



TEO Signal Committee Meeting Minutes

Meeting Date: 10/6/2016

Water's Edge Conference Rm A

Meeting Time: 9:00am – Noon

Meeting Attendees:

Jerry Kotzenmacher	Sue Zarling	Robin Delage
Peter Skweres	Chris Bosak	Greg Kern
Jim Deans	Mike Gerbensky	Ben Osemenam
Jeff Knofczynski	Alex Govrik	Cindy Dittberner
Greg Wagner	Kile Holm	Linda Heath
Allen Espinoza	Clint McCullough	Mike Posch
Mark Korwin-Kuczynski (phone)		

Old Business-

Flashing Yellow Arrow – There is a video and worksheet on the OTST website that should be viewed and used to help determine when the FYA should be used. This was developed by the University of Minnesota and gives guidance to when we should use the FYA.

Reminder – if the signal has conflicting paths for the left turns this should be noted on the plan for future operators so that they are not allowing the left turns at the same time.

The committee elected to remove the FYA from “old business”.

Cabinet/Controller Committee – There was training on the new Intelight Maxview software. The software received good reviews in its initial training. Outstate districts can also use this central control system and it is open to cities and counties to purchase a license. If there is interest from districts let Jerry know and he can set up a Skype meeting with Mike Fairbanks.

See latest Cabinet/Controller meeting minutes in attachments.

The new Tomar EVP has been put out to be tested. They would also like us to look at putting their lower model card on our APL to be compatible with the other card on the APL

EMTRAC now has a new Emergency Vehicle Preemption (EVP) card and sensor that they have submitted for approval.

The CTC's Railroad preempt interface cards test site has not yet been installed.

Pedestrian Station – Could look into designing a Standard Plate for the pedestrian station.

RICWIS – These systems will become MnDOT’s responsibility to maintain on December 1st, 2016. Sue will be setting up a meeting with Mike Kronzer and Cory Johnson to better assure that everything needed for these systems is received by the districts and ESS. Clint, Mike, Linda, Jim want to be part of this meeting. Agreements were something also needed to be discussed by this group.

¾ Amp Fuse – After a meeting with OTST and ESS it was decided that we will be staying with the ¾ amp fuse rather than going back to the 7 amp fuse in new cabinets. On retro-fit signals with older LED (10 years or older) or incandescent lamps, the district should strongly encourage the local agency to replace the indications with new LED indications. If the local agency will not change to new LED indications then the designer must include in the contract that it is the contractors responsibility to replace the ¾ amp fused in the cabinet with 7 amp fuses . The State will furnish the 7 amp fuses that need to be installed, should the Cities or Counties choose not to replace the older indications. Language will be placed in the Sample Special Provisions to provide for this work.

Door Latch for SSB Cabinets - Jim showed a smaller bracket that can be used as a door latch for the SSB cabinet. Holes would need to be drilled into the door and cabinet. Jim will send Mark Korwin-Kuczynski the latch to be tested. Jim and Mark can report back on how the latch worked. Anyone who wants to try the latch can contact Jim. This will not be added to the cabinet, but can be added on as a maintenance item if desired.

Door latch:



New Business

Ground Rod Placement Concerns – The city of St Paul expressed concerns of lightning flow back to the ground rods. MnDOT electricians expressed that lightning is very unpredictable in its flow and every electrician has an opinion on where current can flow in a circuit. There is no known concern for the current design of ground rods on MnDOT signal systems, but it was stated that the supplemental ground rod is not required by code. Sue needs to get a note back to the City on this and will pull a small group together to make a decision. Ray S should be part of this group.

Heated Shell LED Signal Modules – A manufacturer has a heater to melt away snow sticking on indications. There was no interest from the group on this product. There was concern that adding such a thing would add back energy cost and would provide a warm spot for mice.

Dual Right Blank-Out Sign for Pedestrians - There are occasions when pedestrians struggle to cross where there is a dual right turn on red. It was suggested that a blank out sign be used at these intersections to prevent right turns on red when the pedestrian indication is pushed. The committee approved the recommendation of using this sign at locations a site evaluation suggests a problem. The sign would be a blank out sign with a red slash thru the right turn arrow. This will come on when a pedestrian pushes the button and the dual right turn has a red. The word “pedestrian” under the banned right (similar to the “train” banned right turn) on red was discussed but the committee decided that this was not needed. Sue will bring this to the TEO Executive Committee for their approval.

