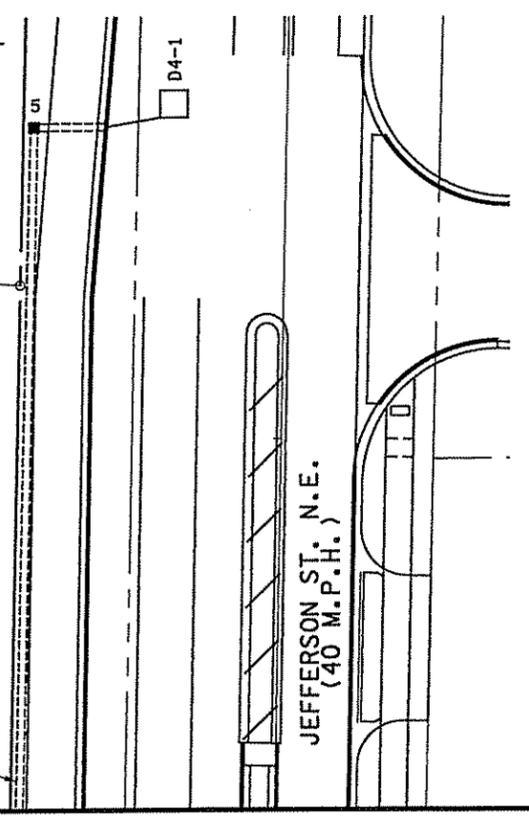


MATCHLINE STA. 1194+00.00

- 6 PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
2-SWING AWAY HINGES
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11' AND 23'
2-ANGLE MOUNT SIGNALS AT 90 DEG AND 180 DEG
2-ANGLE MOUNT C.D. PED INDS AT 90 DEG AND 180 DEG
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1+6)
LUMINAIRE-250W HPS
1-PB AND SIGN (LT ARROW)(PB4-1)
1-TYPE D SIGN "JEFFERSON ST"
1-R6-1L SIGN "ONE WAY"
EXTEND INTO INP. HH 12:
3" RSC
2 - 12/C #14
2 - 4/C #14
1 - 3/C #14
1 - 3/C #14 (LUM.)
1 - 3/C #20
1 - 2/C #14
1 - 1/C #6 INS. GR.

- A EQUIPMENT PAD - SEE DETAIL
SERVICE CABINET
CONTROLLER AND CABINET
2 - 4" RSC TO HH 1:
4 - 12/C #14
2 - 4/C #14
1 - 3/C #12
2 - 3/C #14
2 - 3/C #20
13 - 2/C #14
1 - 1/C #6 INS. GR.
2 - 4" RSC TO HH 16:
4 - 12/C #14
3 - 4/C #14
2 - 3/C #12
2 - 3/C #14
2 - 3/C #20
13 - 2/C #14
1 - 1/C #6 INS. GR.
1 1/2" NMC/HDPE TO FIBER CABINET WITH:
1 - FO PIGTAIL
3" RSC STUBBED OUT CAPPED BOTH ENDS
2" RSC TO SERVICE CABINET
2 - 1/C #6
1 - 1/C #6 INS. GR.
SERVICE CABINET TO HH 1:
2" RSC
1 - 3/C #14 (LUM.)
SERVICE CABINET TO HH 16:
2" RSC
1 - 3/C #14 (LUM.)
SERVICE CABINET TO HH 17:
2" RSC
3 - 1/C #2



MATCHLINE STA. 72+18.46

- 7 PA100 POLE FOUNDATION
TYPE PA100-A-55
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 3+8)
1-PB AND SIGN (RT ARROW)(PB6-2)
1-TYPE D SIGN "125TH AVE NE"
1-R10-12 SIGN
1-R6-1R SIGN "ONE WAY"
EXTEND INTO INP. HH 13:
3" RSC
1 - 12/C #14
1 - 3/C #14
1 - 3/C #20
1 - 2/C #14
1 - 1/C #6 INS. GR.

