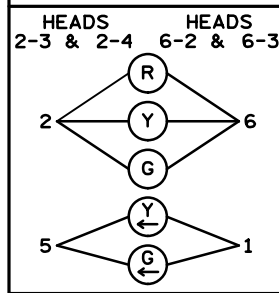


SIGNAL HEAD CHART

FACE	R	Y	G	Y	G
2-1, 2-2	○	○	○		
2-3, 2-4	○	○	○	◀	◀
4-1, 4-2, 4-3	○	○	○		
6-1	○	○	○		
6-2, 6-3	○	○	○	◀	◀
8-1, 8-2, 8-3	○	○	○		

-ALL SIGNAL INDICATIONS ARE 12" LED
 -ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS

SIGNAL HEAD PHASING

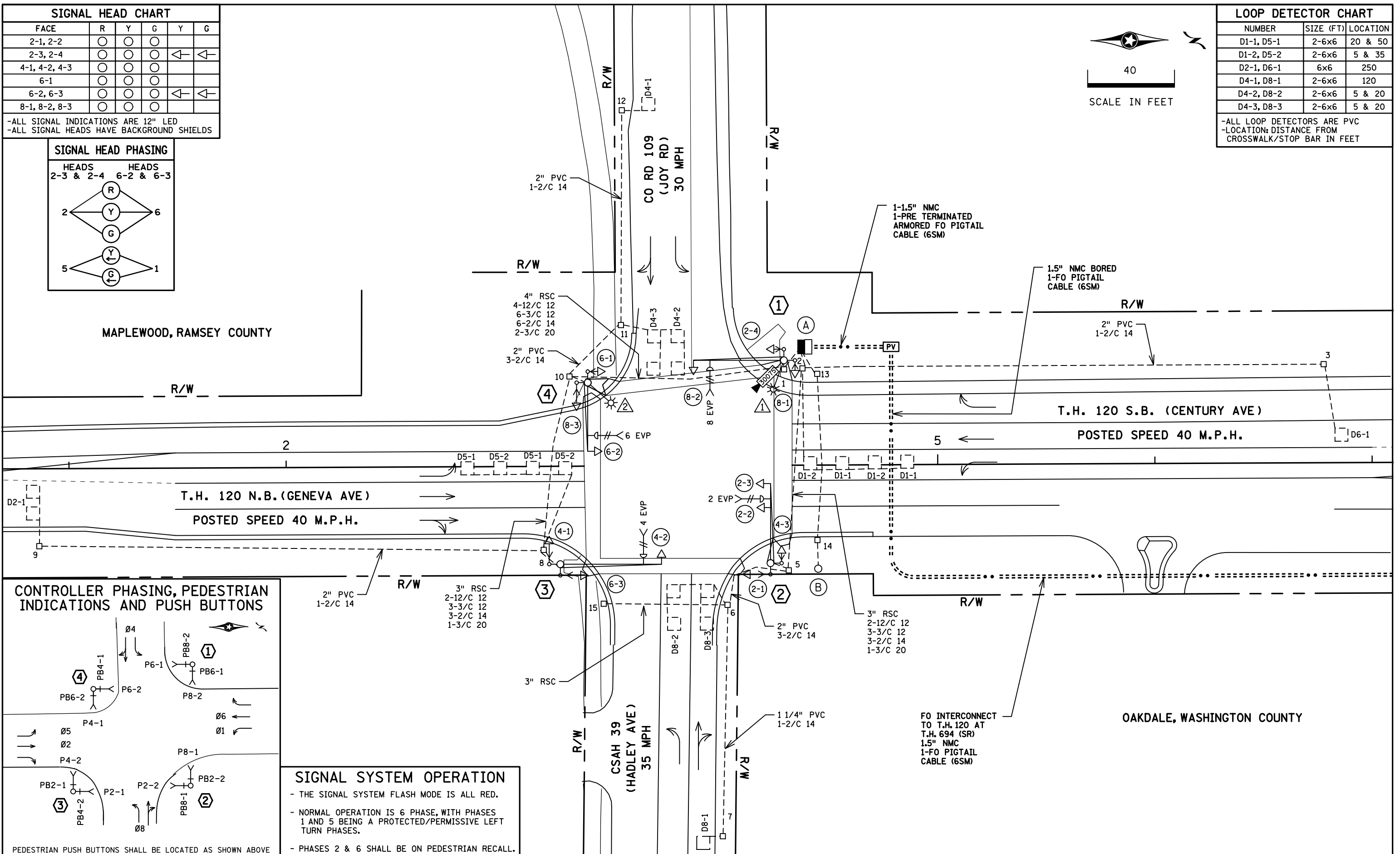
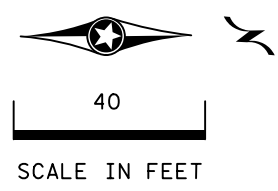


