

Meeting Minutes: Statewide Work Zone Safety Committee

Date: 11/2/17, 9:00 – 3:00
Minutes prepared by: Ken E. Johnson, MnDOT OTST
Location: MnDOT Shoreview Training and Conference Center, Shoreview, MN

Mission, Purpose, & Meeting Methods

- **Mission** – The SWWZSC will influence the actions of those involved with work zones through the information that is shared through the innovations and best practices that are identified so that we achieve safer work zones and fewer fatal and life changing crashes.
- **Purpose** to provide a forum for
 - Identifying work zone safety problems, safety areas, and help set priorities
 - Brainstorming ideas
 - Recommending direction to our functional offices and committees
- **Meeting Methods**
 - Committee, partner, and group reports with discussion. Representatives will give
 - Status report on Action Items (from previous meeting if assigned)
 - Update report on work zone safety issues
- **Committee Website**
 - Minutes, Presentations and Handouts for the Committee meetings may be found at the Committee website
 - <http://www.dot.state.mn.us/trafficeng/workzone/wzcommittee.html>

Attendance

- | | |
|----------------------------|---|
| • Duane Hill, MnDOT D1 | • Adam Bruening, Washington County |
| • Steve Lund, MnDOT OM | • Vic Lund, St. Louis County |
| • Tom Ravn, MnDOT OCIC | • Lynn Berg, SignCAD |
| • Ted Schoenecker, SALT | • Dave Meslow, NLCATSSA – 3M |
| • Ken Johnson, MnDOT OTST | • Doug Swenson, Contractors - AGC |
| • Bob Vasek, MnDOT OM | • John Bear, Contractors - Shafer |
| • Ted Ulven, MnDOT OCIC | • Brad Drews, Contractors - Egan Co |
| • Mark Vizecky, MnDOT SALT | • Tim Lewis, TTC Services - Warning Lites of MN |
| • Jeff Morey, MnDOT OTST | • JP Story, TTC Services – Salander |
| • Mark Vizecky, MnDOT SALT | • Reed Leidle, TTC Services – Safety Signs |
| • Steve Blaufuss, MnDOT OM | • Kathy Schaefer, LTAP |
| • Will Stein, FHWA | |

- Jon Jackels, Consultants – SRF
- Mark Panek, MnDOT PCMG/CMG – D6
- Leigh Kriewall, MnDOT OCIC
- Trudy Kordosky, MnDOT Resident Engineers – D4
- Sheila Johnson, MnDOT Metro Maintenance
- Dave Tody, MnDOT Metro Maintenance
- Kelvin Howieson, SALT D3
- Todd Haglin, MnDOT Admin
- Rebecca Albrecht, MnDOT Metro Safety
- Peter Buchen, MnDOT OTST
- Rashmi Brewer, MnDOT OTST
- Jeff Rieder, MnDOT D6 Traffic

Decisions Made

- No specific decisions made

Action items

- The SWWZSC will be kept up to date on progress related to TTC Training
- Ask Nichole Morris to update the SWWZSC on In-Vehicle Warning Systems and the WZ Intrusion Reporting projects
- MnDOT should research and determine a consistent application of when PE Signatures are required on TTC plans
- Next Meeting Agenda – all Committee members will submit proposed agenda items to Ken E. Johnson

Next Meeting

Date: March 8, 2018

Time: 9:00-3:00

Location: MnDOT Shoreview Training and Conference Center, Shoreview, MN

Agenda items: Submit proposed agenda items to Ken E. Johnson

Agenda and Meeting Notes

Welcome/Introductions

- **Steve Lund – MnDOT Office on Maintenance**
 - Introductions
 - Reviewed Action Items from previous meeting and discussed status

Committee Reports

- **Executive Committee**

- Tom Ravn, OCIC

- Purpose of the Executive Committee is to make sure the ideas get implemented appropriately and that we are heading the correct direction.
 - Field Manual Update
 - Funding – was funded by MnDOT OTST
 - PE Signature on TTC Plan sets - big issue
 - Trends the TTC contractors are seeing
 - Proposed updates to PE Rules
 - State Aid involvement
 - Training needs for TTC - do we need to add requirements, should there be required training for certain jobs
 - MASH Crashworthy Issues
 - MnDOT OTST is working with MnDOT OPMTS to determine which Traffic Control Devices need to be tested and is following industry progress