- B SOP - GROUND MOUNT TRANSFORMER
2" RSC TO HH 13:
3 - 1/C #2

2" RSC
1 - 2/C #14

- 1 PA100 POLE FOUNDATION
TYPE PA100-A-45
2-SWING AWAY HINGES
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11' AND 23'
2-ANGLE MOUNT SIGNALS AT 90 DEG AND 180 DEG
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 2+5)
1-TYPE D SIGN "JEFFERSON ST"
EXTEND INTO HH 1:
3" RSC
2 - 12/C #14
1 - 3/C #14
1 - 3/C #20
1 - 1/C #6 INS. GR.

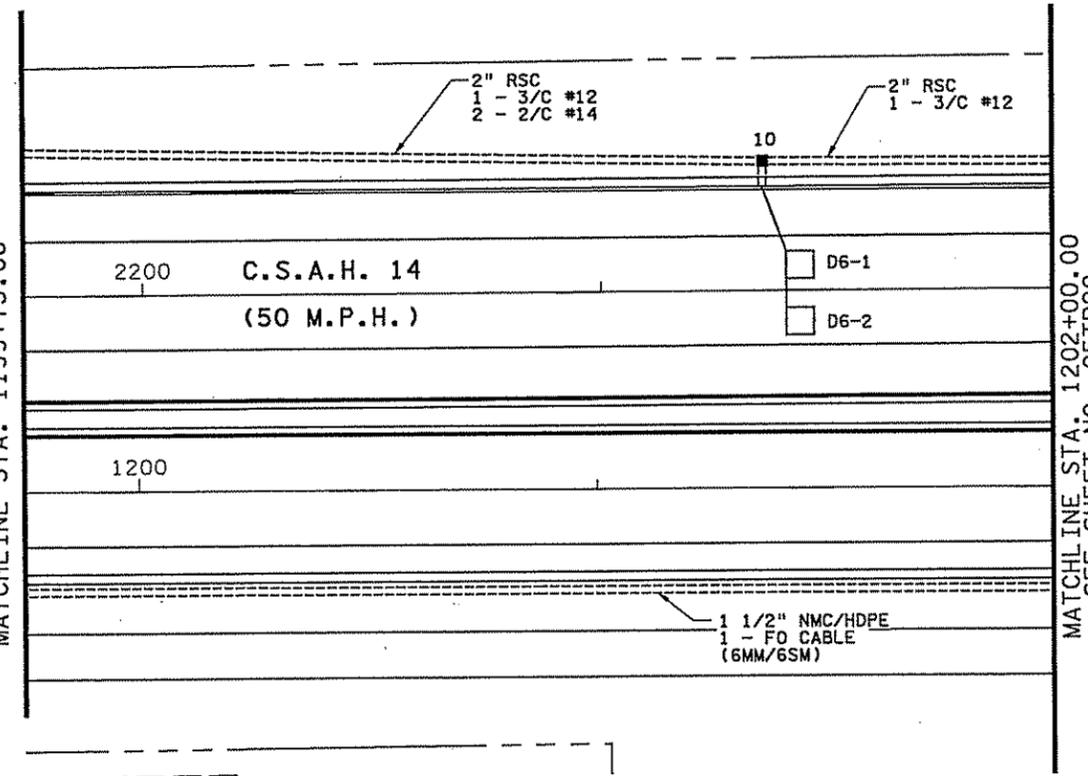
- 4 PEDESTAL FOUNDATION
14' PEDESTAL POLE AND BASE (13' POLE PLUS BASE)
2-STRAIGHT MOUNT C.D. PED INDS (PB-1)(P2-2)
1-PB AND SIGN (RT ARROW)(PB2-2)
1-PB AND SIGN (LT ARROW)(PB8-1)
1-R6-1L SIGN "ONE WAY"
1-R6-1R SIGN "ONE WAY"
EXTEND INTO INP. HH 3:
3" RSC
2 - 4/C #14
2 - 2/C #14
1 - 1/C #6 INS. GR.