MAPLEWOOD, RAMSEY COUNTY

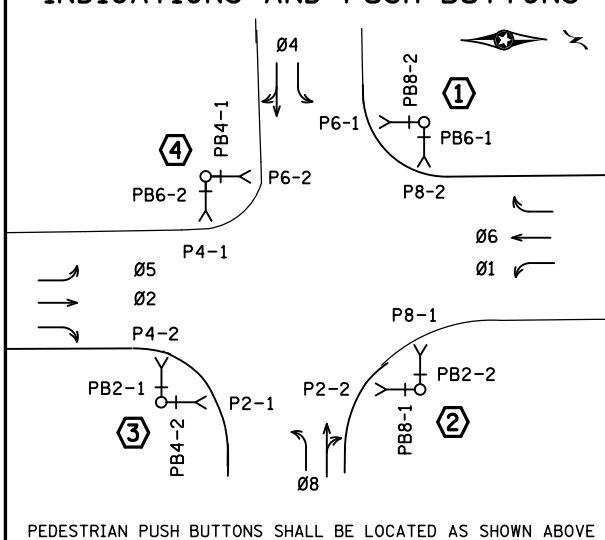
LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION
D1-1, D5-1	2-6x6	20 & 50
D1-2, D5-2	2-6x6	5 & 35
D2-1, D6-1	6x6	250
D4-1, D8-1	2-6x6	120
D4-2, D8-2	2-6x6	5 & 20
D4-3, D8-3	2-6x6	5 & 20

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



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



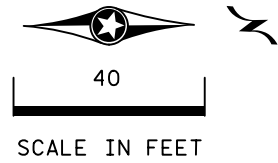
SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING A PROTECTED/PERMISSIVE LEFT TURN PHASES.
- PHASES 2 & 6 SHALL BE ON PEDESTRIAN RECALL.

BY: SJK	DATE: 1/30/23	REVISIONS: AS-BUILT PLAN SP 6227-83	SYSTEM ID: 1736388	T.E. 6053	METER ADDRESS: 5700 CENTURY AVE	OLD SYSTEM ID: 22606	INTERSECTION LAYOUT REVISE SIGNAL SYSTEM K T.H. 120 AT C.S.A.H. 39 (HADLEY AVE)/CO RD 109 (JOY RD) IN MAPLEWOOD, RAMSEY COUNTY AND OAKDALE, WASHINGTON COUNTY	S.A.P. NO.	CERTIFIED BY: _____ LICENSED PROFESSIONAL ENGINEER	LIC. NO. 19863	DATE: 06-06-18	DRAWN BY: GDS	CKD BY: GBB	DATE: 05-03-18
								STATE PROJ. NO. 6227-83 (T.H.120)	SHEET NO. 70 OF 89 SHEETS					

DISTRICT #: Metro
 IPLOT NAME: T1736388_sgl
 PATH & FILENAME: Projects\DM_POS\20\0000\Traffic\Signal\8.05_1\09\JOY RD & slash HADLEY AVE N-1736388\T1736388_sgl.dwg/REVISED: 30-JAN-2023

DISTRICT #: Metro
 PLOT NAME: T1736388_sgl
 PATH & FILENAME: Projects\DM罗斯\20\0000\Traffic\Signal\8.05_109\JOY RD & slash HADLEY AVE N-1736388\T1736388_sgl.dwg/REVISED: 30-JAN-2023



④ PA100 POLE FOUNDATION
 TYPE PA100-A-30-D40-9 (DAVIT AT 350 DEG)
 2-SWING AWAY HINGES
 1-ONE WAY SIGNAL OVERHEAD AT 0'
 2-TYPE 10B AT 90 AND 180 DEG
 2-CD PED HEADS
 1-EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 6)
 LUMINAIRE-250W H.P.S.
 2-SOLID STATE PBS AND SIGNS
 1-R10-12 SIGN ADJACENT TO (6-2)
 TYPE D SIGN
 3" RSC INTO HH 10:
 2-12/C 12
 3-3/C 12
 1-3/C 20

③ PA100 POLE FOUNDATION
 TYPE PA100-A-45
 1-ONE WAY SIGNAL OVERHEAD AT 0'
 2-TYPE 10B AT 90 AND 180 DEG
 2-CD PED HEADS
 1-EVP DETECTOR & CONFIRMATORY LIGHT (PHASE 4)
 2-SOLID STATE PBS AND SIGNS
 TYPE D SIGN
 3" RSC INTO HH 8:
 2-12/C 12
 3-3/C 12
 1-3/C 20

① PA100 POLE FOUNDATION
 TYPE PA100-A-40-D40-9 (DAVIT AT 270 DEG)
 1-X6-350/CAM 400 EXTENSION (MOUNTED AT 350 DEG) (INCLUDES LIGHTNING ROD)
 7/16" GROUND BRAID
 1-VIDEO CAMERA WITH MOUNT
 1-ONE WAY SIGNAL OVERHEAD AT 0'
 2-TYPE 10B AT 90 AND 180 DEG
 2-CD PED HEADS
 1-EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 8)
 LUMINAIRE-250W H.P.S.
 2-SOLID STATE PBS AND SIGNS
 TYPE D SIGN
 3" RSC INTO HH 1:
 2-2/C 12
 3-3/C 12
 1-3/C 20
 1-7/16" GROUND BRAID TO GROUND ROD
 1-COM CABLE (CAT 5E)

② PA100 POLE FOUNDATION
 TYPE PA100-A-35
 2-SWING AWAY HINGES
 ONE WAY SIGNAL OVERHEAD AT 0'
 2-TYPE 10B AT 90 AND 180 DEG
 1-EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2)
 2-SOLID STATE PBS AND SIGNS
 1-R10-12 SIGN ADJACENT TO (2-2)
 TYPE D SIGN
 3" RSC INTO HH 5:
 2-12/C 12
 2-3/C 12
 1-3/C 12
 1-3/C 20

