



**DEPARTMENT OF
TRANSPORTATION**

TEO Signal Committee Meeting Minutes

Meeting Date: 12/13/2019

Water's Edge Conference Rm 176

Meeting Time: 9:00am – 12:00am

Meeting Attendees:

Jerry Kotzenmacher	Sue Zarling	Kevin Chan
Mike Schroeder	Robin Delage	Cindy Dittberner
Mike Fairbanks	Alex Govrik	Mike Posch
Clint McCullough	Marty Carlson	Greg Wagner
Chris Bosak	Eric Klute	Ron Christopherson
Peter Skweres	John Fahrendorf	

By phone:	Les Bjerketvedt	Paul Ackerley
Mark Korwin-Kuczynski	Derek Lehrke	Nick Ollrich
Tod Becker		
Guest: Derek Leuer		

Old Business-

ATC cabinet –Prototype review has been completed and the manufacturer is updating the cabinets and prints to fix issues. We are hoping to have the cabinets available for construction August 2020. It will be NRTL listed in accordance with UL 508. The cabinet pad details are now complete and posted on the OTE web site. Use the 350 (rather than the 352) cabinet pad on all upcoming projects. This has the same bolt pattern for both the NEMA and ATC 350 cabinet. Place the NEMA cabinet until we have the 350 cabinet. The 352 cabinet is a smaller single wide cabinet and can be used once it is available.

Background Shield Reflector Project – The project is complete. We must determine if we want to make reflective wrap around tape a standard for all new signals. 3” or 2” width tape was discussed. Most seem to like the 2”. Minimal costs when installed on a new signal. A few manufacturers have preinstalled tape to their visors. We need to verify this is on rolled edged background shields. Derek Leuer stated that other states have seen 10-20% fewer crashes when the reflective tape is installed. Sue will bring this subject up in an upcoming TEO information exchange.

Flashing Yellow Arrow Study – Derek Leuer The Safety office will be starting a project to review the safety effects of the FYA. Getting the project together and will be looking for information on districts FYA installations. Looking into operational changes among other things.

Ped Indications Countdown – Derek also discussed funds available for safety projects that must be spent by September 2020. It was proposed to fund replacing pedestrian indications that are not currently countdown with countdown indications. Derek will be placing a request for around funding for these indications. Replacing incandescent signal indications and HPS luminaires with LED's also came up as safety related items that could hopefully be replaced by contract with these funds. OTE has a good idea of how many pedestrian indications will be needed in greater Minnesota with the SNTC worksheet districts have turned in.

Signal Detail to Standard Plan/Plate – OTE is working on what should be a Standard Plan and what should be a Standard Plate. A loose definition of Standard Plan is anything constructed or built in the field. Standard Plans go into a Plan like a detail but do not need to be signed by the design engineer. A Standard Plate is typically something that a manufacturer produces in their facility and is placed in the field. There are current details that have both of these type of items on them such as the lighting detail that has steel screw in base with in field installation requirements on the current detail and there is also a Standard Plate for precast and cast in place light foundations. In any case, both a standard plan and a plate will be more difficult to change than the detail. If you have any current changes needed on any of the details, get the comments/change suggestions to Jerry. OTE would like consistency in where items are placed. i.e. if new concrete cabinet pads are made in to Standard Plans we would like to make all of the pads Standards Plans. This would mean changing some existing Standard Plates in to Standard Plans in the future.

RICWS/AWF – If installing RICWS, do not use the sign posts, use the pedestal pole. We are looking for an alternate base for RICWS and AWF installs. After working with the structures group it appears that a steel post will need to be used for the RICWS and AWF to meet the wind load requirements. If you have a suggestion for the base please send it to Alex.

Ground Rods – The committee determined that a 10' ground rod will work in the cabinet pad. There are two ground rods in the pad and 10' was determined to be good. A 12' ground rod (from 15') can now be used in the hand hole. ~~it should be placed 6" below the hand hole cover. This will put it 2' above the ground for access with 10' into the ground under the hand hole.~~ We will continue to use the 5/8" diameter rod.

New Business-

New Hand Hole Cover – locator balls need to be installed into all hand holes. Each district said they had a locator that would detect the balls or they could get one from ESS. 3M ball locators work well. OTE will place these ball locators on the APL. It will have to be verified that other

manufacturers' locator balls will work with our locating wands. MnDOT will still supply until they are on the APL and for existing plans that do not call for them to be state provided.