- 8 PEDESTAL FOUNDATION
14' PEDESTAL POLE AND BASE (13' POLE PLUS BASE)
2-STRAIGHT MOUNT SIGNAL INDICATIONS (8-1)(5-2)
2-STRAIGHT MOUNT C.D. PED INDS (P6-1)(P8-2)
1-PB AND SIGN (LT ARROW)(PB6-1)
1-PB AND SIGN (LT ARROW)(PB8-2)
1-R6-1L SIGN "ONE WAY"
1-R6-1R SIGN "ONE WAY"
EXTEND INTO HH 8:
3" RSC
1 - 12/C #14
1 - 4/C #14
2 - 2/C #14
1 - 1/C #6 INS. GR.

- 2 INP.-PEDESTAL FOUNDATION (MN/DOT STANDARD PLATE NO. 8112F)
PEDESTAL POLE, BASE, FLASHER BEACONS, FLASHER CABINET AND SIGNS-BY OTHERS
INP.-EXTEND INTO INP. HH 8:
2" RSC
1 - 3/C #12

- 5 PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
2-ANGLE MOUNT SIGNALS AT 90 DEG AND 180 DEG
2-ANGLE MOUNT C.D. PED INDS AT 90 DEG AND 180 DEG
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 4+7)
LUMINAIRE-250W HPS
1-PB AND SIGN (LT ARROW)(PB2-1)
1-PB AND SIGN (RT ARROW)(PB4-2)
1-TYPE D SIGN "125TH AVE NE"
1-R10-12 SIGN
1-R6-1L SIGN "ONE WAY"
1-R6-1R SIGN "ONE WAY"
EXTEND INTO INP. HH 15:
3" RSC
2 - 12/C #14
1 - 3/C #14
1 - 3/C #14 (LUM.)
1 - 3/C #20
2 - 2/C #14
1 - 1/C #6 INS. GR.

- 3 INP.-PEDESTAL FOUNDATION (MN/DOT STANDARD PLATE NO. 8112F)
PEDESTAL POLE, BASE, FLASHER BEACONS, FLASHER CABINET AND SIGNS-BY OTHERS
INP.-EXTEND INTO INP. HH 14:
2" RSC
1 - 3/C #12



MATCHLINE STA. 1199+75.00

MATCHLINE STA. 1202+00.00
SEE SHEET NO. 05TR29

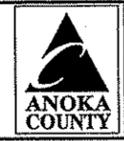
RELEASED FOR CONSTRUCTION

4:32:13 PM 9/12/2011 H:\Projects\1461\1461-VHF-MUNIP\an\DP_5\CD0261434_05tr21.dgn

NO	DATE	BY	CHKD	APPR

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 Pr Int Name: GEORGE M. STUEMPFIG
George M. Stuempfig
 Date: 9/13/11 License # 21849

ANOKA COUNTY RELEASED FOR CONSTRUCTION
Charles C. Carls
 Date: 9/29/11 ANOKA COUNTY



CSAH 14 DESIGN BUILD (SAP 002-614-034)
 MATCHLINE LAYOUT
 CSAH 14 & JEFFERSON ST NE (SYSTEM "D")
 C.S.A.H. 14
 DESIGN PACKAGE #05