Ⓐ EQUIPMENT PAD SERVICE CABINET
CONTROLLER AND CABINET
 4" RSC TO HH 2: 4" RSC TO HH 1:
 2-12/C 12 6-12/C 12
 3-3/C 12 9-3/C 12
 6-2/C 14 6-2/C 14
 1-3/C 20 3-3/C 20
 1-COM CABLE (CAT 5E)

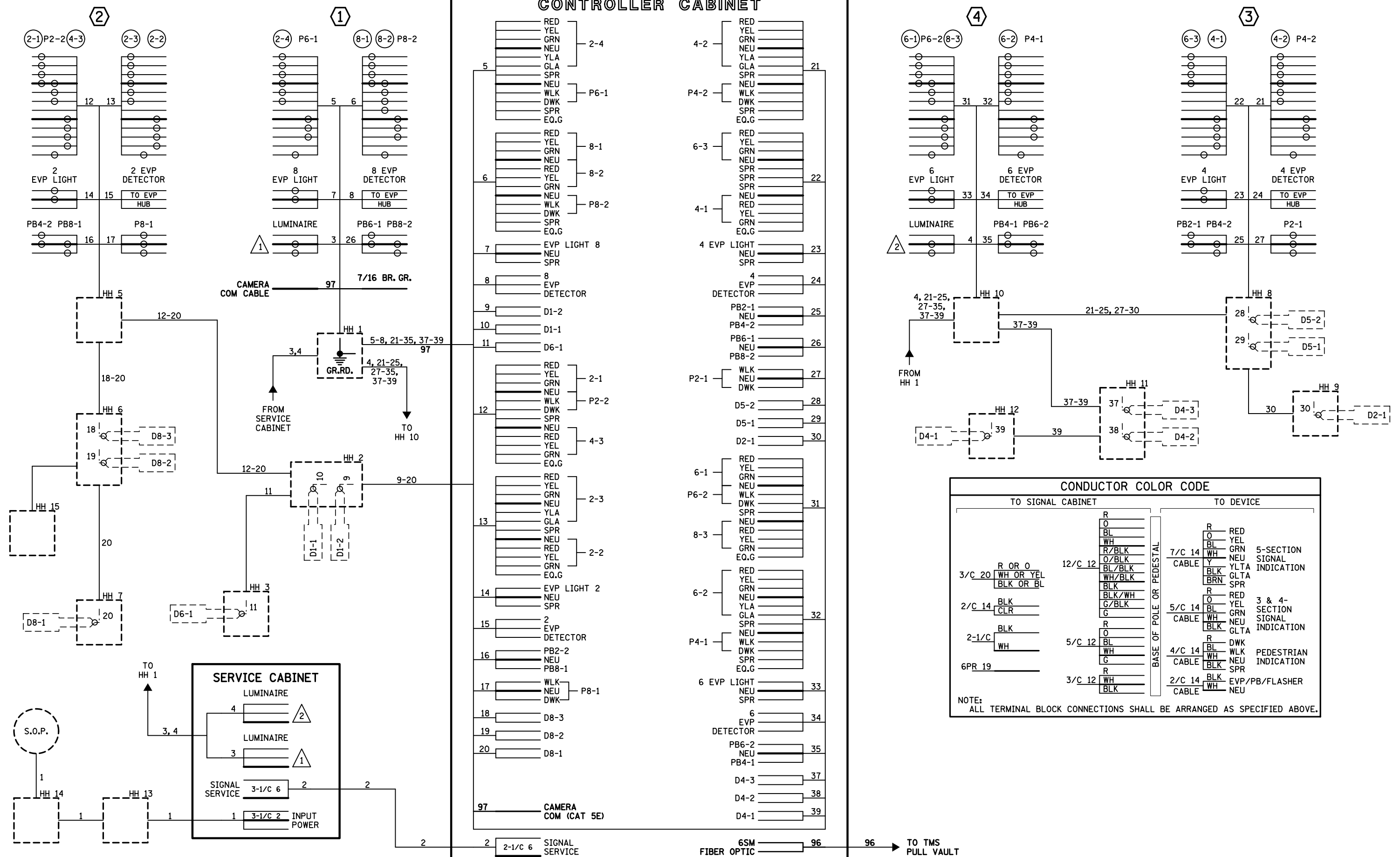
3" RSC STUBBED OUT (CAPPED BOTH ENDS)
CONTROLLER CABINET TO PULL VAULT:
 1-1.5" NMC (IN SPARE 3")
 1-PRE TERMINATED ARMORED FO PIGTAIL CABLE (6SM)
 2" RSC TO SERVICE CABINET:
 2-1/C 6
 1-1/C 6 INS. GR.
 SERVICE CABINET TO HH 1:
 2" RSC
 2-3/C 12
 SERVICE CABINET TO HH 13:
 2" RSC
 3-1/C 2

Ⓑ SOP - BY XCEL
 2" RSC RISER, WEATHERHEAD AND CONDUIT TO HH 13:
 3-1/C 2

BY	DATE	REVISIONS	SYSTEM ID: 1736388	T.E. 6053	S.A.P. NO.	DRAWN BY:GDS	CKD BY:GBB	DATE:05-03-18
SJK	1/30/23	AS-BUILT PLAN SP 6227-83	METER ADDRESS: 5700 CENTURY AVE		CERTIFIED BY _____	LIC. NO. 19863	DATE: 06-06-18	
			OLD SYSTEM ID: 22606		INTERSECTION NOTES REVISE SIGNAL SYSTEM K T.H. 120 AT C.S.A.H. 39 (HADLEY AVE)/CO RD 109 (JOY RD) IN MAPLEWOOD, RAMSEY COUNTY AND OAKDALE, WASHINGTON COUNTY			
					STATE PROJ.NO. 6227-83 (T.H.120) SHEET NO. 71 OF 89 SHEETS			