CTC Railroad Preemption Card – The card has been approved for use on all MnDOT signal projects that have railroad preemption. It is replacing the card that ESS used to make and has additional features from what we previously had. This railroad preemption interface accommodates all 7 of railroad interface circuits. OTE can set up a class on programming of this card once the contract is in place. It is in the process of being placed on state contract and will hopefully be on the contract soon.

FYA sign – back when the current policy was developed (install sign for 6 months, than sign can be removed), the TEO executive committee said it should be reviewed after a couple years. Sue will bring this up at the next TEO committee meeting. No consensus was made with this committee. Some people thought the sign was still needed and should remain up all of the time and others thought it should be optional.

There are two FYA signs with different dimensions. Metro uses the larger sign but other districts want a smaller sign on retrofit projects. On the sign detail for each project, you can choose the sign size your district wants. Smaller sign could be used for smaller intersections while the larger sign can be used for larger intersections. It was also asked if the sign could be put on the mast arm extension. We will discuss this with the structures group.

Pedestrian Pole Reflective Tape - Currently our ped station posts have a white (corner) or a yellow (median) reflective tape on them. It was suggested that the white does not contrast enough in snowy conditions and some stations may be getting hit because of this. A blue reflective tape was suggested as an alternate. Jerry will work with Tiffany Kautz to get a MUTCD clarification on whether it is OK to go with a different color.

APS ped buttons – Polara has a new push button that is at ESS being evaluated. The new system is backward compatible with the last 2 versions. One of the features is blue tooth connection with cell phones to let you know there is a button. While this could be used it cannot replace the locator or crossing sounds.

D2 was having problems at 2 intersections with the Campbell button the buttons were losing connections in some limited cases. TCC came out, but it is not certain if the issue was fixed. D2 will keep committee posted. Metro has also had this problem.

D1 has some instances when the entire button has been covered in snow. Communication to the button may be lost, but since pedestrians cannot get to it, it must be put in to recall so it is serviced. If there are traffic backups because of this maintenance should be contacted to clear the snow.

Status of Operating Software – Metro had 22 intersections operating with the new Econolite EOS software. All 22 versions were removed due to problems. It is currently only operating at 1 intersection at TH 55 and TH 100. A new version is now out and has been installed by the City of Fargo. Metro will be trying this version.

About 30 Maxtime controllers are running and seem to be working. Firmware can be updated remotely. Either the Maxtime or EOS will need to be used in the new ATC cabinets.

Round Versus Multi-sided Poles – The current signal pole needs to be redesigned to meet AASHTO LRFD standards. There has been discussions of looking at a round pole. A meeting is set with MnDOT Traffic Engineers and structural folks to discuss whether we should move to a round PA pole along with other pole design features. The PA pole has been grandfathered in over the years, but structures no longer wants to do this. Only DTE's were invited to this meeting so if you are interested in joining talk to your DTE to get the meeting notice forwarded. Get any opinions to Sue.

.75 fuses – Change fuses in the field to 7 amp when retrofitting a signal cabinet when incandescent indications are present. Metro is going to start to change the signal indications to LED when they plan to change the cabinets to address the fuse blowing issue on cabinet retro fit projects. There are special provisions available to require the contractor to do this work. These special provisions should be included when necessary.

It was mentioned that there have been some new intersections that have had problems with the fuses. If this is happening then there is a different wiring issue on the system.

Round Robin –

Peter – Asked how many signals are installed with no termination in the base. D2 has 3 with 3 or 4 more planned next year. No problems have been reported.

Alex – Please give number of light systems poles knockdowns in 2019 to Alex. (ESS knockdowns) Districts please provide how many light poles on average in a construction season are installed.

Tod – would like to start a spreadsheet on what people are finding on flash calls. Every year there seems to be problems that haven't been seen before, but may have been found by others.

Robin – there is concern with engineers in the districts having to sign off on details that they did not have part of designing. This is being address by changing them in to Standard Plates and Standard Plans. In the meantime the details are there to help the designers by not having to redraw them, but if they are more comfortable with that they can. If it is a structural detail Jihshya can be asked if he will sign it.

Next meeting: Friday, April 10th, 2020
Waters Edge **Conference Room 176**
9:00am – 12:00 noon
Skype call available
Send agenda items to Jerry K