

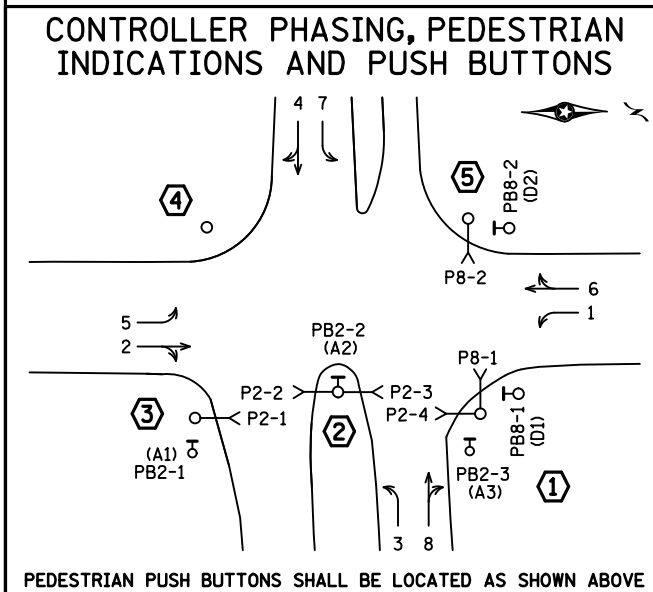
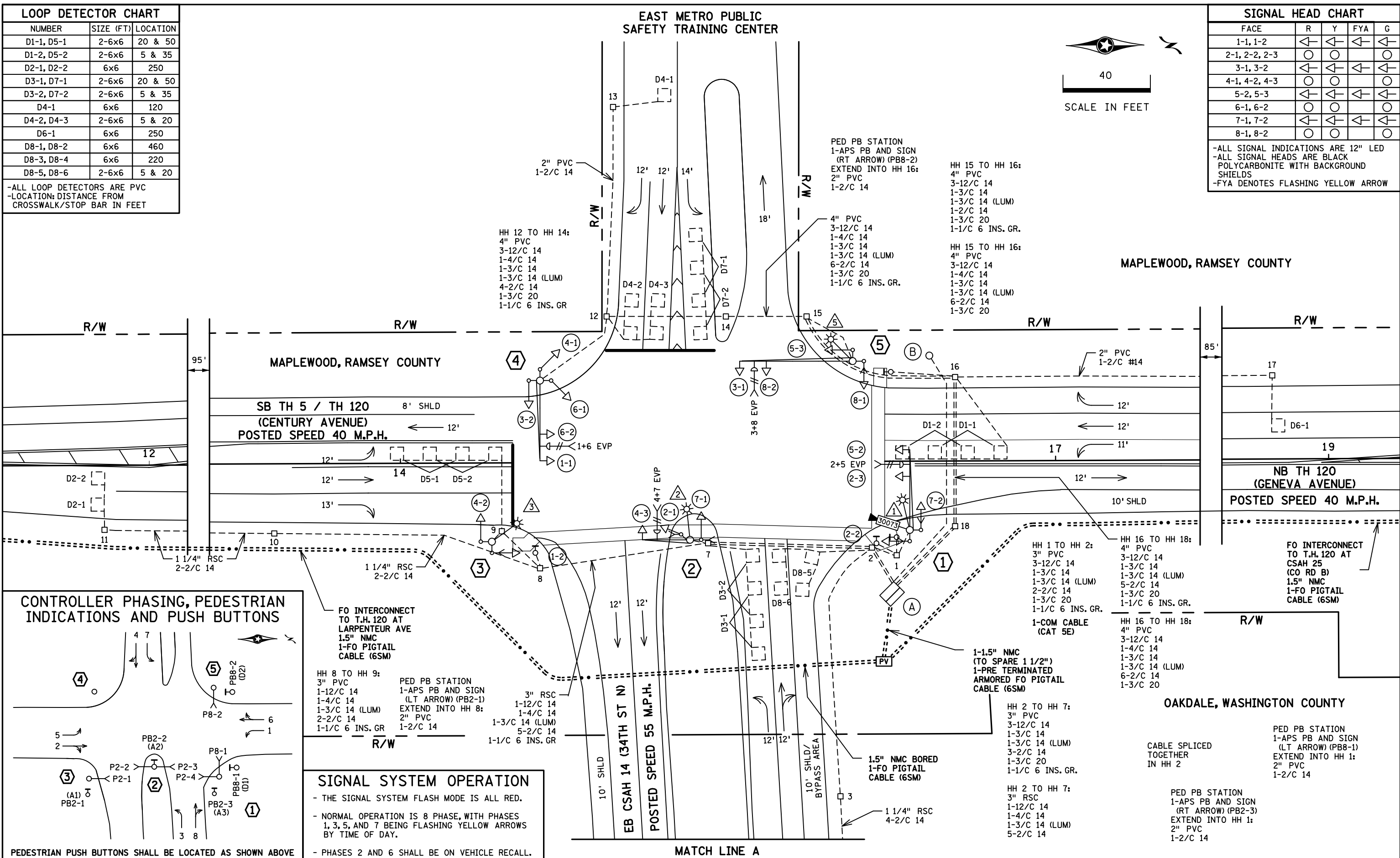
LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1, D5-1	2-6x6	20 & 50
D1-2, D5-2	2-6x6	5 & 35
D2-1, D2-2	6x6	250
D3-1, D7-1	2-6x6	20 & 50
D3-2, D7-2	2-6x6	5 & 35
D4-1	6x6	120
D4-2, D4-3	2-6x6	5 & 20
D6-1	6x6	250
D8-1, D8-2	6x6	460
D8-3, D8-4	6x6	220
D8-5, D8-6	2-6x6	5 & 20

-ALL LOOP DETECTORS ARE PVC
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

SIGNAL HEAD CHART					
FACE	R	Y	FYA	G	
1-1, 1-2	←	←	←	←	
2-1, 2-2, 2-3	○	○	○	○	○
3-1, 3-2	←	←	←	←	
4-1, 4-2, 4-3	○	○	○	○	○
5-2, 5-3	←	←	←	←	
6-1, 6-2	○	○	○	○	○
7-1, 7-2	←	←	←	←	
8-1, 8-2	○	○	○	○	○

-ALL SIGNAL INDICATIONS ARE 12" LED
-ALL SIGNAL HEADS ARE BLACK POLYCARBONITE WITH BACKGROUND SHIELDS
-FYA DENOTES FLASHING YELLOW ARROW

EAST METRO PUBLIC SAFETY TRAINING CENTER



SIGNAL SYSTEM OPERATION

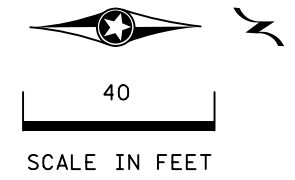
- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 1, 3, 5, AND 7 BEING FLASHING YELLOW ARROWS BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

BY	DATE	REVISIONS	SYSTEM ID: 1735675	T.E.	S.A.P. NO.	DRAWN BY: GDS	CKD BY: GBB	DATE: 05-03-18
SJK	1/20/23	AS-BUILT PLAN SP 6227-83	METER ADDRESS: 21439 GENEVA AVE		CERTIFIED BY _____	LIC. NO. 19863	DATE: 06-06-18	
			OLD SYSTEM ID: 21439		STATE PROJ. NO. 6227-83 (T.H.120)		SHEET NO. 59 OF 89 SHEETS	