DISTRICT #: Metro
 PLOT NAME: T1736388_sgl
 PATH & FILENAME: Projects\DM_POS\20\0000\Traffic\Signals\8.05_109\JOY RD & SLASH HADLEY AVE N-T1736388-T1736388_sgl\REVISED: 30-JAN-2023

CONTROLLER CABINET



CONDUCTOR COLOR CODE			
TO SIGNAL CABINET		TO DEVICE	
3/C 20	R OR O WH OR YEL BLK OR BL	12/C 12	BASE OF POLE OR PEDESTAL
2/C 14	BLK CLR	5/C 14	CABLE
2-1/C	BLK WH	4/C 14	CABLE
6PR 19		3/C 12	CABLE
		R	RED
		O	YEL
		BL	GRN
		WH	NEU
		R/BLK	YLT
		O/BLK	GLTA
		BL/BLK	SPR
		WH/BLK	GLTA
		BLK	SPR
		BLK/WH	RED
		G/BLK	YEL
		G	GRN
		R	NEU
		O	GLTA
		BL	DWK
		WH	WLK
		G	NEU
		R	SPR
		BLK	EVP/PB/FLASHER
		WH	NEU

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

BY	DATE	REVISIONS	SYSTEM ID: 1736388	T.E. 6053	S.A.P. NO.	DRAWN BY: GDS	CKD BY: GBB	DATE: 05-03-18
SJK	1/30/23	AS-BUILT PLAN SP 6227-83	METER ADDRESS: 5700 CENTURY AVE		CERTIFIED BY _____			LIC. NO. 19863
			OLD SYSTEM ID: 22606		LICENSED PROFESSIONAL ENGINEER			DATE: 06-06-18
FIELD WIRING DIAGRAM REVISE SIGNAL SYSTEM K T.H. 120 AT C.S.A.H. 39 (HADLEY AVE)/CO RD 109 (JOY RD) IN MAPLEWOOD, RAMSEY COUNTY AND OAKDALE, WASHINGTON COUNTY					STATE PROJ. NO. 6227-83 (T.H.120) SHEET NO. 72 OF 89 SHEETS			

PVC LOOP DETECTOR CHART		
DESIGNATION	NO. OF LOOPS/SIZE	LOCATION
D1-1, D5-1	2-6X6	20 & 50
D1-2, D5-2	2-6X6	5 & 35
D2-1	2-6X6	250
D6-1	1-6X6	250
D4-1, D8-1	1-6X6	120
D4-2, D8-2	2-6X6	5 & 20
D4-3, D8-3	2-6X6	5 & 20

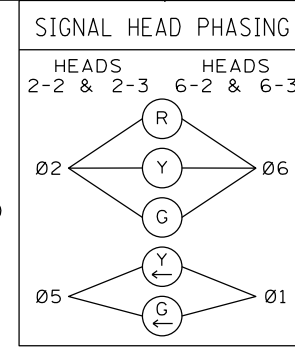
-LOCATION: DISTANCE FROM CROSSWALK/STOP LINE IN FEET

PLOTTED/REVISED: \$\$\$@DATE\$\$\$

(4)
S.B. 3+29, 46' LT
PA100 POLE FOUNDATION
TYPE PA100-A-30-D40-9 (DAVIT AT 350 DEG)
LUMINAIRE-250W HPS
2-SWING AWAY HINGES
1-ONE WAY SIGNAL OVERHEAD AT 0'
2-TYPE 10B AT 90 & 180 DEG
2-CD PED HEADS
1-EVP DETECTOR & CONFIRMATORY LIGHT (PHASE 6) AT 6'
2-SOLID STATE PBS AND SIGNS
1-R10-12 SIGN ADJACENT TO (6-2)
TYPE D SIGN
3" RSC INTO HH 10:
2-12/C #12
3-3/C #12
1-3/C #20

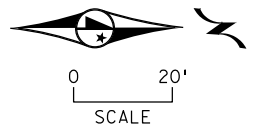
(A) S.B. 4+51, 35' LT
EQUIPMENT PAD
SERVICE CABINET
CONTROLLER AND CABINET
4" RSC TO HH 1
6-12/C #12
9-3/C #12
6-2/C #14
3-3/C #20
2-12/C #12
4" RSC TO HH 2
2-12/C #12
3-3/C #12
1-3/C #20
6-2/C #14
1-6PR #19
3" RSC STUBBED OUT (THREADED AND CAPPED BOTH ENDS)
2" RSC TO SERVICE CABINET
2-1/C #6
1-1/C #6 INS. GR.
SERVICE CABINET TO HH 1
2" RSC
2-3/C #12
SERVICE CABINET TO HH 13
2" RSC
3-1/C #2

