



TEO Signal Committee Meeting Minutes
Meeting Date: 5/14/2018
Water's Edge Conference Rm 176
Meeting Time: 9:00am – 12:00am

Meeting Attendees:

Jerry Kotzenmacher	Sue Zarling	Mike Gerbensky
Linda Heath	Mike Schroeder	Mike Posch
Mike Fairbanks	Derek Lehrke	Greg Kern
Clint McCullough	Jim Deans	Brian Vitek
Alex Govrik		
Derek Leuer (Skype)	Tom Dumont (skype)	Ron Eberle (skype)
Mark Korwin-Kuczynski (skype)		Les Bjerketvedt (skype)
Cindy Dittberner (skype)	Paul Ackerley (skype)	

Old Business-

Cabinet/Controller Committee – Software used in ASC/3 controllers is 2653.0 New controller RFP is out. Bids should be received soon. 48 volt cabinets are being looked into.

Sample Plan - The 4” conduit has been removed on the sample plan and two 3 inch conduits will be installed where a 4 inch conduit used to be installed. This change will be on the next sample plan release. Additionally, the # has been removed from wire note on the example plan. This should be used when making any new plan, removing the # form the wire notes.

Signal Indication Reflector Project – A maintenance contract will be used for this project. The project will be two phased, with one phase being in the North half of the State and the other being in the South half of the State. The reflector will be placed directly to the background shield after cleaning. 99 intersection across the State. Should be going to bid in the next week. See attached project sheets. Any comments can be sent to Derek Leuer.

Rail Road preemption – Sue and Jerry met with BNSF to discuss their use of the AREMA 50 second max time. Maximum vehicle times can no longer be longer than 50 seconds. This means MnDOT will now be calling for two more additional circuits between the rail road and traffic cabinet. If needed, an advanced ped time that is longer than the vehicle time will be placed. This will give whatever ped time is needed or ban the call during track clearance time. All districts should work with OTST on the design form.

New Business

Detection Layout - Metro Signal operations is experimenting with different detector layouts to help them implement the Utah Signal Performance Measures (SPM). The new layouts utilize up to 32 detection areas. Using in-pavement loops may not be attainable for the information Metro is seeking. Sensus pucks, wavetronics radar and video camera detection systems will be further tested for accuracy. . District 3 is looking at installing a system that was submitted as part of the Smart City Innovative Program. ESS would like a log of detection maintenance to be kept in TAMS for each system being tested. Gridesmart (fish eye) camera system will be used in test case in Burnsville. See attachments

Longer delays for Steel – Delays in pole and mast arms for projects has been experienced. Delay times as long as 18 – 20 weeks is not uncommon. Solutions are not obvious. One suggestion is to write a letter to the manufacturer's or write in dates in the provisions. Jerry will set up a meeting to meet the new sales manager at Millerbernd. NOTE: Millerbernd recently hired a steel buyer that knows the industry and offered to provide a presentation to MnDOT.

Software Upgrades – There are many different types of software in the signal systems now including that for controller, pedestrian buttons, and camera. What office should upgrade needed software in the electronics of the cabinet? The controller and MMU is upgraded by ESS. All other components in the cabinet should be upgraded by the district. TAMS should be updated with every software upgrade. Paul Ackerley will make a first attempt to come up with a list of items that need to be upgraded to be entered in to TAMS for tracking.

Digital Log Book – It was suggested that a digital log book could be used to replace the paper log book in the cabinet. Problems with this would be not everyone has an electric pad to log into an electrical log book. Log books are also used by locators and other maintenance staff. It was determined that a paper log book is still needed at this time.

Maxview Storage for controllers – Outstate districts need a place to store controller programming to non-connected intersections. The older controller's computer software (Aries) has or will be unusable. At some point problems will exist as MNIT removes old computers from the inventory and Aires cannot operate on the new operating systems. This leaves the districts with no usable storage for these controllers. Maxview is not likely a good place to store this information since they charge \$700 per license even if the intersection is not connected to the system. Each controller would then need a license. The data key for the controller will hold this data but likely not the best place. Georilla was mentioned as a place to store files along with TAMS eDocs.. This item will go to the controller agenda for this committee to review.