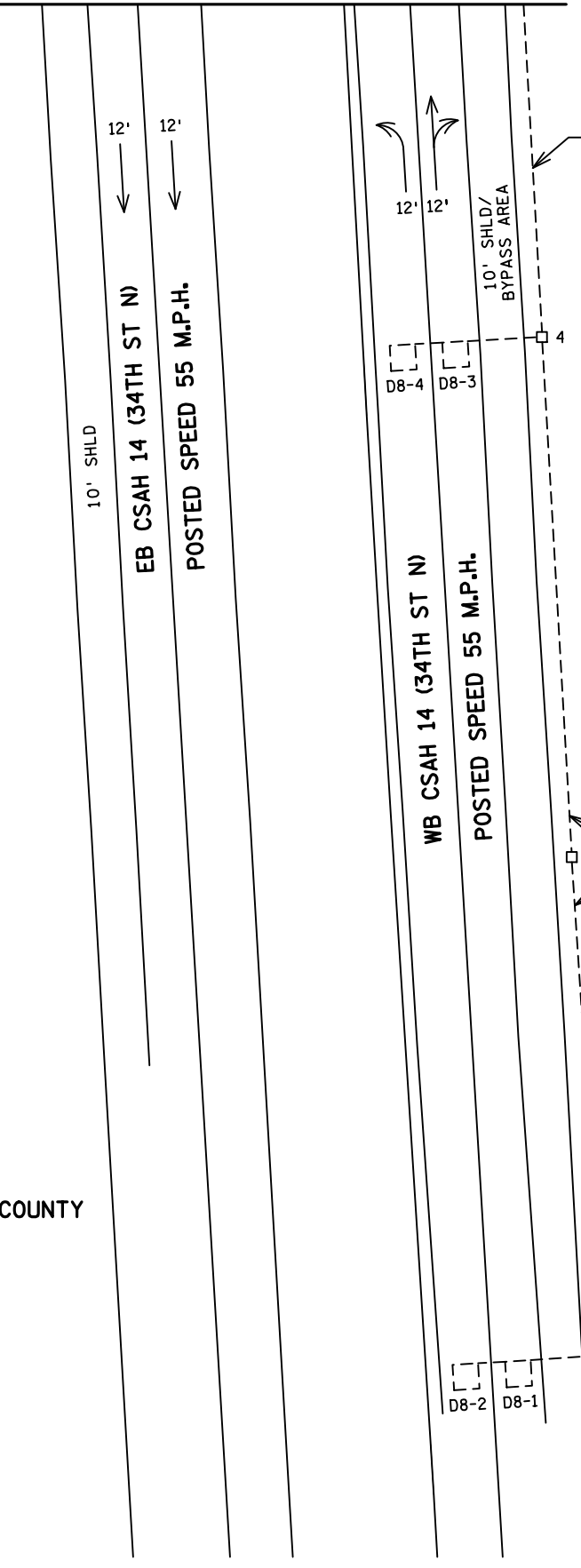
DISTRICT #: Metro
 IPLOT NAME: T1735675.sgl
 PATH & FILENAME: Projects\DM_ROS\20\00000\Traffic\Signals\5.7.4.1(4) 34TH ST N\1735675.sgl.dgn
 PLOTTED/REVISED: 20-JAN-2023

DISTRICT #: Metro
 IPLOT NAME: T1735675.sgl
 PATH & FILENAME: Projects\DM_ROMS\20\00000\Traffic\Signals\5.7.4_(14)_34TH ST N-1735675\T1735675.sgl.dgn

PLOTTED/REVISED: 20-JAN-2023



MATCH LINE A



- 4** PA100 POLE FOUNDATION
 TYPE PA100-A-35
 2-WAY ANGLE MOUNT SIGNALS OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
 3-ANGLE MOUNT SIGNALS AT 90 DEG, 180 DEG AND 270 DEG
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1+6)
 2-R9-3 SIGNS (NO PEDS) FACING POLES 3 AND 5
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
 1-TYPE D SIGN
 3" PVC TO HH 12:
 3-12/C 14
 1-4/C 14
 2-3/C 14
 1-2/C 14
 1-3/C 20
 1-1/C 6 INS. GR.

- 3** PA85 POLE FOUNDATION
 TYPE PA85-A-D40-9 (DAVIT AT 350 DEG)
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ANGLE MOUNT C.D. PED HEAD AT 90 DEG
 LUMINAIRE-LED
 1-R9-3 SIGN (NO PEDS) FACING POLE 4
 3" PVC TO HH 9:
 1-12/C 14
 1-4/C 14
 1-3/C 14 (LUM)
 1-1/C 6 INS. GR.

- 2** PA85 POLE FOUNDATION
 TYPE PA85-A-20-D40-9 (DAVIT AT 90 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-ANGLE MOUNT SIGNALS AT 0 AND 180 DEG
 2-ANGLE MOUNT C.D. PED HEADS AT 0 AND 180 DEG
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 4+7)
 LUMINAIRE-LED
 1-APS PB AND SIGN (DBL ARROW) (PB2-2)
 1-R10-X12 SIGN - POLE MOUNTED AT 90 DEG
 2-TYPE D SIGNS
 3" PVC TO HH 7:
 3-12/C 14
 1-3/C 14
 1-3/C 14 (LUM)
 1-2/C 14
 1-3/C 20
 1-1/C 6 INS. GR.

- 5** PA100 POLE FOUNDATION
 TYPE PA100-A-50-D30-9 (DAVIT AT 45 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ANGLE MOUNT C.D. PED HEAD AT 180 DEG
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 3+8)
 LUMINAIRE-LED
 1-R9-3 SIGN (NO PEDS) FACING POLE 4
 1-R10-X12 SIGN ADJACENT TO HEAD (3-1)
 2-TYPE D SIGNS
 3" PVC TO HH 15:
 3-12/C 14
 1-3/C 14
 1-3/C 14 (LUM)
 1-2/C 14
 1-3/C 20
 1-1/C 6 INS. GR.

- 1** PA100 POLE FOUNDATION
 TYPE PA100-A-35-D40-9 (DAVIT AT 350 DEG)
 1-X6-350/CAM 400 EXTENSION (MOUNTED AT 350 DEG) (INCLUDES LIGHTNING ROD)
 7/16" GROUND BRAID
 1-VIDEO CAMERA WITH MOUNT
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 2-ANGLE MOUNT C.D. PED HEADS AT 90 AND 180 DEG
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 2+5)
 LUMINAIRE-LED
 1-R10-X12 SIGN ADJACENT TO HEAD (5-2)
 1-TYPE D SIGN
 3" PVC TO HH 1:
 3-12/C 14
 1-3/C 14
 1-3/C 14 (LUM)
 1-3/C 20
 1-1/C 6 INS. GR.
 1-7/16" GROUND BRAID TO GROUND ROD
 1-COM CABLE (CAT 5E)

- A** EQUIPMENT PAD
 BBU SERVICE CABINET (SSB)
 CONTROLLER AND CABINET
 4" PVC TO HH 18:
 3-12/C 14
 1-3/C 14
 5-2/C 14
 1-3/C 20
 1-1/C 6 INS. GR.
 4" PVC TO HH 18:
 3-12/C 14
 1-4/C 14
 1-3/C 14
 6-2/C 14
 1-3/C 20
 4" PVC TO HH 2:
 3-12/C 14
 1-4/C 14
 1-3/C 14
 8-2/C 14
 1-3/C 20
 1-1/C 6 INS. GR.
 1-COM CABLE (CAT 5E)