(B) SOP - BY XCEL
2" RSC RISER, WEATHERHEAD AND CONDUIT TO HH 13
3-1/C #2

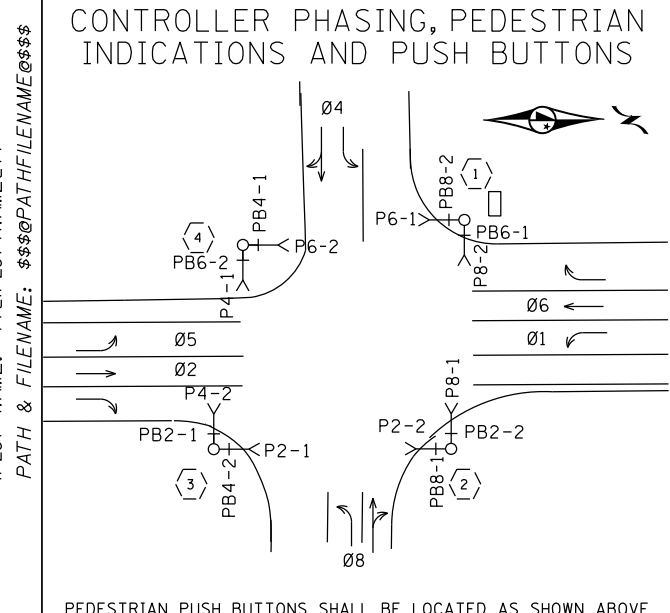
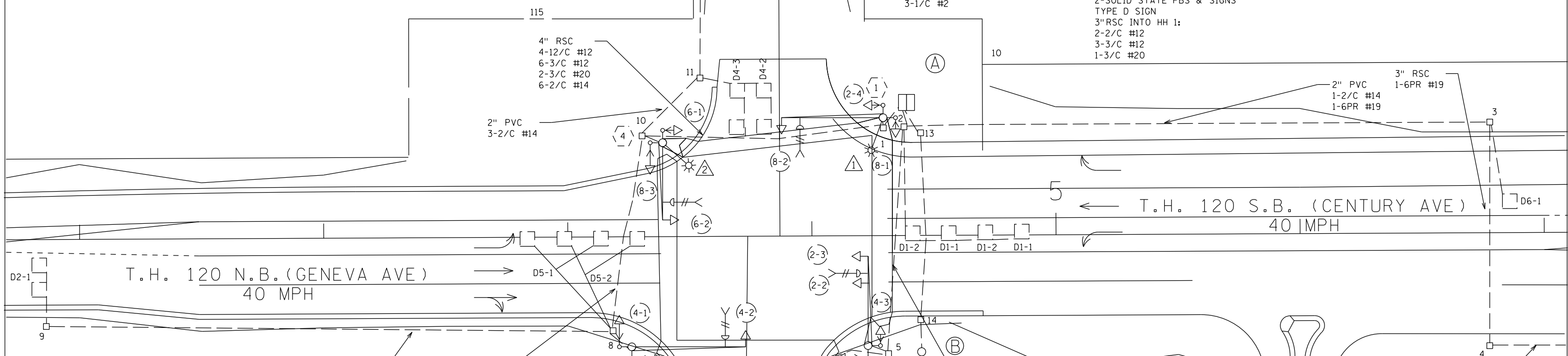


SIGNAL HEAD CHART						
FACE	R	Y	G	Y	G	
2-1,2-2	○	○	○			
2-3,2-4	○	○	○	←	←	
4-1, 4-2, 4-3	○	○	○			
6-1	○	○	○			
6-2, 6-3	○	○	○	←	←	
8-1, 8-2, 8-3	○	○	○			

-ALL SIGNAL INDICATIONS SHALL BE 12"
-ALL SIGNAL INDICATIONS SHALL BE LED
-ALL SIGNAL FACES SHALL HAVE A BACKGROUND SHIELD



MAPLEWOOD, RAMSEY COUNTY



(3)
N.B. 3+26, 45' RT
PA100 POLE FOUNDATION
TYPE PA100-A-45
1-ONE WAY SIGNAL OVERHEAD AT 0'
2-TYPE 10B AT 90 & 180 DEG
2-CD PED HEADS
1-EVP DETECTOR & CONFIRMATORY LIGHT (PHASE 4) AT 6'
2-SOLID STATE PBS & SIGNS
TYPE D SIGN
3" RSC INTO HH 8:
2-12/C #12
3-3/C #12
1-3/C #20

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.

(2)
N.B. 4+23, 45' RT
PA100 POLE FOUNDATION
TYPE PA100-A-35
2-SWING AWAY HINGES
ONE WAY SIGNAL OVERHEAD AT 0'
2-TYPE 10B AT 90 & 180 DEG
1-EVP DETECTOR & CONFIRMATORY LIGHT (PHASE 2) AT 6'
2-SOLID STATE PBS & SIGNS
1-R10-12 SIGN ADJACENT TO (2-2)
TYPE D SIGN
3" RSC INTO HH 5:
2-12/C #12
2-3/C #12
1-3/C #12
1-3/C #20

OAKDALE, WASHINGTON COUNTY

BY	DATE	REVISIONS
BAM	03-07-06	SP 6227-63 PHASES 2 & 8 PEDS ADDED
EJA	03-23-16	PLAN UPDATES

SYSTEM ID: 22606 T.E.
METER ADDRESS: 5700 CENTURY AVE
MASTER ID: T.E.

