of good with the second subset. Brian suggested that there should be more documentation in footnote 1 on page 1 in addition to the FHWA sponsored study regarding the safety results of red light cameras in terms of both T-Bone and rear-end crashes. He was particularly interested in the work of Karen Dixon and Chris Monsere in the Highway Safety Manual which references several other studies which he said reported mixed results He thought a little more discussion might be useful in that regard to preclude charges of cherry-picking of data in trial cases.

The committee agreed with asking for a crash history prior to installing Red Light Running cameras so that there's some assurance that crashes are actually reduced in number and severity. Joel McCarroll pointed out that there is no need to repeat the work in the Highway Safety Manual. The Safety Manual only included treatments that they are sure are going to be effective. Referencing it should go a long way regarding recognition of crash reduction factors. Doug said he could go back and look at the HSM and see if it has recommended a counter-measure reduction and if it recognizes that angle crashes are reduced and rear-end

crashes are increased. That would be a better reference because it's supposed to be everybody's reference.

Brian said he wanted footnote 4 to be strengthened so that it's not just "signal timing is consistent with Traffic volume, speed and specific intersection design elements." He would like it to be relatively objective as to what appropriate signal timing is. Joel McCarroll asked if clearance intervals should have more emphasis instead. Gary said he'd rather reference the ODOT policy on yellow and red clearance time minimums. Brian said that there should be no difference in signal timing between Red Light Running cameras and other signals. Doug agreed and asked for Gary to help rewrite that section to make this clear because there is no other mandate to local road authorities. Joel said you also shouldn't ignore the clearance interval as a counter-measure. It shouldn't just talk about timing as per ITE guidance, but also should talk about increasing the clearance interval as a counter-measure.

Ed Fischer said hopefully it won't be too far off from what we have now. He said ODOT's clearance interval policy is a lot closer to the ITE guidance than it used to be and includes more all-red clearance than we used to have. He said we have to be careful that we don't make signal timing so poor that we increase driver frustration and subsequent running of red lights. This may be important enough to pull out of a footnote and put it into the text.

Ed suggested the next version brought to the committee should incorporate all changes approved by the committee and then just add any new changes for approval.

ACTION ITEM – Doug Bish will work with Gary and bring back an updated version of the Red Light Running Camera Guidelines for a future meeting.

European Pedestrian Safety Tour

Ed Fischer gave a powerpoint presentation which illustrated the international scan tour on pedestrian and bike safety and mobility he co-chaired for AASHTO earlier this year. The team visited ten cities in five European countries under the sponsorship of FHWA, AASHTO, and the NCHRP. This included Sweden (Lund and Malmö); Denmark (Copenhagen and Nakskov); Germany (Berlin and Potsdam); Switzerland (Bern and Winterthur) and the United Kingdom (London and Bristol).

Ed briefly went over key findings from the tour. He indicated key findings include typical 3E's plus two others: Encouragement and Evaluation.

- Engineering - designing and building infrastructure that is safe, convenient, and comfortable to us
- Education - educating all transportation system users on safe and appropriate behavior
- Enforcement - enforcing existing traffic laws
- Encouragement - encouraging and promoting the use of sustainable travel modes
- Evaluation - monitoring the results to ensure that goals are met

He said objectives included surveying European successes in the following:

- Improving Pedestrian and Bicyclist Safety
- Safe Routes to School Programs
- Monitoring Usage Levels and Exposure
- Safety Research and Evaluation

General findings – there are a lot of policies and practices that could be transferrable to the U.S, especially in the areas of education, enforcement and encouragement. Some of the engineering and design practices will require more evaluation because we're a little stodgy in the U.S., with the MUTCD, standards deliberations, committees, evaluations, research, etc. He said there are some differences in culture and behavior they noticed that may become more acceptable in the U.S. over time. There are differences in the cultures of the five countries visited.

Other general findings: A lot of factors contribute to the European environment of pedestrian and bike mobility and safety – land use policies, urban policies, political support at all levels, vehicle operating costs (gas, etc), parking policies, enforcement policies, (photo enforcement), street design hierarchy that focuses on bikes/pedestrians, great integration with public transport (parking lots at train stations), good interconnectivity between on- and off-street networks, safety education for children, etc.

Ed noted a European concept of safety in numbers on the roadway. When you can get pedestrians and bikes to be more a part of the daily environment, motorists expect to see them on the roadway and drive accordingly.

Bike helmets are optional except for children. Europeans don't want that to be seen as an impediment to biking. They want to make it as easy as going for a walk because of the good results in terms of economics, environment, and health.

Ed reviewed some engineering measures for pedestrians, including puffin signals (Pedestrian User Friendly Intelligent Crossings), that have passive detection of pedestrians who need to cross and include near side pedestrian signal heads. Puffin crossings are surrounded in Britain by zig-zag pavement markings (also used in zebra crossings). These prohibit stopping or passing of vehicles within the area of the crosswalk for improved visibility.

Ed said in the interest of time, he'd come back at a later meeting to complete the report with an update on recommendations.

Non-Agenda Items

There were no non-agenda items brought forward.

The committee adjourned just prior to noon.

Next Meeting Date

December 18, Portland, ODOT Region 1 Office (123 NW Flanders Street) starting at 9:00 a.m. and running to about 2:00 p.m. to accommodate the bike signal tour.