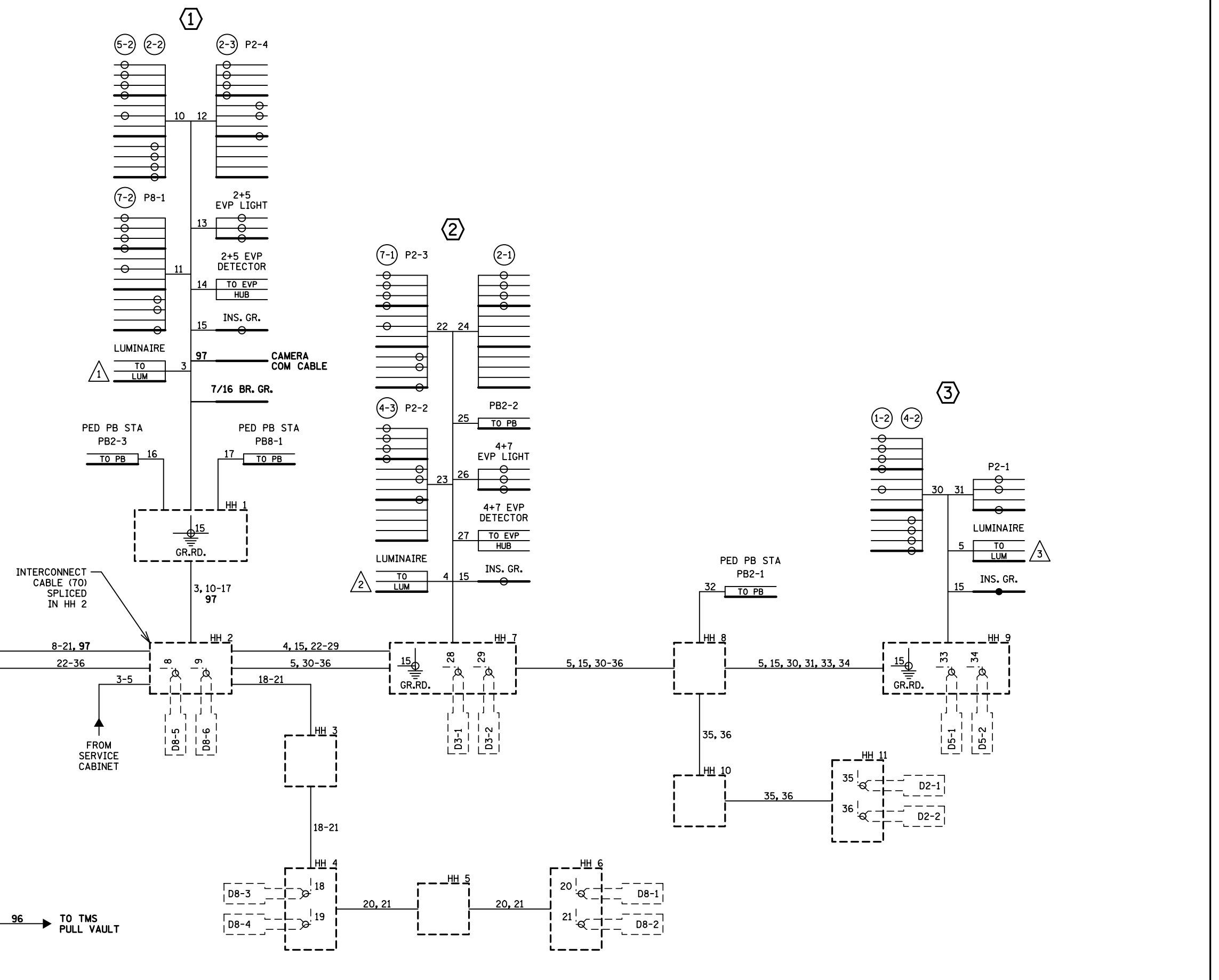
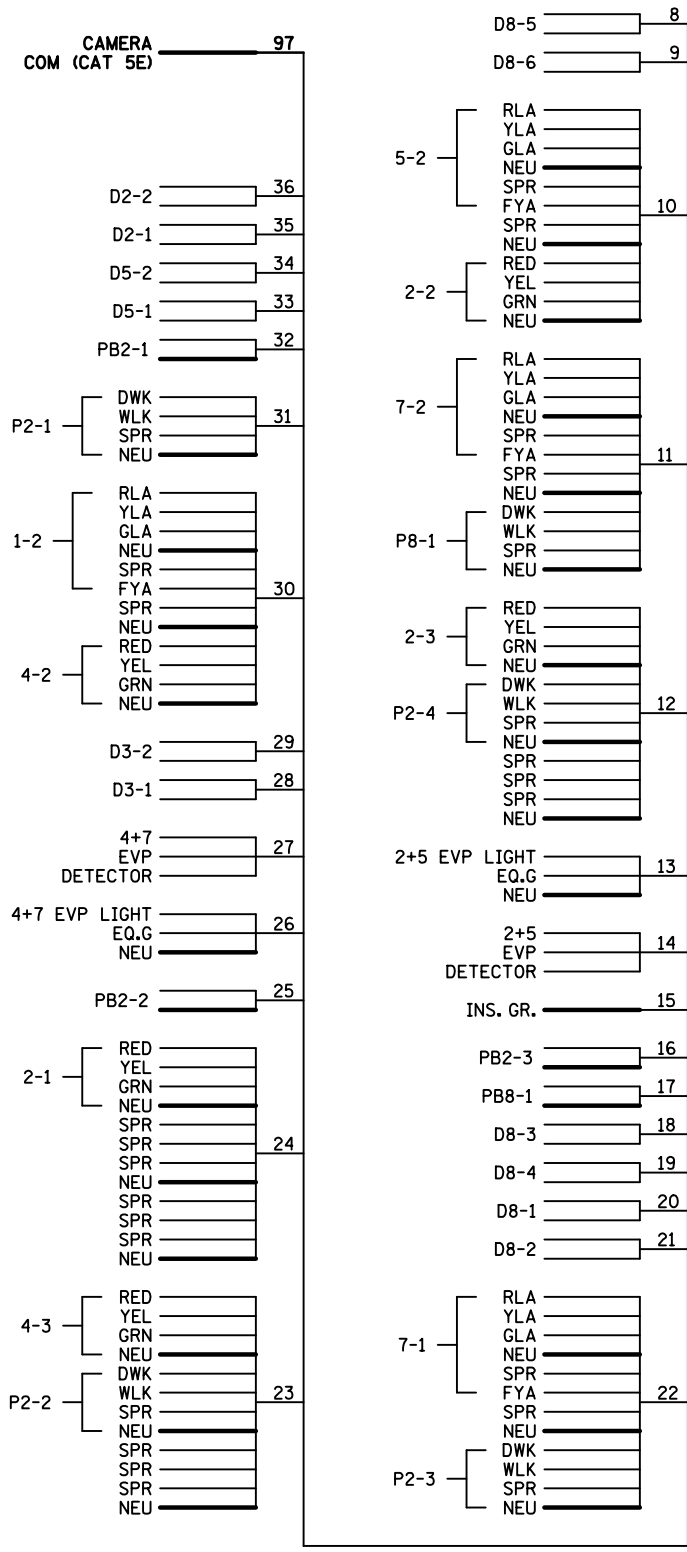
- 3" PVC STUBBED OUT (CAPPED BOTH ENDS)
 CONTROLLER CABINET TO PULL VAULT:
 1-1.5" NMC (TO SPARE 3")
 1-PRE TERMINATED ARMORED FO PIGTAIL CABLE (6SM)
 CONTROLLER CABINET TO SERVICE CABINET:
 2" PVC
 2-1/C 6
 1-1/C #6 INS. GR.
 SERVICE CABINET TO SOP:
 2" PVC
 3-1/C 2
 SERVICE CABINET TO HH 18:
 2" PVC
 2-3/C 14 (LUM)
 SERVICE CABINET TO HH 2:
 2" PVC
 3-3/C 14 (LUM)

- B** SOP-WOOD POLE (NORTH ST. PAUL UTILITIES)
 2" PVC RISER AND WEATHERHEAD
 EXTEND INTO SERVICE CABINET:
 2" PVC
 3-1/C 2

OAKDALE, WASHINGTON COUNTY

BY	DATE	REVISIONS	SYSTEM ID: 1735675	T.E.	MATCH LINES LAYOUT AND NOTES	S.A.P. NO.	DRAWN BY:GDS	CKD BY:GBB	DATE:05-03-18
SJK	1/20/23	AS-BUILT PLAN SP 6227-83	METER ADDRESS: 21439 GENEVA AVE		REVISE SIGNAL SYSTEM H	CERTIFIED BY _____	LIC. NO. 19863	DATE: 06-06-18	
			OLD SYSTEM ID: 21439		T.H. 120 AT C.S.A.H. 14 (34TH ST. N.)	STATE PROJ.NO. 6227-83 (T.H.120)	SHEET NO. 60 OF 89 SHEETS		
					OAKDALE, WASHINGTON COUNTY				