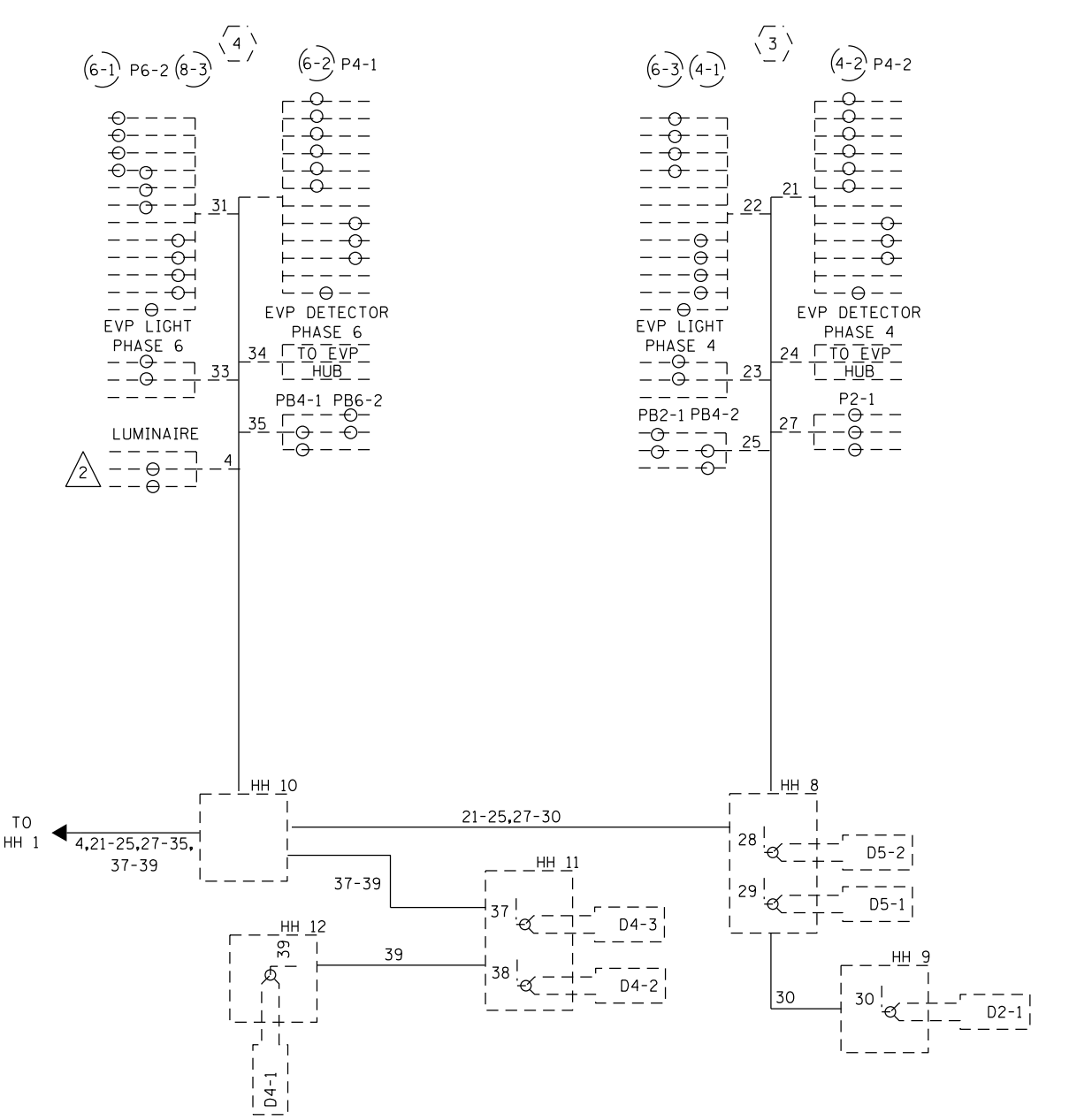
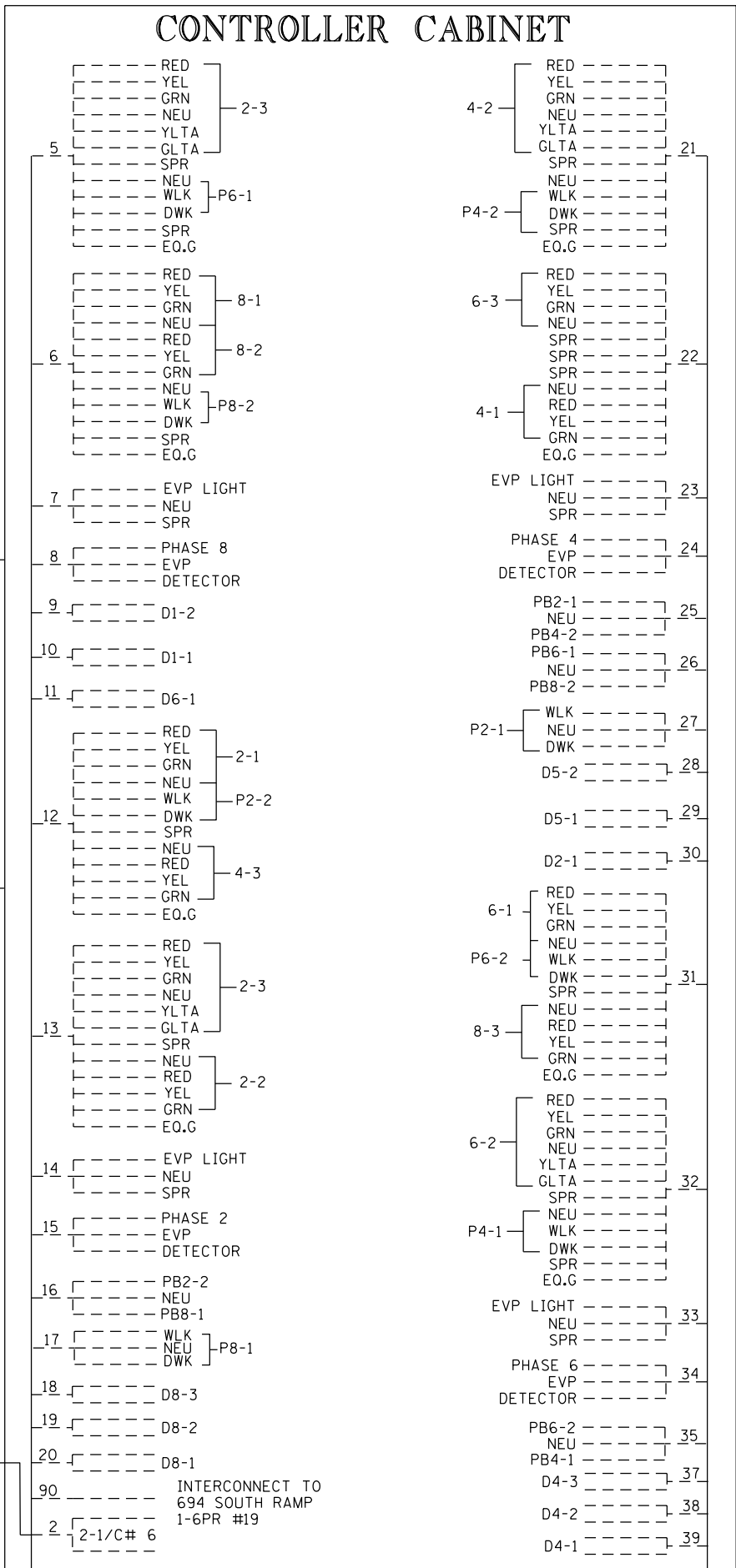
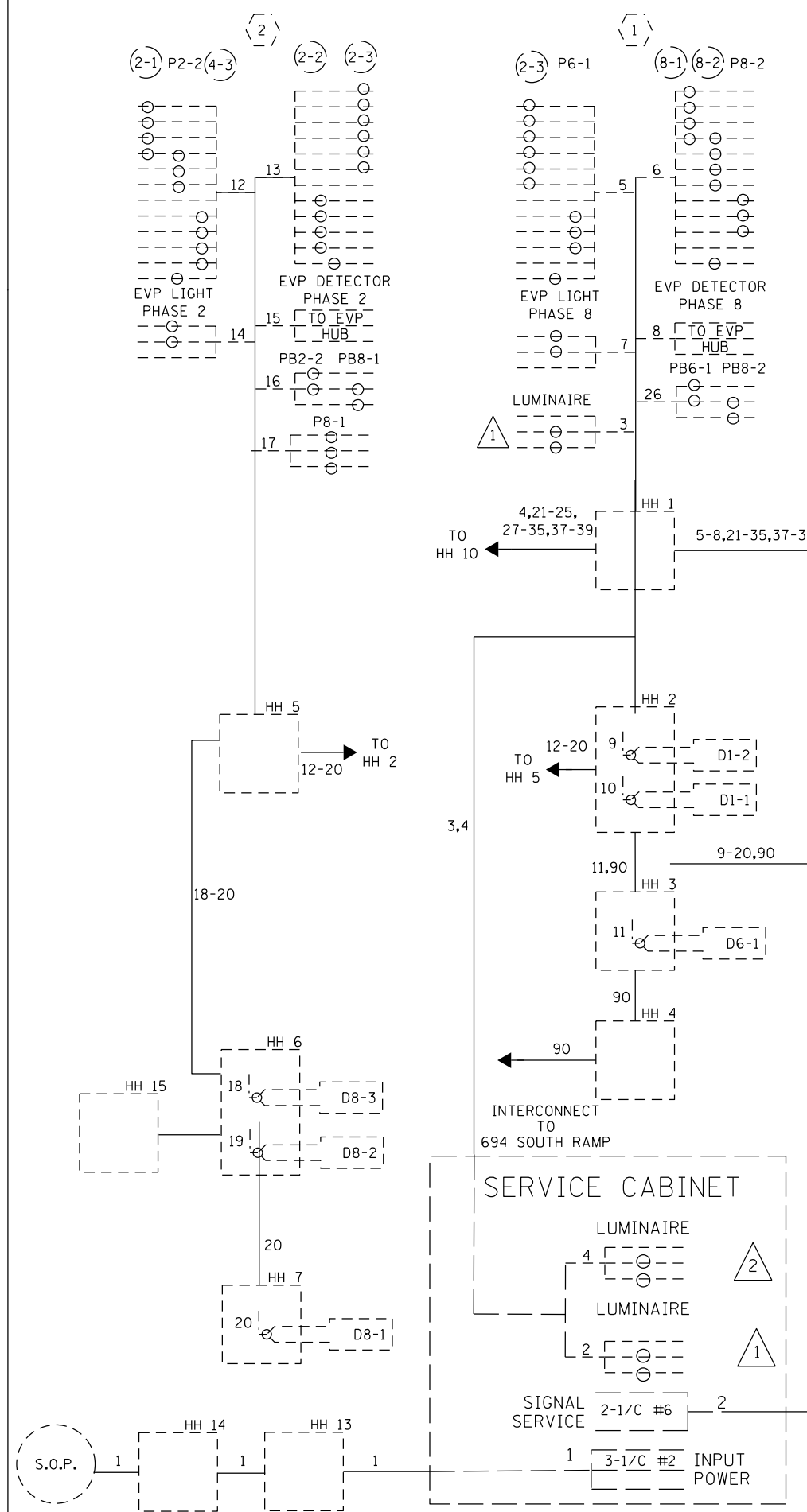
INTERSECTION LAYOUT
TH 120 AT CSAH 39 (HADLEY AVE)/CO RD 109 (JOY RD) MAPLEWOOD, RAMSEY CO. & OAKDALE, WASHINGTON CO.