SHEET
 05TR21
 OF
 05TR37

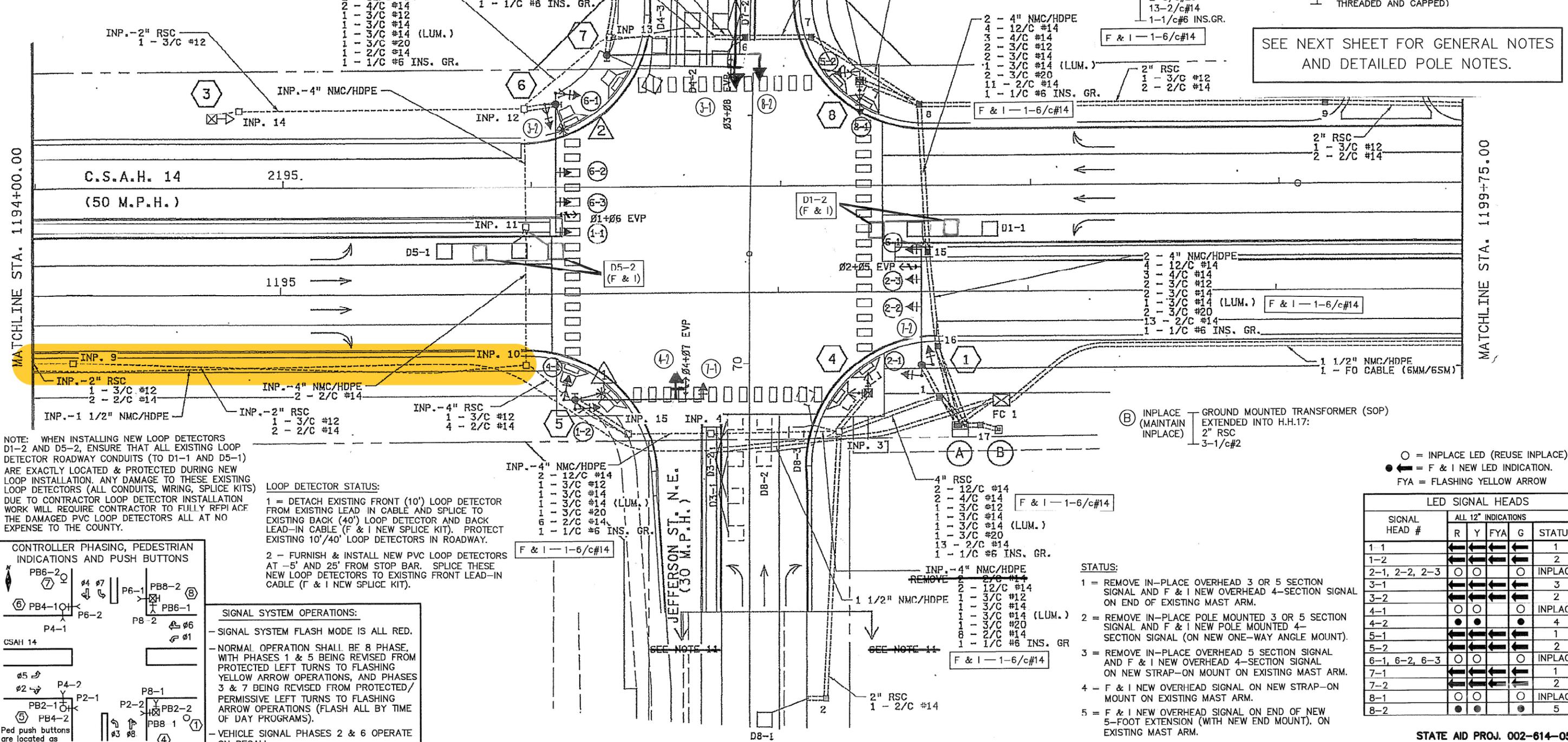
PVC LOOP DETECTORS				
NUMBER	SIZE (FT.)	LOCATION	FUNCTION	STATUS
D1-1	2-6x6	10' & 40'	1	1
D1-2	2-6x6	-5' & 25'	1	2
D2-1, D2-2	6x6	400'	1	INPLACE
D3-1	2-6x6	15' & 45'	1	INPLACE
D3-2	2-6x6	0' & 30'	1	INPLACE
D4-1	6x6	250'	3	INPLACE
D4-2, D8-2	2-6x6	0' & 15'	1	INPLACE
D4-3, D8-3	2-6x6	-10' & 5'	7	INPLACE
D5-1	2-6x6	10' & 40'	1	1
D5-2	2-6x6	-5' & 25'	1	2
D6-1, D6-2	6x6	400'	1	INPLACE
D7-1	2-6x6	15' & 45'	1	INPLACE
D7-2	2-6x6	0' & 30'	1	INPLACE
D8-1	6x6	120'	3	INPLACE