CONTROLLER CABINET

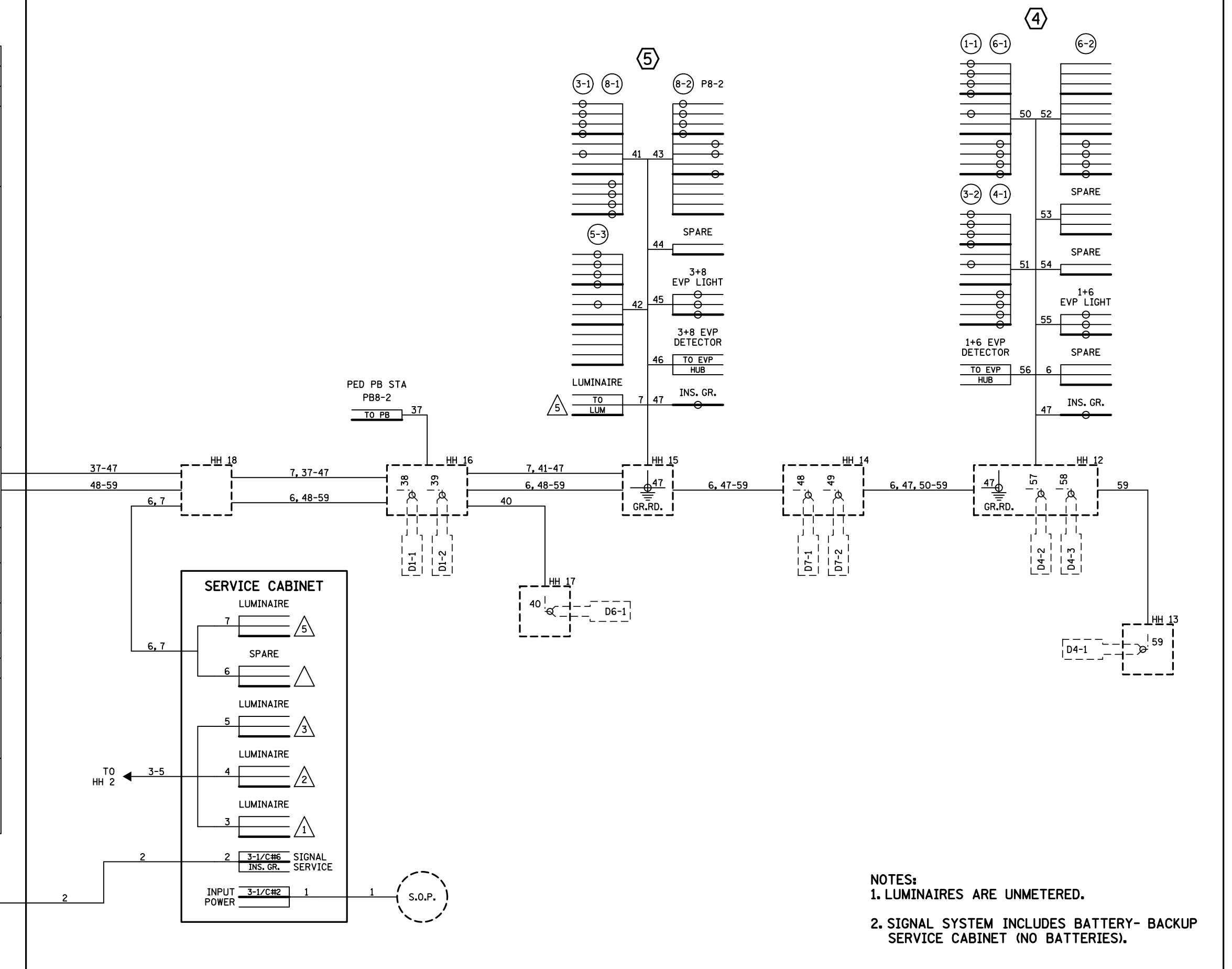
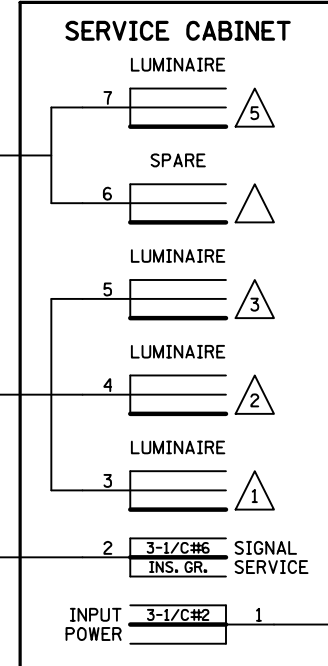
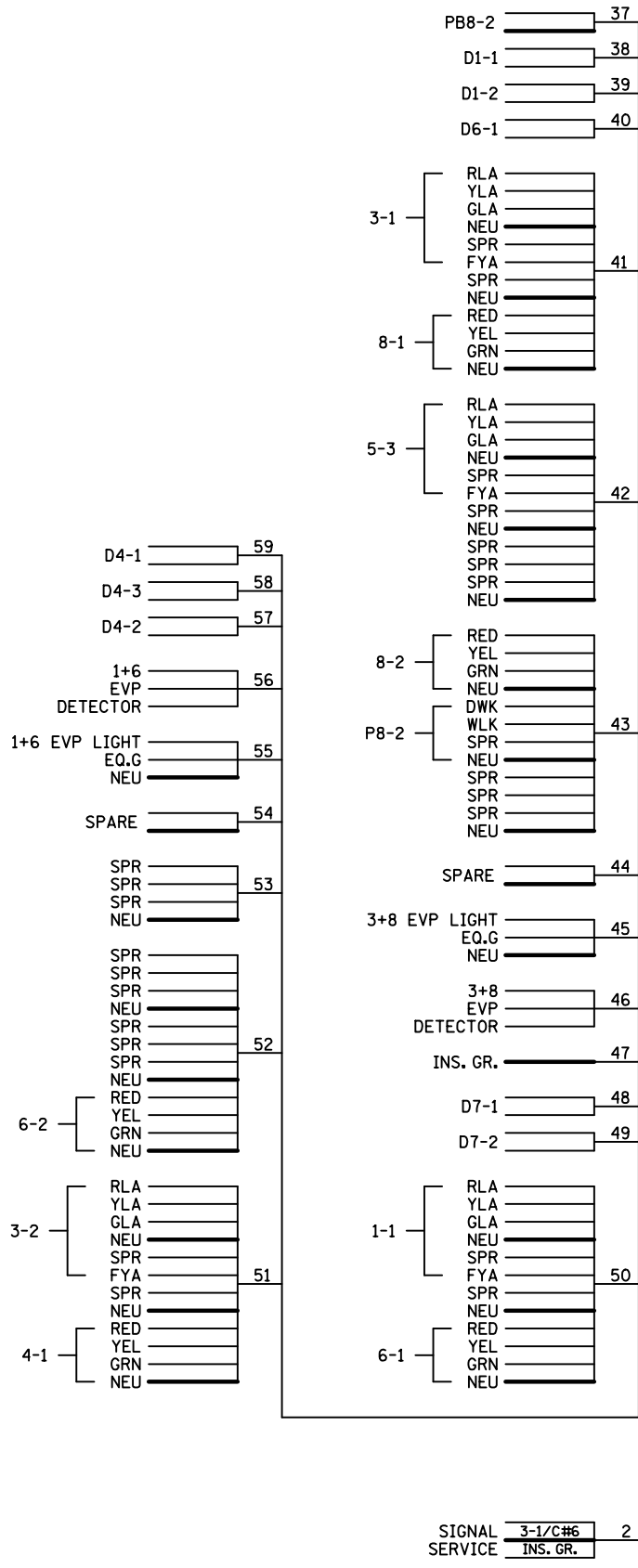


DISTRICT #: Metro
 IPLOT NAME: T1735675.sgl
 PATH & FILENAME: Projects\DM_POS\20\0000\Traffic\Signal\5.7.4_14\34TH ST N-1735675\T1735675.sgl.dgn
 PLOTTED/REVISED: 20-JAN-2023

BY	DATE	REVISIONS	SYSTEM ID: 1735675	T.E.	FIELD WIRING DIAGRAM (1 OF 2)	S.A.P. NO.	DRAWN BY:GDS	CKD BY:GBB	DATE:05-03-18
SJK	1/20/23	AS-BUILT PLAN SP 6227-83	METER ADDRESS: 21439 GENEVA AVE		REVISE SIGNAL SYSTEM H	CERTIFIED BY _____			LIC. NO. 19863 DATE: 06-06-18
			OLD SYSTEM ID: 21439		T.H. 120 AT C.S.A.H. 14 (34TH ST. N.)	STATE PROJ.NO. 6227-83 (T.H.120)		SHEET NO. 61 OF 89 SHEETS	
					IN MAPLEWOOD, RAMSEY COUNTY AND OAKDALE, WASHINGTON COUNTY				

DISTRICT #: Metro
 PLOT NAME: T1735675.sgl
 PATH & FILENAME: Projects\DM_POS\20\0000\Traffic\Signal\5.7.4_(4) 34TH ST N-1735675\T1735675.sgl.dgn
 PLOTTED/REVISED: 20-JAN-2023

CONTROLLER CABINET



NOTES:

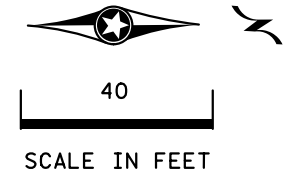
- LUMINAIRES ARE UNMETERED.
- SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).