Bike Detection Northfield - Bike detection by MS-Sedco was installed in Northfield back in May 2016. The detection worked well during this initial installation. After checking on the detection a few months after installation the system was not responding as well as when we first turned the system on. We changed out the sensors to a newer version but the system could not separate the difference between bicycles and cars. The manufacture is looking in to the issues and plan to come back to us with a solution. At this time the intersection was left so that bikes may not be picked up for left turns.

Water Pipe for Mice Prevention – It was proposed that we look at using a water pipe with holes drilled in it for mice prevention in our bases instead of the stainless steel mesh cloth currently used to prevent mice from getting into the signal transformer base. Millerbernd was OK with the pipe being used as longer it does not go higher than the base plate. Anoka County currently uses the pipe. Some contractors have commented to Metro Inspectors that it is easier to install sine they do not need a ground. There is no known problems with the mesh cloth other than it needs to be grounded. Maintenance will work with Anoka and Dakota Counties to see if this is something we want to try. Bring back as old business in next meeting.

Pipe for mice prevention under transformer base:



Transformer Base – The design of our transformer base has a one inch lip, or extension, on the base plate. MnDOT Bridge and Structures Office is looking into the calculations of taking this lip off. No changes for now.

Polara Push Buttons with Water – D3 found a few of these buttons with water sitting in them. They were older units. The housing has been changed since these buttons were installed. This may be an isolated issue but we should keep an eye out for more of the same. No holes should be drilled into the unit.

Signal Alarms – This was discussed at the last meeting in February. The alarms were mislabeled but have since been amended in the February meeting minutes.

Correct Alarm numbering is shown below:

- 1) Door Open
- 2) Running on Battery Back Up
- 3) Battery Back Up Batteries Low
- 4) UPS Watch Dog Fail
- 5) Cabinet Transient Suppression Fail
- 6) Undefined (possible fan on or over temperature)
- 7) Undefined (possible humidity level)
- 8) Undefined

Signalized R-Cut Intersection - TH 65 at Viking will be designed as a Signalized R-Cut intersection (reduced conflict intersection) with federal funding. The intersection will likely have 3 cabinets. It is being looked at as to how the cost and maintenance sharing with the local agency will be done for this installation. Two options are currently being looked at: These options will be brought to the District Traffic Engineers for discussion at the next TEO Exchange.

Round Robin –

Linda – TAMS; Are districts writing requests for work in TAMS? Yes

Chris – 35W at Lake Street – Cast iron cover for hand holes MnDOT is owner but Minneapolis maintains. Need to work towards NEC compliance. Further discussions are needed for future projects.

Mark – BA poles have been installed and are now operating in Buffalo.

Peter – Pelco has submitted an APS system for inclusion on MnDOT's APL.

Next meeting: Tuesday, January 31st, 2017
Waters Edge **Conference Room 176**
9:00am – 12:00noon
Send agenda items to Jerry K

Attachments to Signal TEO Committee Meeting:

- Cabinet/Controller Committee Meeting Minutes
- 7 Amp Fuse Meeting Minutes

Controller/Cabinet Committee Meeting Minutes 8/9/2016

Attendees -

<i>Jerry Kotzenmacher</i>	<i>Sue Zarling</i>	<i>Ron Christopherson</i>	<i>Jim Deans</i>
<i>Peter Skweres</i>	<i>Kevin Schwartz</i>	<i>Dan Truhler</i>	<i>Brenda Byrne</i>
<i>Marty Carlson</i>	<i>Tony Kasper</i>	<i>Mike Fairbanks</i>	

ATC Controller –

- *New ATC spec is being drafted. Peter is looking for any input on the spec such as I/O inputs and data base defaults.*