LOOP DETECTORS FUNCTIONS:

- 1) CALL AND EXTEND
- 3) EXTEND ONLY
- 7) DELAYED CALL, IMMEDIATE EXTEND



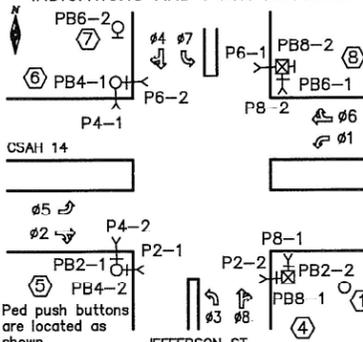
LOCATION = DISTANCE FROM STOP BAR TO FRONT OF DETECTOR



NOTE: WHEN INSTALLING NEW LOOP DETECTORS D1-2 AND D5-2, ENSURE THAT ALL EXISTING LOOP DETECTOR ROADWAY CONDUITS (TO D1-1 AND D5-1) ARE EXACTLY LOCATED & PROTECTED DURING NEW LOOP INSTALLATION. ANY DAMAGE TO THESE EXISTING LOOP DETECTORS (ALL CONDUITS, WIRING, SPLICE KITS) DUE TO CONTRACTOR LOOP DETECTOR INSTALLATION WORK WILL REQUIRE CONTRACTOR TO FULLY REPAIR THE DAMAGED PVC LOOP DETECTORS ALL AT NO EXPENSE TO THE COUNTY.

- LOOP DETECTOR STATUS:**
- 1 = DETACH EXISTING FRONT (10') LOOP DETECTOR FROM EXISTING LEAD IN CABLE AND SPLICE TO EXISTING BACK (40') LOOP DETECTOR AND BACK LEAD-IN CABLE (F & I NEW SPLICE KIT). PROTECT EXISTING 10'/40' LOOP DETECTORS IN ROADWAY.
 - 2 = FURNISH & INSTALL NEW PVC LOOP DETECTORS AT -5' AND 25' FROM STOP BAR. SPLICE THESE NEW LOOP DETECTORS TO EXISTING FRONT LEAD-IN CABLE (F & I NEW SPLICE KIT).

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATIONS:

- SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1 & 5 BEING REVISED FROM PROTECTED LEFT TURNS TO FLASHING YELLOW ARROW OPERATIONS, AND PHASES 3 & 7 BEING REVISED FROM PROTECTED/PERMISSIVE LEFT TURNS TO FLASHING ARROW OPERATIONS (FLASH ALL BY TIME OF DAY PROGRAMS).
- VEHICLE SIGNAL PHASES 2 & 6 OPERATE ON RECALL.