BY	DATE	REVISIONS	SYSTEM ID: 1735675	T.E.	FIELD WIRING DIAGRAM (2 OF 2)	S.A.P. NO.	DRAWN BY:GDS	CKD BY:GDB	DATE:05-03-18
SJK	1/20/23	AS-BUILT PLAN SP 6227-83	METER ADDRESS: 21439 GENEVA AVE		REVISE SIGNAL SYSTEM H	CERTIFIED BY _____			LIC. NO. 19863 DATE: 06-06-18
			OLD SYSTEM ID: 21439		T.H. 120 AT C.S.A.H. 14 (34TH ST. N.)	STATE PROJ.NO. 6227-83 (T.H.120)		SHEET NO. 62 OF 89 SHEETS	
					IN MAPLEWOOD, RAMSEY COUNTY AND OAKDALE, WASHINGTON COUNTY				

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1, D5-1	2-6x6	20 & 50
D1-2, D5-2	2-6x6	5 & 35
D2-1, D2-2	6x6	250
D3-1, D7-1	2-6x6	20 & 50
D3-2, D7-2	2-6x6	5 & 35
D4-1	6x6	120
D4-2, D4-3	2-6x6	5 & 20
D6-1	6x6	250
D8-1, D8-2	6x6	460
D8-3, D8-4	6x6	220
D8-5, D8-6	2-6x6	5 & 20

-ALL LOOP DETECTORS ARE PVC
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

EAST METRO PUBLIC SAFETY TRAINING CENTER



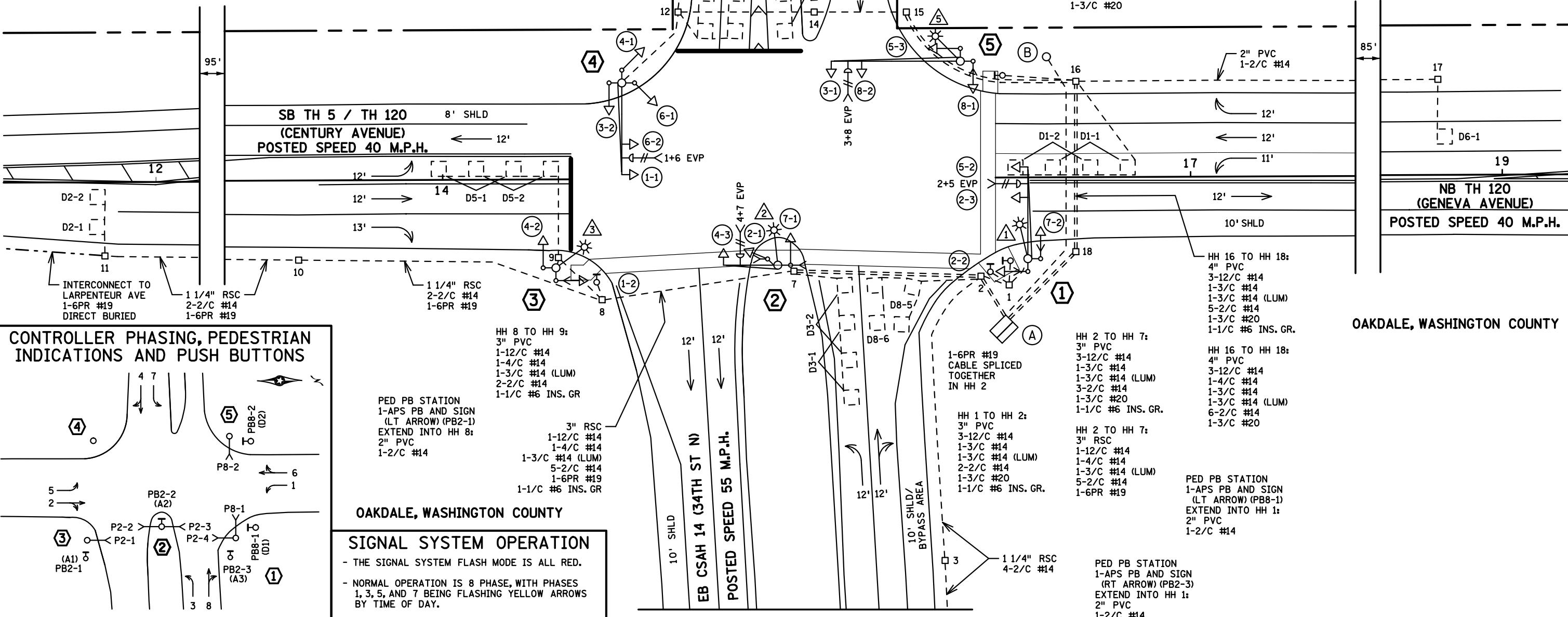
SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2, 2-3	○	○	○	○
3-1, 3-2	←	←	←	←
4-1, 4-2, 4-3	○	○	○	○
5-2, 5-3	←	←	←	←
6-1, 6-2	○	○	○	○
7-1, 7-2	←	←	←	←
8-1, 8-2	○	○	○	○

-ALL SIGNAL INDICATIONS ARE 12" LED
-ALL SIGNAL HEADS ARE BLACK POLYCARBONITE WITH BACKGROUND SHIELDS
-FYA DENOTES FLASHING YELLOW ARROW

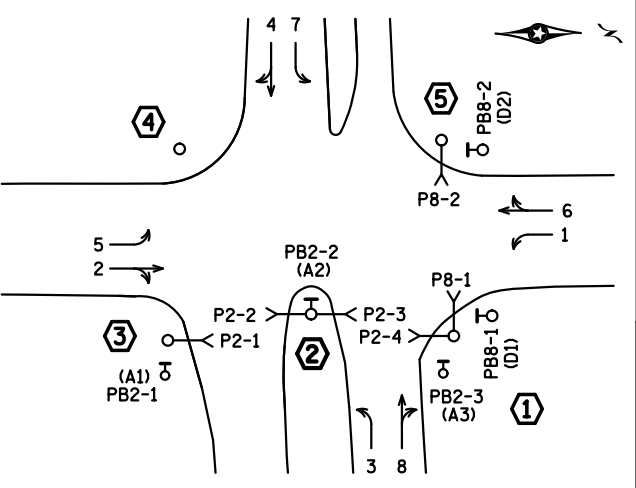
PLOTTED/REVISED: 2/25/2016

MAPLEWOOD, RAMSEY COUNTY

MAPLEWOOD, RAMSEY COUNTY



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 1, 3, 5, AND 7 BEING FLASHING YELLOW ARROWS BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

BY	DATE	REVISIONS
GDS	07-25-13	AS BUILT OF SP 6227-80
EJA	01-14-16	HWY NAME CHANGE TH 5 NOW CSAH 14

SYSTEM ID: 21439	T.E.
METER ADDRESS: 21439 GENEVA AVE	
MASTER ID:	T.E.