Cabinet Switches – Would the idea be to connect everything to ethernet and cell modems? There is monthly cost to this and districts would have to determine if they have the operating

budget to pay for it. Districts may want to install them wherever there is a desire to pull info back to the office and access remotely. Each district may have to define their needs. I.P addresses would have to be changed whenever a component is changed. This would have to be addressed. A hardened switch would have to be found. Operating budgets and communication costs should be discussed at the next TEO exchange.

Cost sharing for FYA retrofits – The FYA is an upgrade and should be treated like any other upgrade. If locals are installing on a local project the cost share will depend on how they are initiating the project (permit, Cooperative Agreement...). At time we have bartered such as MnDOT providing the material and the locals installing.

Hand Hole verses Splice Vault – The hand holes nearest the cabinet often have a large number of conduits and wires going to them and it is at times difficult to get it all in to a standard hand hole. It was suggested that in these situations that a splice vaults be used to replace the hand holes. Fiber vaults are larger and could be used. In the majority of cases, the hand hole will work.

Plate 8119C – This is a pad foundation that has not been updated since 1978. If we were to delete this plate, it is difficult to get back. Alex will work with the bridge office to upgrade the plate so that it meets current standards.

ATCC/SSB cabinet Pad Detail – Review the detail passed out in the meeting. Comments back to Jerry. This new detail shouldn't be finalized until we have the new cabinet specification complete.

Frey Pole adaptor – Frey submitted a pole mount adaptor to OTST for review. It only has one support which may be questionable.

Loop Truck – ESS still has a loop truck to install loops for the districts. Bad loops have also been installed by contract in the Metro. Write up requests for loop replacements in TAMS. ESS will work with the district to schedule replacement.

Round Robin –

Alex – Standard plate 8121 shows an opening of 10" but the actual size is 10 ¾". This change was done by a county about 10 years ago without our knowledge. It does not hurt to have the larger opening so at this time we will just update the standard plate to match what we are getting.

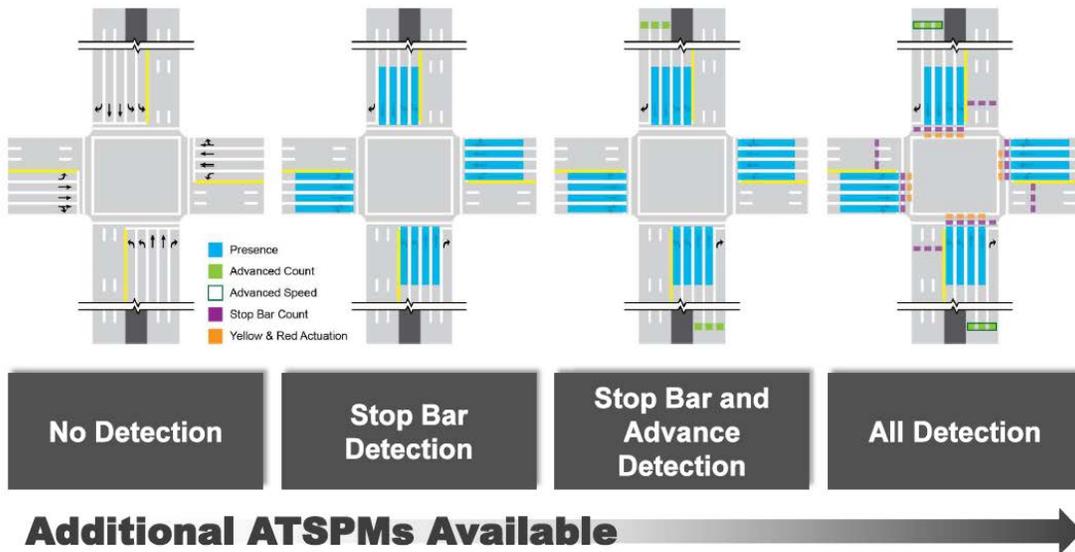
Paul- Is anyone doing anything regarding master controllers? Do we have an ongoing list of updated equipment? – When using the ATC controller we will not be looking at a Master controller anymore. Old systems will need to use an old master from ESS.

- Using an USB in a controller is an issue if it is encrypted. Derek suggested buying a USB and only putting in to the controller and not in the laptop that will require it to be encrypted. An Ethernet port is an option.