- **Autonomous TMA**

- Duane Hill, MnDOT District Engineer - Duluth

- Colorado DOT and Royal Truck and Equipment

- Duane visited a demo in Colorado
 - Developed to be used for striping operations
 - MnDOT has striping crews working throughout the state and have a train of vehicles and the last vehicle is a TMA. Person that drives that truck is in the vehicle that would get hit if a vehicle was to approach the striping train. Supports WZ safety, worker safety, innovation, new technology. CODOT put in money to develop the technology. Based on platooning. Places a GPS device on lead vehicle and the following vehicle follows the exact path of the lead vehicle. Low following speed. Has a radar for failsafe stopping. Current tech stopped the vehicle, but it took 20 minutes to restart. Could do training using VR technology.
 - Steve Lund thought that this would be good technology for MN ROAD. Could double loading on the low volume road with a follow vehicle right behind the lead vehicle.

- **Traffic Engineering Organizations Temporary Traffic Control (TEO TTC) Committee**

- Co-chairs: Jeff Morey & Ken Johnson, both of OTST

- ATV TTC Requirements for Work on State Right of Way

- The group was updated that OTST published the document [ATV Temporary Traffic Control Requirements for Work on Trunk Highway Right of Way](#). It can be found on MnDOT's Work Zone – Manuals and Guidelines webpage. Any work conducted using ATVs on state right of way is required to follow the requirements in the memo.

- APR/TPAR Template Sheets

- The APR routing and TPAR devices template sheets are being updated with additional requirements:

- The temporary walkway surface will now have acceptable materials and Audible Message Devices will be required for detours
- Clear Zones
 - The Traffic Engineering Manual will add language requiring clear zones in some circumstances and will include a table with appropriate clear zone distances based on speed.
- MASH Testing of Type III Barricade and Portable Sign Stand
 - MnDOT is investigating avenues to test the current non-proprietary 350 approved Type III Barricade and Portable Sign Stands to MASH criteria
- Barrier Guidance
 - MnDOT OTST conducted a synthesis through MnDOT Research and received a lot of good information from other states' about their practices.
 - Jeff Morey of OTST is chairing a Barrier Guidance Task Force to develop a Guidance document. Elements will be completed and published as questions are answered.
- Prequalification Program
 - The TTC Work Type for the MnDOT Pre-Qualification program will be updated to 3 levels that represent complexity levels of temporary traffic control.
- Wet Reflective PMs in Work Zones
 - MnDOT is considering requiring any temporary markings used for temporary traffic control be wet-reflective. Current standard requires wet reflective markings in the transitions, this would change it to all temporary markings.
- **Presentation – Field Manual, What's New and Exciting**
 - Ken Johnson, OTST presented the major Field Manual changes up to this point. The file used was not included in these minutes as the final 2018 Field Manual was published in January 2018.
- **Resident Engineers Work Zone Safety Advisory Committee**
 - Chair: Trudy Kordosky, District 4 Construction
 - Polled the Resident Engineers group
 - Patiently waiting for Temporary Barrier Guidelines
 - Fall meeting coming up on November 28. If this group wants anything brought up, let her know.
- **Statewide Maintenance Temporary Traffic Control Committee**
 - Chair: Steve Blaufuss, OM
 - About 28 members. Healthy participation. Next meeting in December
 - Hot topics
 - Work Zone Intrusion System - Traffic Guard Worker Alert System (TAPCO developed)
 - One getting deployed in District 1. Once evaluation complete, then try in District 6.
 - Simple system