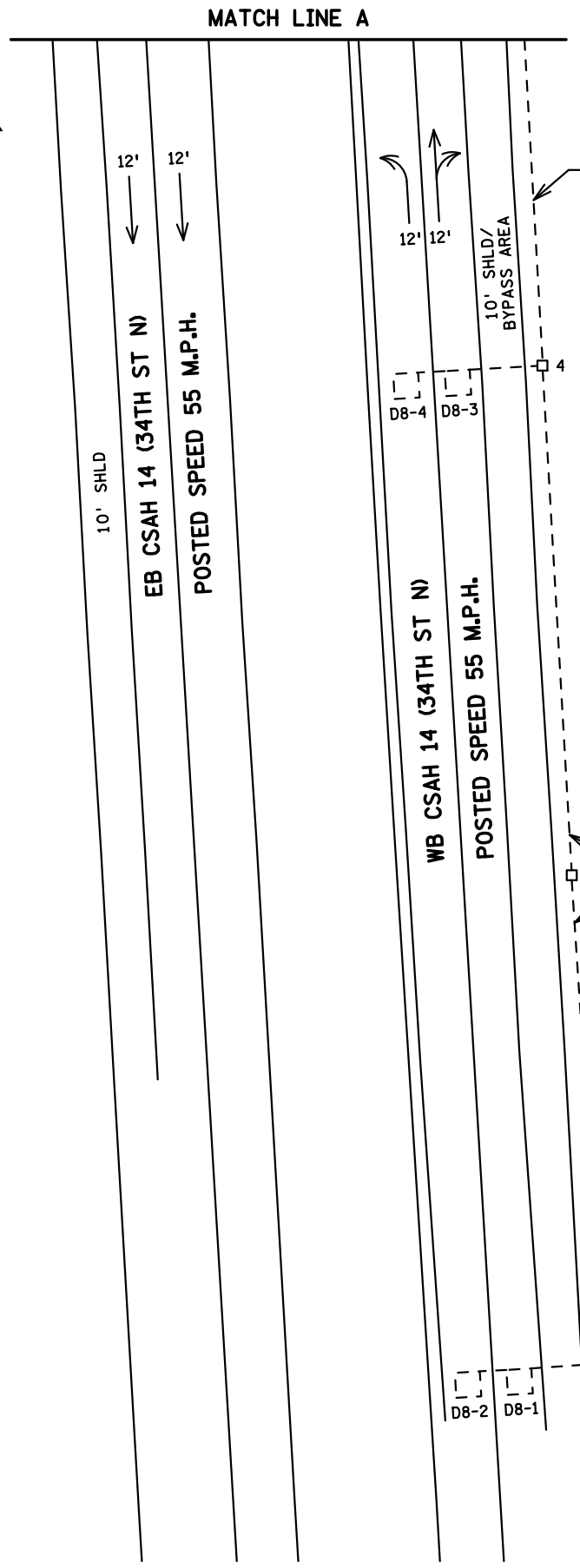
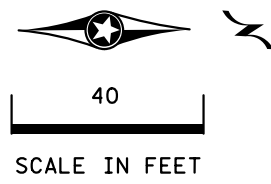
INTERSECTION LAYOUT
T.H. 120 AT C.S.A.H. 14 (34TH ST. N.)
IN MAPLEWOOD, RAMSEY COUNTY &
OAKDALE, WASHINGTON COUNTY

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H.120)	SHEET NO. 1 OF 4 SHEETS	

DISTRICT #: METRO
IPLOT NAME: layout
PATH & FILENAME: IP_PWP-d1515143YT21439_sgl.dgn

PLOTTED/REVISED: 2/25/2016

DISTRICT #: METRO
 IPLOT NAME: ML & notes
 PATH & FILENAME: IP_PWP-d\1515143\T21439_sgl.dgn



- 4** PA100 POLE FOUNDATION
 TYPE PA100-A-35
 2-WAY ANGLE MOUNT SIGNALS OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
 3-ANGLE MOUNT SIGNALS AT 90 DEG, 180 DEG AND 270 DEG
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1+6)
 2-R9-3 SIGNS (NO PEDS) FACING POLES 3 AND 5
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
 1-TYPE D SIGN
 3" PVC TO HH 12:
 3-12/C #14
 1-4/C #14
 2-3/C #14
 1-2/C #14
 1-3/C #20
 1-1/C #6 INS. GR.

- 3** PA85 POLE FOUNDATION
 TYPE PA85-A-D40-9 (DAVIT AT 350 DEG)
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ANGLE MOUNT C. D. PED HEAD AT 90 DEG
 LUMINAIRE-LED
 1-R9-3 SIGN (NO PEDS) FACING POLE 4
 3" PVC TO HH 9:
 1-12/C #14
 1-4/C #14
 1-3/C #14 (LUM)
 1-1/C #6 INS. GR.

- 2** PA85 POLE FOUNDATION
 TYPE PA85-A-20-D40-9 (DAVIT AT 90 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-ANGLE MOUNT SIGNALS AT 0 AND 180 DEG
 2-ANGLE MOUNT C. D. PED HEADS AT 0 AND 180 DEG
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 4+7)
 LUMINAIRE-LED
 1-APS PB AND SIGN (DBL ARROW) (PB2-2)
 1-R10-X12 SIGN - POLE MOUNTED AT 90 DEG
 2-TYPE D SIGNS
 3" PVC TO HH 7:
 3-12/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-2/C #14
 1-3/C #20
 1-1/C #6 INS. GR.

- 5** PA100 POLE FOUNDATION
 TYPE PA100-A-50-D30-9 (DAVIT AT 45 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ANGLE MOUNT C. D. PED HEAD AT 180 DEG
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 3+8)
 LUMINAIRE-LED
 1-R9-3 SIGN (NO PEDS) FACING POLE 4
 1-R10-X12 SIGN ADJACENT TO HEAD (3-1)
 2-TYPE D SIGNS
 3" PVC TO HH 15:
 3-12/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-2/C #14
 1-3/C #20
 1-1/C #6 INS. GR.

- 1** PA100 POLE FOUNDATION
 TYPE PA100-A-35-D40-9 (DAVIT AT 350 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG
 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 2+5)
 LUMINAIRE-LED
 1-R10-X12 SIGN ADJACENT TO HEAD (5-2)
 1-TYPE D SIGN
 3" PVC TO HH 1:
 3-12/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-3/C #20
 1-1/C #6 INS. GR.

- A** EQUIPMENT PAD
 BBU SERVICE CABINET (SSB)
 CONTROLLER AND CABINET
 4" PVC TO HH 18:
 3-12/C #14
 1-3/C #14
 5-2/C #14
 1-3/C #20
 1-1/C #6 INS. GR.
- 4" PVC TO HH 2:
 3-12/C #14
 1-3/C #14
 8-2/C #14
 1-3/C #20
 1-1/C #6 INS. GR.
- 4" PVC TO HH 18:
 3-12/C #14
 1-4/C #14
 1-3/C #14
 6-2/C #14
 1-3/C #20
- 4" PVC TO HH 2:
 4-12/C #14
 1-4/C #14
 1-3/C #14
 8-2/C #14
 1-3/C #20
 1-6PR #19

- 1-1* PVC STUBBED OUT (CAPPED BOTH ENDS)
 CONTROLLER CABINET TO SERVICE CABINET:
 2" PVC
 2-1/C #6
 1-1/C #6 INS. GR.
 SERVICE CABINET TO SOP:
 2" PVC
 3-1/C #2
 SERVICE CABINET TO HH 18:
 2" PVC
 2-3/C #14 (LUM)
 SERVICE CABINET TO HH 2:
 2" PVC
 3-3/C #14 (LUM)

- B** SOP-WOOD POLE
 (NORTH ST. PAUL UTILITIES)
 2" PVC RISER AND WEATHERHEAD
 EXTEND INTO SERVICE CABINET:
 2" PVC
 3-1/C #2