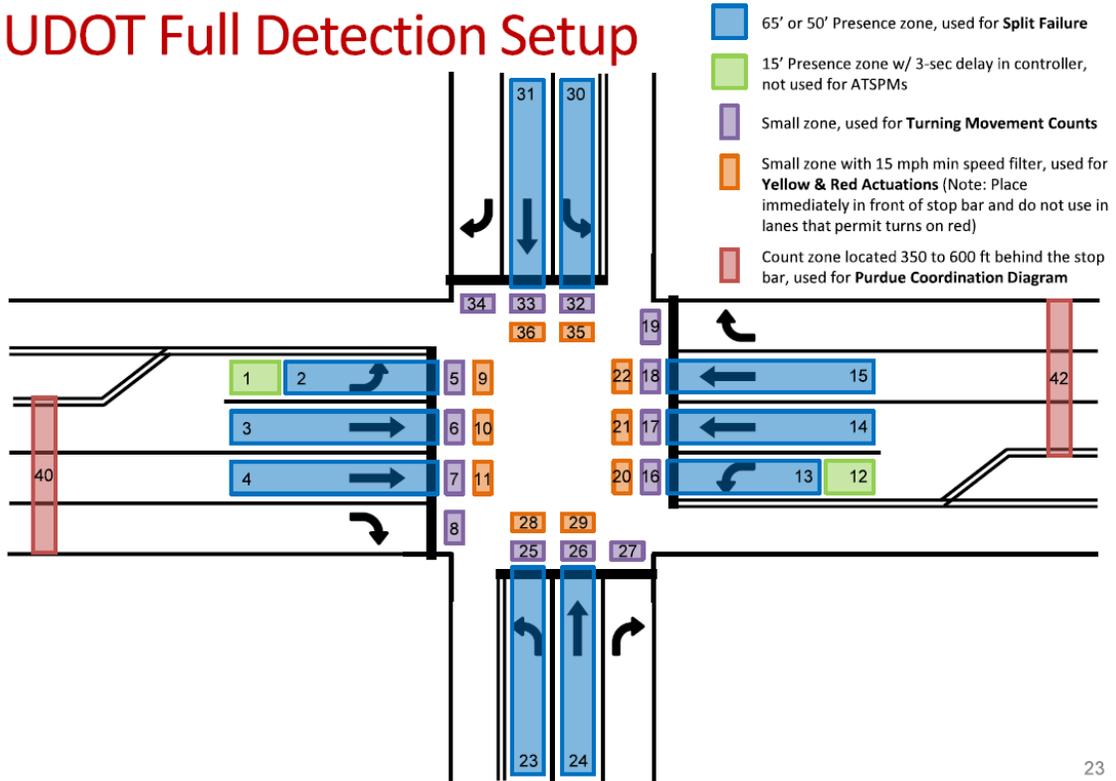
Next meeting: Friday, September 7th, 2018
Waters Edge **Conference Room 176**
9:00am – 12:00 noon
Skype available
Send agenda items to Jerry K