- (A) INPLACE (MAINTAIN INPLACE)**
- EQUIPMENT PAD FOUNDATION
 - CONTROLLER AND CABINET
 - SIGNAL SERVICE CABINET
 - CONTROLLER CABINET TO H.H.1:
 - 2-4" RSC
 - 4-12/c#14
 - 2-4/c#14
 - 2-3/c#14
 - 1-3/c#12 (FLASHER)
 - 2-3/c#20
 - 1-1/c#6 INS.GR.
- INPLACE (MAINTAIN INPLACE)**
- CONTROLLER CABINET TO H.H.16:
 - 2-4" RSC
 - 4-12/c#14
 - 3-4/c#14
 - 2-3/c#14
 - 2-3/c#12 (FLASHER)
 - 2-3/c#20
 - 13-2/c#14
 - 1-1/c#6 INS.GR.
- INPLACE (MAINTAIN INPLACE)**
- CONTROLLER CABINET TO H.H.17:
 - 2-4" RSC
 - 4-12/c#14
 - 3-4/c#14
 - 2-3/c#14
 - 2-3/c#12 (FLASHER)
 - 2-3/c#20
 - 13-2/c#14
 - 1-1/c#6 INS.GR.
- INPLACE (MAINTAIN INPLACE)**
- SERVICE CABINET TO CONTROLLER CABINET:
 - 2" RSC
 - 2-1/c#6
 - 1-1/c#6 INS.GR.
 - SERVICE CABINET TO H.H.1:
 - 2" RSC
 - 2-3/c#14 (LUM)
 - SERVICE CABINET TO H.H.16:
 - 2" RSC
 - 2-3/c#14 (LUM)
 - SERVICE CABINET TO H.H.17:
 - 2" RSC
 - 3-1/c#2
 - FIBER CABINET WITH 1-FO PIGTAIL
 - 3" RSC STUBBED OUT (BOTH ENDS THREADED AND CAPPED)

SEE NEXT SHEET FOR GENERAL NOTES AND DETAILED POLE NOTES.

- (B) INPLACE (MAINTAIN INPLACE)**
- GROUND MOUNTED TRANSFORMER (SOP)
 - EXTENDED INTO H.H.17:
 - 2" RSC
 - 3-1/c#2

- = INPLACE LED (REUSE INPLACE).
- ← = F & I NEW LED INDICATION.
- FYA = FLASHING YELLOW ARROW

LED SIGNAL HEADS					
SIGNAL HEAD #	ALL 12" INDICATIONS				STATUS
	R	Y	FYA	G	
1-1	←	←	←	←	1
1-2	←	←	←	←	2
2-1, 2-2, 2-3	○	○	○	○	INPLACE
3-1	←	←	←	←	3
3-2	←	←	←	←	2
4-1	○	○	○	○	INPLACE
4-2	●	●	●	●	4
5-1	←	←	←	←	1
5-2	←	←	←	←	2
6-1, 6-2, 6-3	○	○	○	○	INPLACE
7-1	←	←	←	←	1
7-2	←	←	←	←	2
8-1	○	○	○	○	INPLACE
8-2	●	●	●	●	5

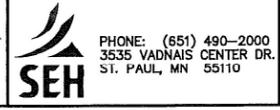
- STATUS:**
- 1 = REMOVE IN-PLACE OVERHEAD 3 OR 5 SECTION SIGNAL AND F & I NEW OVERHEAD 4-SECTION SIGNAL ON END OF EXISTING MAST ARM.
 - 2 = REMOVE IN-PLACE POLE MOUNTED 3 OR 5 SECTION SIGNAL AND F & I NEW POLE MOUNTED 4-SECTION SIGNAL (ON NEW ONE-WAY ANGLE MOUNT).
 - 3 = REMOVE IN-PLACE OVERHEAD 5 SECTION SIGNAL AND F & I NEW OVERHEAD 4-SECTION SIGNAL ON NEW STRAP-ON MOUNT ON EXISTING MAST ARM.
 - 4 = F & I NEW OVERHEAD SIGNAL ON NEW STRAP-ON MOUNT ON EXISTING MAST ARM.
 - 5 = F & I NEW OVERHEAD SIGNAL ON END OF NEW 5-FOOT EXTENSION (WITH NEW END MOUNT), ON EXISTING MAST ARM.

DRAWN BY: JMG
 DESIGNER: JMG
 CHECKED BY: JMG

NO.	BY	DATE	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

John M. Gray, PE
 Lic. No. 22457
 Date: August 21, 2020



ANOKA COUNTY
CITY OF BLAINE

REVISE SIGNAL SYSTEM 'B'
INTERSECTION LAYOUT
 CSAH 14 (125TH AVE) AT JEFFERSON STREET NE

FILE NO. ANOKC 153781
 12
 55