- *Currently 4 controller manufactures will have a chance to review our spec for the controller. Econolite, Intelight, Peek and McCain.*
- *An RFP could be “winner take all” or just meet the spec and get on the state contract for controllers. In Peters opinion multiple controllers on contract is the preferred route because it would allow MnDOT to choose and/or change controllers in the future.*
- *The spec will have two parts. One for the software and one for the hardware. This was the intent of the ATC controllers. There could be challenges to this approach with one implying that the other is the problem, should problems arise.*
- *Peter should be around 85% complete with the spec in a month or two. The committee and industry will then have three weeks to comment on the proposed specification.*
- *As part of the acceptance of controllers for the state contract, they will need to be shop tested along with additional reviews by a few other groups prior to acceptance*
- *MNFAST Project is a grant MnDOT hopes to receive in the future. This \$15M grant would replace all Metro district signal controllers with the new ATC controller. It would use DSRC radios to transmit and receive snow plow preemption which the technical term would be Freight Signal Priority (FSP). This could be a first of a kind large scale deployment of Vehicle-to-Infrastructure (V2I) communications in the United States. In the long run there may be other operational benefits.*

ASC/3 –

- *Econolite will discontinue the sale and manufactures of ASC/3 controllers by the end of the year.*
- *Final order by MnDOT will purchase extras.*
- *If the above MN FAST project is awarded, there will be many used ASC/3 available. These controllers could not be used in new federally funded signal projects but could be used as statewide upgrades to older Econolite controllers or Traconex controllers.*
- *The current software version is 2.64; OS 1.14.03; Data Base N3883. There are no plans to change any of these versions.*

Metro Central Software System –

- *Intelight should be fully installed by the end of August.*
- *Many area Counties and Cities are looking into using the communications server.*
- *Metro is currently anticipating placing 400 signals on the new system. Dakota County expressed interest in adding about 40 signals.*
- *Curt Krohn will be the system administrator. All signal staff will have read only access at their desktop.*
- *Training will be scheduled once system is operating.*

CTC Preemption boards –

- *Metro will write TE’s for the installations at TH 149 and Opperman; TH 149 at Yankee Doodle. (This has been completed).*

7 Amp fuse versus .75 Amp fuse in Signal Cabinet

8/19/16

Attendees: Sue Zarling, Peter Skweres, Alex Govrik, Clint McCullough, Linda Heath, Mike Posch, Jerry Kotzenmacher, Brenda Byrne

- Background information as to why it was decided to change to the .75 fuse was presented. The decision was made in January 2014 at the Signal TEO meeting to make this change. The driving force behind the change was related to a City Inspector that called MnDOT on having Class 1 cable running in the same conduit as Class 3 cable. The attempt was made to make our circuits meet the classification for a class 3 power limited circuit so they can all be run in the same raceway.*
- Currently there have been issues with 8+ cabinets across the state where a signal retrofit was done and a new cabinet was installed at a location that has incandescent or old LED indications. This has caused the fuses to blow and takes the ET's a significant amount of time to replace them. Often this requires several trips since fuses do not all show an issue at the same time. New cabinets in new construction have not, and should not, have any issues with the .75 amp fuse.*
- When coax and/or Ethernet cables are in the signal system 7 amp fuses will not meet the NEC. .75 amp fuses meet the intent of the code. It is arguable whether they meet the actual code or just the intent.*
- It was decided to keep the .75 amp fuses in all new cabinets. A proposal to add language to the Special Provisions dealing with signal retrofits will be taken to the next Signal TEO meeting in October. If the signal being revised has incandescent or old LED indications the first attempt should be to have the city or county change the indications to new LED. This will save them money and maintenance in the long run. If the responsible agency will not change the indications the special provisions should include language that it is the contractors responsibility to change all fuses in the cabinet out to 7 amp fuses for that project.*
- There was some concern that the contractors would not change the fuses and the ET's would still have to come out and do the work. While it was agreed that it is possible that the contractor does not complete the work as required the expectation for the ET would be to go to the flashing signal and fix the immediate problem (possibly having to change out a few of the fuses), but they should not replace all of the fuses. The contractor would be required to come back and change all fuses as required by contract documents. If there are any issues getting the MnDOT Inspectors to enforce this OTST should be contacted and we will help work through the issue.*