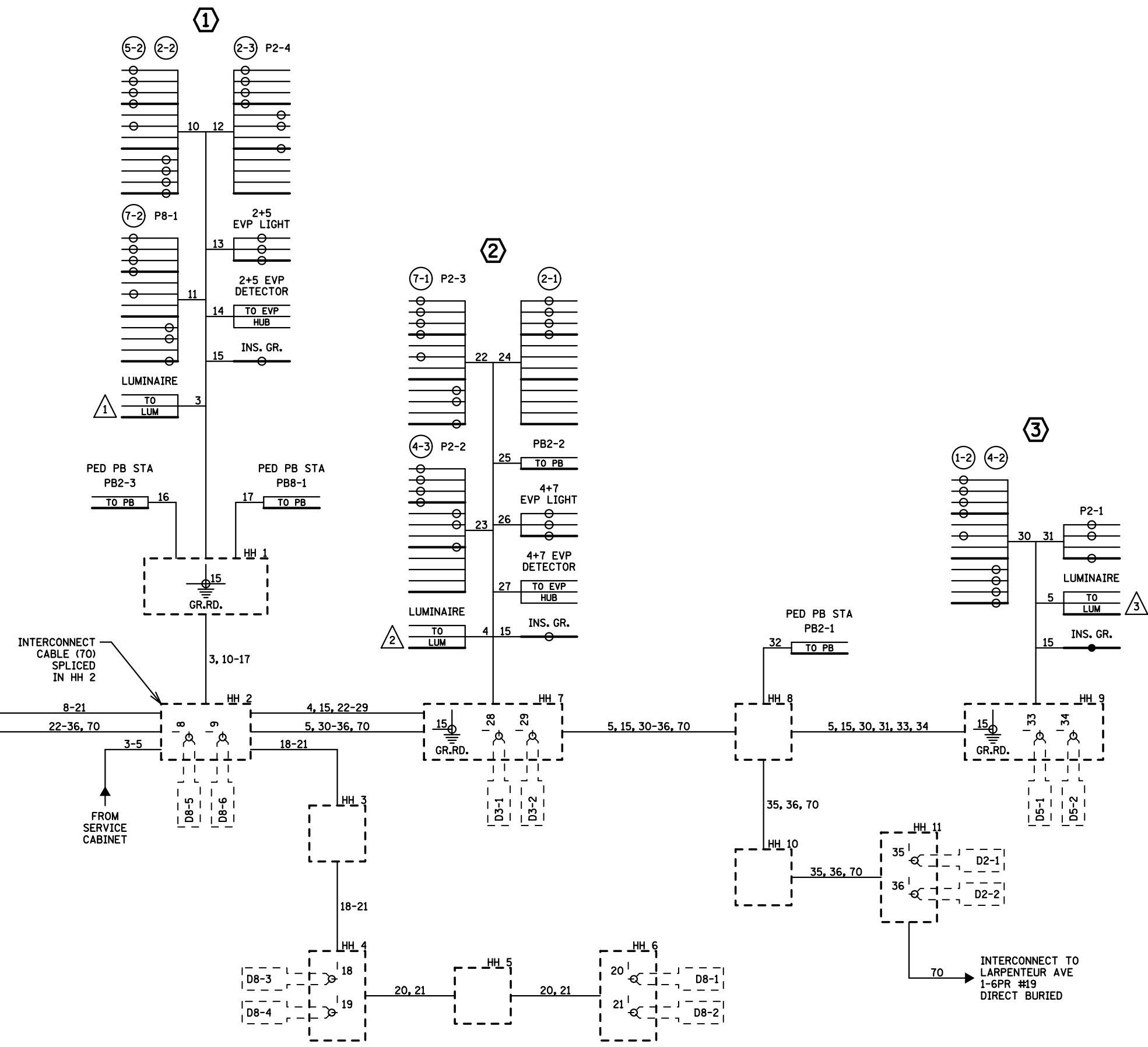
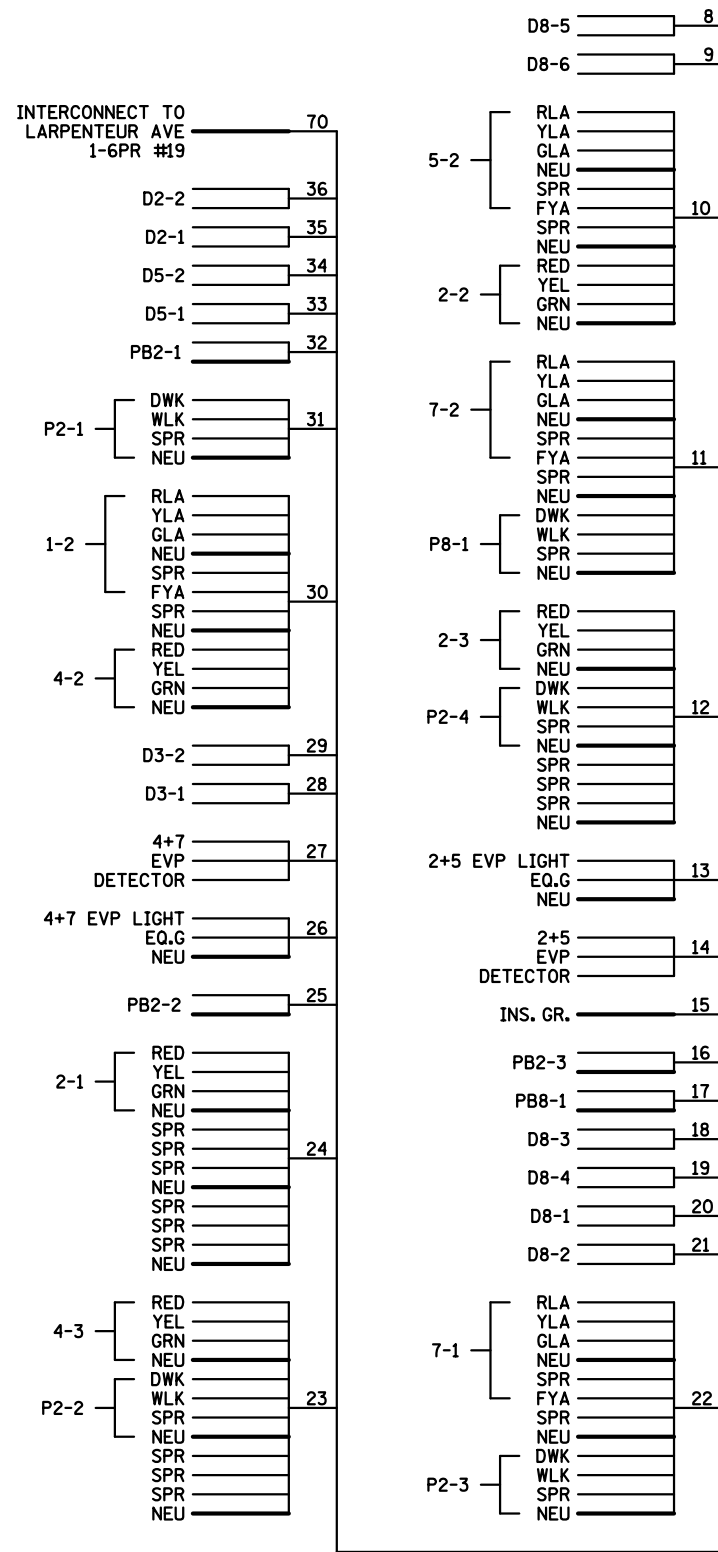
BY	DATE	REVISIONS
GDS	07-25-13	AS BUILT OF SP 6227-80
EJA	01-14-16	HWY NAME CHANGE TH 5 NOW CSAH 14

SYSTEM ID: 21439 T.E.
 METER ADDRESS: 21439 GENEVA AVE
 MASTER ID: T.E.

MATCH LINES LAYOUT AND NOTES
 T.H. 120 AT C.S.A.H. 14 (34TH ST. N.)
 IN MAPLEWOOD, RAMSEY COUNTY &
 OAKDALE, WASHINGTON COUNTY

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY _____	LICENCED PROFESSIONAL ENGINEER		LIC. NO. _____ DATE: _____
STATE PROJ. NO.	(T.H.120)	SHEET NO. 2 OF 4 SHEETS	

CONTROLLER CABINET



PLOTTED/REVISED: 2/25/2016

DISTRICT #: METRO
 IPLOT NAME: wiring 1
 PATH & FILENAME: IP_PWP-d\15143\T21439_sgl.dgn