Attachments

More Detection Leads to More ATSPMs



UDOT Full Detection Setup



NAME	AOT (MAJOR/VEHIC)	EXTRACT	COUNTY	CITY	LATITUDE	LONGITUDE	OVERHEAD				POLE-MOUNTED				SPAN WIRE MOUNTED (1:1)				TOTAL SIGNAL	
							3-SECTION		4-SECTION		3-SECTION		4-SECTION		3-SECTION		4-SECTION			
							LEFT	THRU	LEFT	THRU	LEFT	THRU	LEFT	THRU	LEFT	THRU	LEFT	THRU		
US 2 AT WJWAY RD	5500/8800	1	SACRT LOUIS	HEMANTOWN	-92.2903	46.7828	2	4			2	6							18	
US 169 AT DILLON RD	12800/2700	1	SACRT LOUIS	HEMANTOWN	-92.9825	47.4000	2	5			1	2	8						15	
US 169 AT PRIMAVERA PLAZA	12800/1600	1	SACRT LOUIS	HEMANTOWN	-92.2869	47.4000	2	6			2	4							18	
US 169 AT 37TH ST	15300/5300	1	SACRT LOUIS	HEMANTOWN	-92.5247	47.4084	2				4	10							16	
US 169 AT 25TH ST	15300/4600	1	SACRT LOUIS	HEMANTOWN	-92.9242	47.4207	2	4			2	2	6						18	
US 169 AT 22ND ST	15300/2700	1	SACRT LOUIS	HEMANTOWN	-92.5038	47.4242	6						4	6					16	
US 169 AT HOWARD ST	15300/4500	1	SACRT LOUIS	HEMANTOWN	-92.5222	47.4287	2	4			2	2	6						18	
US 169 AT 9TH AVE	12800/4200	1	SACRT LOUIS	HEMANTOWN	-92.9521	47.4001	2	6			2	8							18	
US 71 AT ANNE ST	10000/8300	2	BELTFRAM		-94.9064	47.2021	6					4	8						18	
US 2 AT CSAR T LAMBERG DR	17100/3300	2	BELTFRAM		-94.9356	47.2021	6					4	9						19	
US 2 AT TH 1974US 71	14900/10000	2	BELTFRAM	BENLOUI	-94.9139	47.4984	2	8				6	6						22	
US 2 AT MONROE ENTRANCE	14900	2	BELTFRAM	BENLOUI	-94.9172	47.4973	5	1				2	1			2			11	
US 2 AT 5TH AVE	5100/2350	2	POLK	EAST GRAND FORKS	-97.0124	47.9380	2	6				2	6						16	
US 2 AT FISHER AVE	7200/7300	2	POLK	CROOKSTON	-96.6111	47.1892	6					4	8						18	
MN 200 AT MN 371	8500/4300	2	CASS		-94.5700	47.2532	2	5				2	6						15	
MN 32 AT GREENWOOD ST	6000/3500	2	PENNINGTON	TRIFLE RIVER FALLS	-94.1312	48.1079	4	4				5	4						17	
MN 27 AT WYCKOFF RD	12000/3300	3	DENVER		-94.0018	45.3883	6					4	8						18	
MN 15 AT CSAR 29	12600/9000	3	DENVER	SARTWELL	-94.1759	45.6122	2	4				2	4						16	
MN 371 AT MN 84	8100/3400	3	CASS	PINE RIVER	-94.4244	46.1178	5	2				6	2						15	
MN 371 AT MIDLAND SCIENCE DR	12000/4700	3	CROW WING	BAKERS	-94.2376	46.3204	2	6				2	4						18	
MN 25 AT TH 18	7500/860	3	CROW WING	BRANDNER	-94.1567	46.2522	4	4				4	4						16	
MN 371 AT CSAR 77	18500/9100	3	CROW WING	NISSWA	-94.2982	45.5000	2	6				2	6						16	
MN 85 AT PENN ST	11100/2200	3	ISANTI	CAMBRIDGE	-93.2304	45.2729	4				2	6							14	
MN 85 AT POLK ST	11100/2100	3	ISANTI	CAMBRIDGE	-93.2453	45.2727	2					6	2			3	2		13	
MN 85 AT CSAR 3	19100/8000	3	ISANTI	ISANTI	-93.2387	45.4930	3	7				2	4						20	
MN 85 AT PLANDERS ST	12000/4100	3	ISANTI		-93.1932	45.9728	6					4	4						18	
MN 23 AT MN 55 SOUTH JUNCTION	11600/5500	3	KANABEC		-93.2988	45.8536	2	2	2	2	2	2	6						14	
US 10 AT CSAR 28	27100/2300	3	MORRISON	ROYALTON	-91.2941	45.8530	3	1				2	3						14	
US 10 AT ROLLING RIDGE RD	19300 US 101	3	SHERBURNE	BECKER	-93.8028	45.3838	2	4	1	1	1	2	4	1					16	
US 169 AT WAIN ST	45500/23600	3	SHERBURNE	ELK RIVER	-93.5547	45.3031	4	6				6	6						22	
US 169 AT 17TH AVE	34000/4400	3	SHERBURNE	ELK RIVER	-93.5611	45.2887	7					4	8						19	
US 10 AT WARD ST	27600/2700	3	SHERBURNE	ELK RIVER	-93.6268	45.3044	2	7				2	6						17	
MN 25 AT CSAR 11	18100/12400	3	SHERBURNE		-93.7889	45.3104	3	5	1	1	1	4	4			1			19	
US 10 AT CSAR 43	21400/5000	3	SHERBURNE		-93.7377	45.3284	7					4	8						19	
US 169 AT CSAR 4	25000/11200	3	SHERBURNE	ZIMMERMAN	-93.5841	45.4435	2	6				6	6						20	
MN 23 AT CSAR 71	10600/2050	3	STEARNS	REMOND	-94.5013	45.4518	6					4	8						18	
US 71 AT STEARNS LEWIS AVE	9900/1100	3	STEARNS	SAUK CENTRE	-94.9500	45.7132	2					2	4						8	
MN 23 AT 10TH AVE	19300/13700	3	STEARNS	WHITE PARK	-94.2293	45.5496	2	4				2	4			2			16	
MN 23 AT 28TH AVE 3	18300/9100	3	STEARNS	WHITE PARK	-94.2242	45.5412	2	6				2	4			2			18	
US 10 AT BUFFALO AVE	113000/6000	3	WISCONSIN	MONROE	-93.9111	45.2649	4					2	6						14	
US 12 AT BRIDGE AVE	14900/6700	3	WISCONSIN	DELAND	-93.7918	45.2419	4					3	5			3			15	
MN 85 AT EXCELSIOR AVE	7200/1400	3	WISCONSIN	MANASSAHE	-94.1273	45.2627	3	3				3	3			5	3		14	
US 10 AT COUNTY LINE RD	18200/4200	3	WISCONSIN	DELAND	-93.7609	45.2585	2	6				2	6						16	
US 10 AT CSAR 31	12800/1500	4	CLAY	BAWLEY	-96.3225	46.4771	6	4				4	6						20	
US 4 AT MN 29 SOUTH RAMP	21800 TH 293	4	COUGLAS	ALEXANDRIA	-95.3981	45.4931	5	1				5	3						12	
MN 210 AT REDWOOD LN	10800 TH 2101	4	OTTER TAHL	PERDUE FALLS	-96.1160	46.2895	2	6				2	6						16	
US 10 AT KRES ST	12600 US 101	4	BECKER	DEHOLT LAKES	-94.8937	46.3098	2	5				2	4						13	
							TOTAL	36	235	20	38	102	210	19	35	3	3	2		13