- Will include 1 year of research
 - 10 user system, about \$2500
 - Another WZ Intrusion System - North Dakota is using a Smart Cone System (Canada developed)
 - MnDOT will wait until ND does their evaluation
 - Developer says that the system should be marketable within a year
 - AWARE System - developed by Old Castle - Ted Ulven
 - Evaluation delayed until spring
 - Gerry Ullman of TTI is lead researcher
- **SWWZSC Industry Liaison Group**
 - Reed Liedle, NLCATSSA
 - Issues are being covered in other areas
 - NLCATSSA is concerned about appropriate training needs for temporary traffic control
 - What are the needs
 - What are the existing offerings
 - What is needed
- **Presentation – TTC Plans Risks and Requirements**
 - Reed Leidle, NLCATSSA gave a presentation updating the group about risks and requirements for temporary traffic control plans per the MN MUTCD and Engineering Rules in MN. The presentation, ***TTC Plans, Risks and Requirements***, can be found on the Committee website.
- **Discussion – Temporary Traffic Control Training**
 - Mark Vizecky, SALT; Reed Leidle, NLCATSSA; Leigh Kriewall/Ted Ulven, OCIC; Kathy Schaffer, LTAP; Ken Johnson/Jeff Morey, OTST; Bob Vasek/Steve Blaufuss, OM; ***anyone else with opinions***
 - Mark Vizecky is working with LTAP and a consultant to develop a Scope of Services to look at training for Temporary Traffic Control
 - The scope includes
 - Identifying available courses
 - Identifying needs
 - Identifying gaps
 - Is certification needed
 - Steve Blaufuss and Kathy Schaeffer are working on storyboards for creating videos on how to implement layouts
 - Steve is working on getting a drone to do some aerial shots
 - Steve and Kathy are also working on an e-learning effort for the upcoming Field Manual
 - Would e-learning suffice? What does this group think?
 - Reed sees a need for a clearinghouse of training
 - Action: Keep this committee aware of progress
- **Presentation - MnDOT Construction Project Review**
 - Ted Ulven, OCIC gave a presentation containing highlights from OCIC's 2017 Construction Project Review. The presentation, ***OCIC 2017 Project Visits***, can be found on the Committee website.

External Partner Reports

- **Law Enforcement**
 - Major Cheri Frandrup (State Patrol) - no update at this time.
- **Engineering Consultants**
 - John Crawford, Kimley Horn; Jon Jackels, SRF; Jeff Hilden, TKDA
 - Jon said that consultants would be interested in the discussion of PE signatures on TTC plans
 - TTC Plans take a long time and make sure that client reviews and approves
 - Challenging to do a plan on a short time frame
 - Waiting for MnDOT to determine what the agency is going to do
 - Trying to stay on top of this issue
- **Report – Next Steps for Work Zone Challenges Project (IWZ related)**
 - Jon Jackels, SRF gave a presentation about IWZs in Work Zones - about 1/2 way through the project. The presentation, *Next Steps for WZ Challenges*, can be found on the Committee website.
 - This effort is to come up with recommendations to MnDOT to implement intelligent work zones at the appropriate time on projects. Following are some of the typical IWZ applications being considered.
 - WZ Intrusion Warning system
 - End of queue
 - Distracted Drivers
 - Travel time
- **Northland Chapter of ATSSA**
 - Reed Leidle, Jay Blanchard, Ken Russell, Lynn Berg
 - The Northland Chapter of ATSSA's How-To will be held March 19-21, 2018.
 - Pre-conference workshop - Field Manual (4 hours)
 - County engineers are being encouraged to attend.
 - General sessions
 - Autonomous vehicles
 - Behind the scenes planning of TTC for superbowl
 - Started using more Halos on hard hats. Field personnel are liking them.
 - Nationally – hot topics include: CAV (Connected and Autonomous Vehicles) and MASH
 - A practice seen in North Carolina that Minnesota many want to consider - if the road surface is to be replaced, fully cover road surface with a material and then put markings on top. This gives the contractor a clean slate with no scarring, making placing clear markings much easier.
 - Attended TZD and had booth. Attended County Engineers Highway Safety Committee.
- **Contractors**
 - Doug Swenson, AGC; Woody Bear, Shafer; Brad Drews, Egan
 - Woody suggests that some effort may need to go to trucks entering or exiting work zones to prevent other vehicles from following.
 - New issue - IWZ for Trucks entering and exiting systems. Would like to see these start being included in plans.

- Brad Drews - starting to use protection vehicles and TMAs included as a bid item on some MnDOT projects

- **Presentation – Construction Health and Safety Excellence (CHASE)**
 - Doug Swenson, AGC gave a presentation about CHASE. 14 years old effort with industry partnering with OSHA.
 - The presentation, **CHASE Overview 2017**, can be found on the Committee website.
 - 32 companies in the CHASE program with AGC
 - This is initiated through AGC
 - CHASE companies have a much smaller rate of incidents
 - Doug provided a couple of handouts:
 - CHASE partnership requirements
 - CHASE incentives brochure

- **TTC Providers**
 - Mike Granger, Street Smart Rental; Eric Johnson, Salander Tech; Reed Leidle, Safety Signs; Tim Lewis, Warning Lites of MN
 - JP Story
 - license plate reading cameras - could they be used to verify local traffic for ROAD CLOSED LOCAL TRAFFIC ONLY?
 - This could be challenging – what does LOCAL TRAFFIC ONLY mean? This isn't clear cut at this point.
 - BLE beacons with audible messages on smartphones