BY	DATE	REVISIONS
GDS	07-25-13	AS BUILT OF SP 6227-80
EJA	01-14-16	HWY NAME CHANGE TH 5 NOW CSAH 14

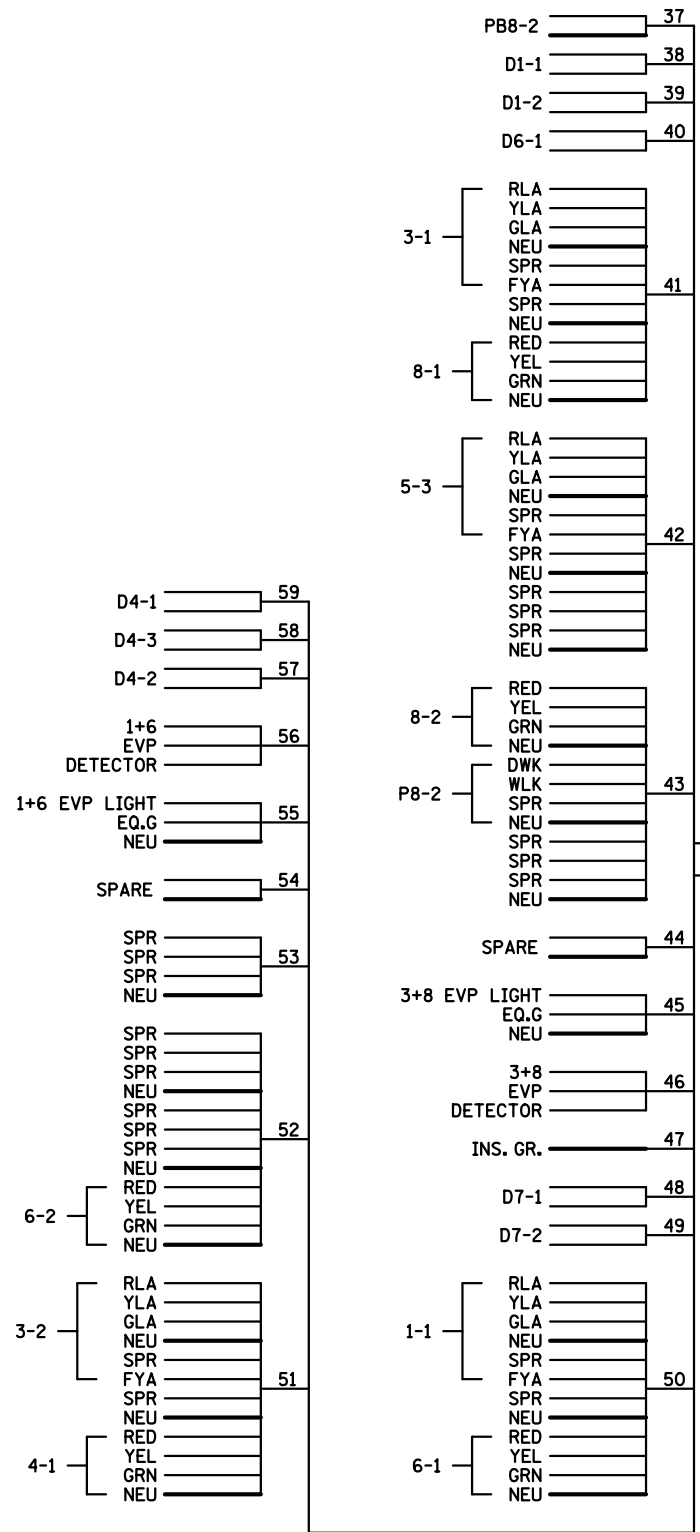
SYSTEM ID: 21439 T.E.
 METER ADDRESS: 21439 GENEVA AVE
 MASTER ID: T.E.

FIELD WIRING DIAGRAM (1 OF 2)
 T.H. 120 AT C.S.A.H. 14 (34TH ST. N.)
 IN MAPLEWOOD, RAMSEY COUNTY &
 OAKDALE, WASHINGTON COUNTY

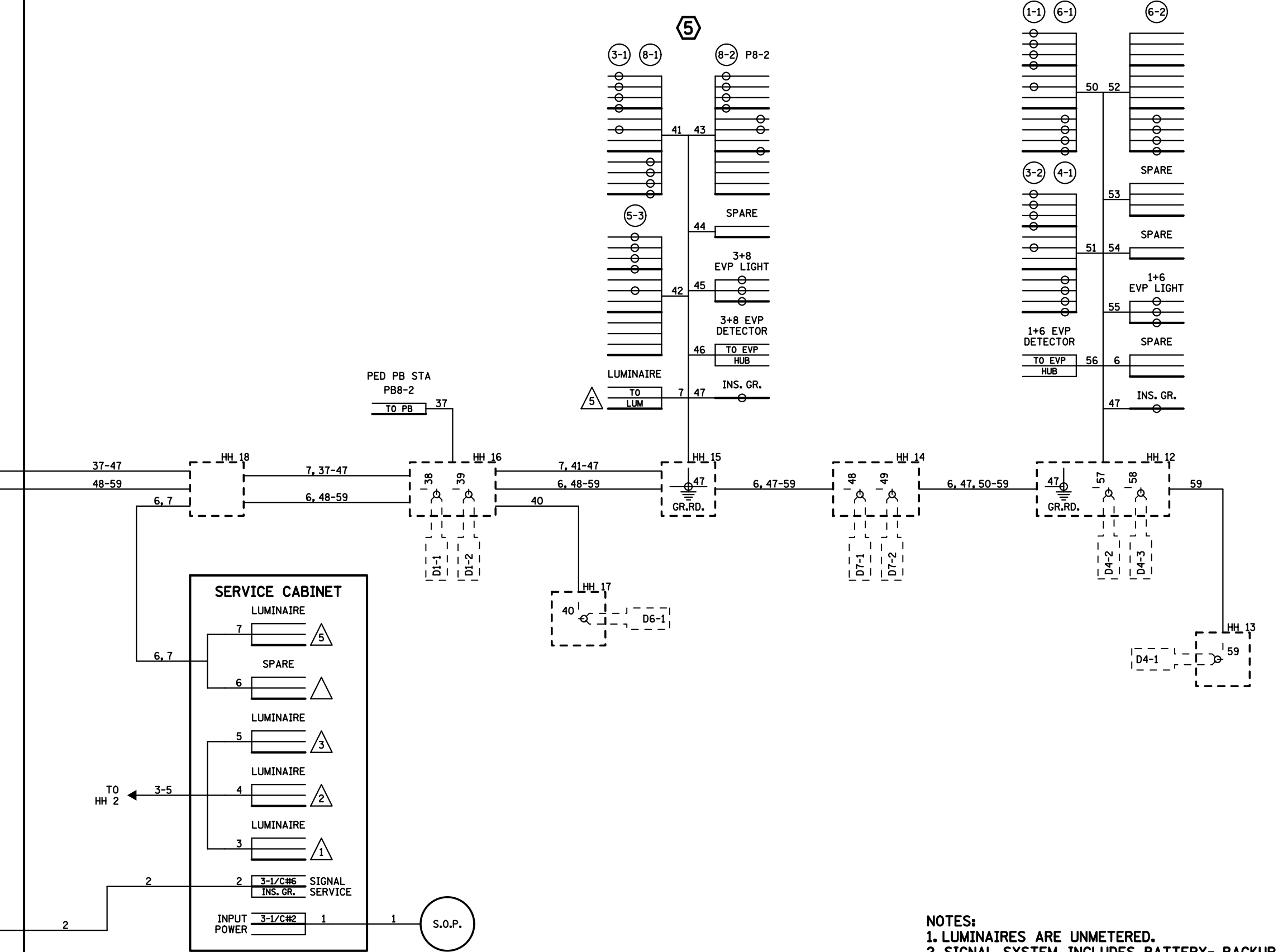
S.A.P. NO. _____ DRAWN BY: _____ CKD BY: _____ DATE: _____
 CERTIFIED BY _____ LIC. NO. _____ DATE: _____
 STATE PROJ. NO. (T.H. 120) SHEET NO. 3 OF 4 SHEETS

CONTROLLER CABINET

PLOTTED/REVISED: 2/25/2016



DISTRICT #: METRO
IPLOT NAME: wiring 2
PATH & FILENAME: IP_PWP-d1515143\T21439_sgl.dgn



NOTES:
 1. LUMINAIRES ARE UNMETERED.
 2. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).

BY	DATE	REVISIONS
GDS	07-25-13	AS BUILT OF SP 6227-80
EJA	01-14-16	HWY NAME CHANGE TH 5 NOW CSAH 14

SYSTEM ID: 21439	T.E.
METER ADDRESS: 21439 GENEVA AVE	
MASTER ID:	T.E.

FIELD WIRING DIAGRAM (2 OF 2)
 T.H. 120 AT C.S.A.H. 14 (34TH ST. N.)
 IN MAPLEWOOD, RAMSEY COUNTY &
 OAKDALE, WASHINGTON COUNTY

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H.120)	SHEET NO. 4 OF 4 SHEETS	