SPECIFIC NOTES:
 (1) NO SPAN WIRE MOUNTED 4-SECTION HEADS.
 (2) INTERSECTION IS LOCATED ON THE LEECH LAKE BAND OF INDIAN RESERVATION. SEE SPECIAL PROVISIONS FOR INFORMATION RELATING TO INDIAN EMPLOYMENTS.
 (3) COORDINATION WITH RAILROAD COMPANY WILL BE NECESSARY AT THIS LOCATION. CONTACT RAILROAD COMPANY AT LEAST 30 DAYS PRIOR TO STARTING WORK AT THE INTERSECTION. SEE SPECIAL PROVISIONS FOR CONTACT INFORMATION.

DESIGN TEAM	NO. BY DATE	REVISIONS	3. Verify quantity sheet price from the approved bid or contract. If approved, use the price from the approved bid or contract. If not approved, use the price from the approved bid or contract. If not approved, use the price from the approved bid or contract.	SEH	S.P. 8816-2698 TRAFFIC SIGNAL REFLECTORIZED BACKPLATE DESIGN DISTRICTS 1,2,3,4	SIGNAL BACKPLATE TABULATIONS	FILE NO. 144715	3	4
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NOTES:

- CLEAN BACKPLATE PRIOR TO REFLECTORIZED TAPE INSTALLATION. SEE SPECIAL PROVISIONS.
- SEE SPECIAL PROVISIONS FOR REFLECTORIZED TAPE INSTALLATION INSTRUCTIONS.
- REFLECTORIZED TAPE SHOULD BE APPLIED TO THE EDGE OF THE BACKPLATE AND TRIMMED TO FOLLOW ROUNDED CORNERS.
- APPROXIMATE LENGTH OF TAPE REQUIRED FOR EACH SIGNAL HEAD SIZE:
 - 3-SECTION HEAD: 12 FEET
 - 4-SECTION HEAD: 14 FEET
 - 5-SECTION STANDARD HEAD: 16 FEET
 - 5-SECTION DOGHOUSE HEAD: 14 FEET

2" WIDE YELLOW REFLECTORIZED TAPE

POLYCARBONATE OR ALUMINUM BACKPLATE (IN PLACE)

DESIGN TEAM	NO. BY DATE	REVISIONS	3. Verify quantity sheet price from the approved bid or contract. If approved, use the price from the approved bid or contract. If not approved, use the price from the approved bid or contract. If not approved, use the price from the approved bid or contract.	SEH	S.P. 8816-2698 TRAFFIC SIGNAL REFLECTORIZED BACKPLATE DESIGN DISTRICTS 1,2,3,4	REFLECTORIZED TAPE APPLICATION DETAIL	FILE NO. 144715	4	4
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