- **FHWA**
 - Will Stein, FHWA
 - MUTCD - FHWA is always interested in improving the MUTCD. The experimental process is a method to follow. The FYA came through the experimental process
 - MASH compliant systems
 - The portable concrete barrier that MnDOT uses is MASH compliant

- **Counties**
 - Wayne Sandberg, Washington County; Adam Bruening, Washington County; Vic Lund, St. Louis County
 - Inspectors are having a difficult time enforcing the plan when the plan is very generic. Also if changes happen, it's hard to review traffic control when changes happen.
 - A lot of issues with Flaggers - seems like many people aren't trained. Are Flaggers trained and who is training?
 - MnDOT hosts a Train the Trainer program. MnDOT requires that Flaggers used on state projects be trained by a qualified trainer.
 - ATSSA provides flagger training, but currently not Minnesota specific. MnDOT intends to start discussions with ATSSA for them to provide a Minnesota specific flagger training.
 - A lot of their TMAs are getting tired and may be in the market for new ones. MnDOT Metro Maintenance may be able to help them out.

- **Municipal**
 - James Koslucher, Fridley – nothing to report

- **Local Agency Education**
 - Kathy Shaefer, LTAP
 - LTAP training, between Kathy and Mike Leaf - they can hit many local agencies, but have mostly been training more urban agencies. Not sure if they can get to more rural areas, but hasn't yet been a lot of demand from them.
- **Utilities**
 - Dale Anderson, Center Point Energy; David Haedtke, Century Link – nothing to report

MnDOT Internal Partner Reports

- **Management Teams**
 - PCMG & CMG – Mark Panek
 - OMG – Sue Lodahl
 - Mark Panek will report to PCMG and CMG what he's heard about
 - Steve Lund - OMG
 - OMG would like to explore extraordinary enforcement in maintenance work zones. Dilemma is that some districts get it for no fee - good coordination; other districts don't have as much coordination and would like to try to pay for extraordinary enforcement.
- **Maintenance**
 - OM – Bob Vasek
 - Training – Kathy Schaefer
 - Districts – Sheila Johnson
 - Bob reported some of the issues that they are looking at:
 - Just in time training. Train the trainer concept for Field Manual Training.
 - How do we get information in the cab of vehicles? Some effort is looking at this and should continue.
 - Bruce Daniel went out to Colorado and watched the ATMA as well. Thought it had promise, but more time needed.
 - Kathy reiterated the Train the Trainer effort and the need for e-learning to be able to meet the demand.
 - Sheila mentioned that the districts want to purchase more mid-size boards - less expensive and a lot of tight locations to place them.
 - Jeff Morey, Steve Blaufuss & Dave Tody are working to come up with more abbreviations to allow smaller PCMSs to be used (per this effort)
- **Traffic Engineering**
 - OTST – Jay Hietpas, Peter Buchen, Rashmi Brewer, Ken Johnson
 - Districts – Ron Rauchle, Jeff Rieder, Scott Meier
 - Peter discussed speed limits in WZs. There was extraordinary enforcement on I-94 in Minneapolis and a reduced speed limit - didn't seem to make any difference.
 - Peter mentioned that the flagger legislation will be pursued again this year.

- Rashmi covered the AWARE system earlier. She is working with State Aid about how they would start implementing IWZ on local projects when local projects have a faster timeline - perhaps a simpler scoping document would be helpful.

- **Construction**
 - OCIC – Tom Ravn
 - Training/WZSAP – Leigh Kriewall
 - Districts – Trudy Kordosky
 - Leigh mentioned that the upcoming training notifications are online. The WZSAP has a videos online to assist in distribution.
 - Trudy will take info and share with Resident Engineers group.

- **Communications**
 - Statewide – Kevin Gutknecht
 - Metro – Chris Krueger

- **Worker Safety**
 - Statewide – Todd Haglin
 - District – Doug Thies
 - Todd Haglin updated the group that the WZ Intrusion Report project is coming to an end and a product has been developed to allow MnDOT personnel to report intrusions. Final meeting upcoming in December.
 - Action: Ask Nichole Morris to report on this and the In-vehicle Warning System at the next meeting

- **State Aid**
 - SALT – Mark Vizecky
 - Districts – Kelvin Howieson
 - LRRB has a listening board going on right now for research projects.

Adjourned