TEO Signal Committee Meeting Minutes
Meeting Date: 8/9/2019
Water's Edge Conference Rm 176
Meeting Time: 9:00am – 12:00am

Meeting Attendees:

Jerry Kotzenmacher	Sue Zarling	Kevin Chan	
Linda Heath	Robin Delage	Mike Schroeder	
Mike Fairbanks	Derek Lehrke	Steve Misgen	
Clint McCullough	Marty Carlson	Greg Wagner	
Chris Bosak	Nick Ollrich	Mike Fairbanks	
By phone:	Les Bjerketvedt	Paul Ackerley	Davis Tsang
Mark Korwin-Kuczynski	Mike Schweyen	Cindy Dittberner	Anne Porter
Guests:	Trisha Stefanski	Mark Cremin	

Old Business-

ATC cabinet – A draft ATC 350 cabinet pad detail was passed around for review. The detail had a new rebar placement example, a 6" compacted layer of granular subbase among other new items. There will be a final review sent out to the Signal TEO committee prior to sending out to others in the traffic office. Once this is complete, it will be sent in to be a standard design detail. A 352 cabinet pad is also being worked on. This pad will be smaller since the 352 cabinet is half the size of the 352 cabinet.

Background shield reflector project – The project is moving along throughout the state. Some safety issues came up in D3 such as inadequate lane control and reflective vests. Keep an eye on the installation to assure they are following the rules. Thought should also go into making the reflectorized background shield as a standard.

Counts off detection – Not many RICWS systems yet have a modem so calling these intersection is not practical. Paul in D1 did tube to loop comparison test and believes that a RICWS system can be used for counts. He set up tubes on a RICWS intersection. The tube count was higher but be believes this is normal sine a tractor trailer would be counted at least twice where an in-pavement loop would count it as once. His tube counts where higher. Signalized intersection hooked to maxview can be used to download counts. Ben Timerson had requested that they be able to download counts. Jerry will contact Ben and give him an update.

New Business-

As-builts - AMPO - Update spec to capture discussion

- Add Design File as optional deliverable for both field wiring control panel **and** plan view layout
- Add Cable Description data field to template
- Update direct buried cables collect (FO and FOCD) location to include at edges of crossings
- Change feature code 'Ped' to full spelling of 'Pedestal'
- Keep feature code 'PWB' for push button walk, includes APS
- Improve language on markup drawings to help with quality

- AMPO – To share updated specs/template for adoption
- Signal TEO Committee – Review updated spec for comment/adoption

Notes: Discussion on value of design files updated by contractor

- Benefit may be faster than internal, helpful for operations when as-built drawing in cabinet
- Con may be less efficient for certain cases, especially when design files made internal. May be impossible for consultant to do red lines since they have their projects completed and closed by red line completion.
- Mark-up drawings quality could be improved

Signal Detail to Standard Plan/Plate – OTE is in the process of converting all signal details to Standard Plans or Standard Plates. This will eliminate the need for the design engineer to have to sign off on details they did not create or was not created under their supervision. It is more difficult to make changes to the standard plates and plans so please review documents when they are sent out for review to avoid future comments. Send comments or corrections back to Jerry. The documents will also be going through the standard review process. OTE is looking to have this completed by the end of the year.

RICWS/AWF redesign – The poles and foundations of the RICWS and AWF have failed calculations from the MnDOT Bridges and Structures office. They are looking into redesign of these items to accommodate the signage and flashers we place on them. A RICWS report is being completed by the MnDOT Safety office. The preliminary results on this report do not show the originally expected benefits of the RICWS installations. Sue will talk to the Safety people and check what options we may have.

Change 15' ground rod to 10' - 25 ohms must be met by the ground rods. It's likely we meet this spec, but it would have to be verified It was decided that to change just the ground rod length in the pad and not change it in each of the hand holes may create confusion. The

committee suggested that we keep all ground rods at 15' for now. The question was asked if one ground rod could go in the hand hole. Clint said that we want them buried in the ground.

Shared thru/left 5 section heads - 5 section dog house style heads are placed in many places in the Metro. They have also been placed in Morris. The question came up is do we want to make this a standard in other small towns in Minnesota that have the same lane configuration? Derek said logic steps must be used to conform to the FHWA approval letter. Problems have occurred because of this. Jerry will check on the Morris signals to assure proper operations. The signal heads cannot display 2 different sets (flashing yellow/red) of information for the same lane. The FYA cannot be on for the left turn with the red ball for the thru movement in the same lane at the same time.

Luminaire/camera extensions – Millerbernd has sent out extensions that are too large and there is slop in the connection. They will replace any extension that does not fit properly. Contact them if you have one of these extensions.

Inverter on all new signals – District 1 is asking for inverters to be installed at all signalized intersections, minus the batteries. They are putting them in because of issues with bad power. The inverter will clean the power to the signal, keeping the signal operational rather than going into flash. It can also be used to show the electric company that they have power problems. Local entity power can be a larger problem than the larger power company's. Paul has treated this like other signal components for the cost share. If the invertor only is installed by sure to list it in TAMS. There is a component in TAMS for Battery Backup Components. We can look to see if a cost share change is needed if this is a problem. The committee agreed that this could be a good option where the power is not clean.

Modem failure - With a large number of modems being installed, especially for coordination of signals, response times become an issue. In some cases the TMC told district personnel not to touch the modem, but with delayed response that could leave the intersection uncoordinated for over a week. Arnie and Wayne help out with this, but it could take a week or more to repair bad modems. The district operations staff do not have proper training to diagnose modem or other communication problems. It was suggested that training be provided to the district staff to better prepare them for future problems. OTE will work on coordinating training.

Temp Signal Systems/Video detection cameras – State or contractor furnished - The committee discussed the pros and cons of state furnished cameras for temporary signals. Maintenance said when we state furnish, the cameras come back in a less reliable condition. When contactor furnished they are at times using bad or old equipment. How long do we give them to get it to work? Metro has purchased some of their own cameras that they will deliver to the project and pick up when use is done. Some other districts have the contractor furnish and the district sets them up. They then get the system when the project is done using them. ESS does not want to state furnish the cameras.

TH 52 at 19th Street AM backup – D6 signal has a major backup in the AM peak that lasts 10-15 minutes. There are several schools near this intersection and the ramp backs up. The committee discussed different options Greg could try. Any additional ideas can be sent to Greg Wagner.

Service connection – Power Company's do not want a Weatherhead on their poles. They suggested that we coil our wire at the bottom of their poles and they will wire the connection. This was suggested by Excel. Other local power company's may not have the same practice. 2 connections are note good. It was suggested that we do a pad mount and not go overhead.

Round Robin –

Greg W**. –** The city wants to put a GPS transit system to extend the green time on the MnDOT signals that they are operating. This has been done in other areas. It was agreed that the city could install the system.

Nick O – LED indication replacement. There are 15 year warrantees on indications. Current replacement language is 7 years. Do we want to change to 15 years? Keep at 7 years for now since only one manufacturer has the 15 year warranty. Nick will be sending a letter to the local partners about replacing the indications after 7 years.

Derek L – Metro has put out 12 Maxtime controllers and have 9 programmed as of now if anyone wants information on them.

Next meeting: Friday, December 13th, 2019

Waters Edge **Conference Room 176**

9:00am – 12:00 noon

Skype/Phone call available

Send agenda items to Jerry K