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY: _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H.120) SHEET NO.	1 OF	3 SHEETS

DISTRICT #: @DISTRICT@
IPLT NAME: @@IPLT\$NAME@
PATH & FILENAME: \$\$\$@PATH\$FILENAME\$\$\$

PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

DISTRICT #: \$@DISTRICT@
PLOT NAME: \$\$\$@PLOT\$NAME@
PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$



CONDUCTOR COLOR CODE

TO SIGNAL CABINET		BASE OF POLE OR PEDESTAL	TO DEVICE			
3/C#20	R OR O WH OR YEL BLK OR BL		12/C#12	R O BL WH R/BLK O/BLK BL/BLK WH/BLK BLK BLK/WH G/BLK G	7/C#14 CABLE	R O BL WH Y BLK BRN
2/C#14	BLK CLR	5/C#12	R O BL WH G	5/C#14 CABLE	R O BL WH BLK	3 & 4- SECTION SIGNAL INDICATION
2-1/C	BLK WH	4/C#14 CABLE	R O BL WH G	4/C#14 CABLE	R O BL WH BLK	PEDESTRIAN SIGNAL INDICATION
6PR#19		3/C#12	R O WH BLK	2/C#14 CABLE	R O WH BLK	EVP/PB/FLASHER NEU

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

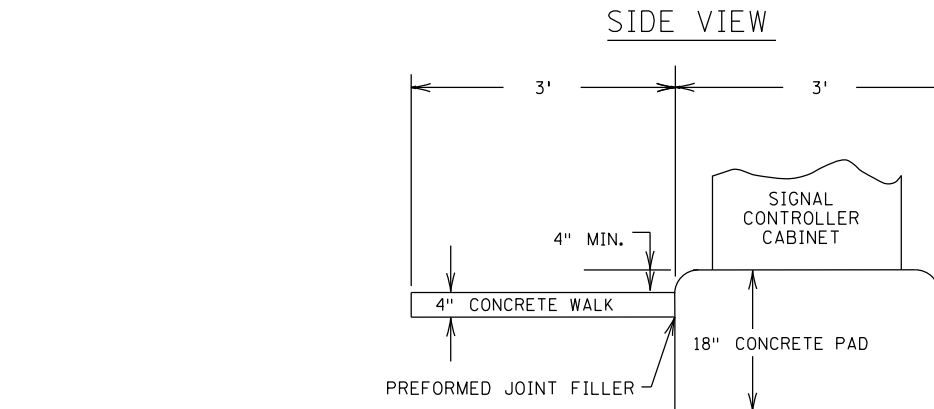
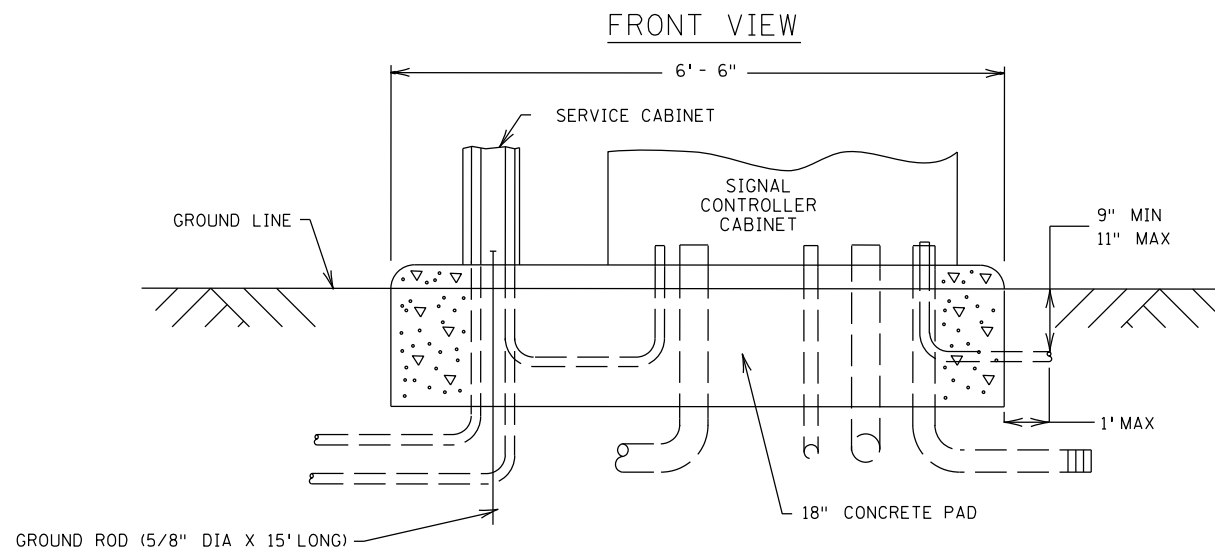
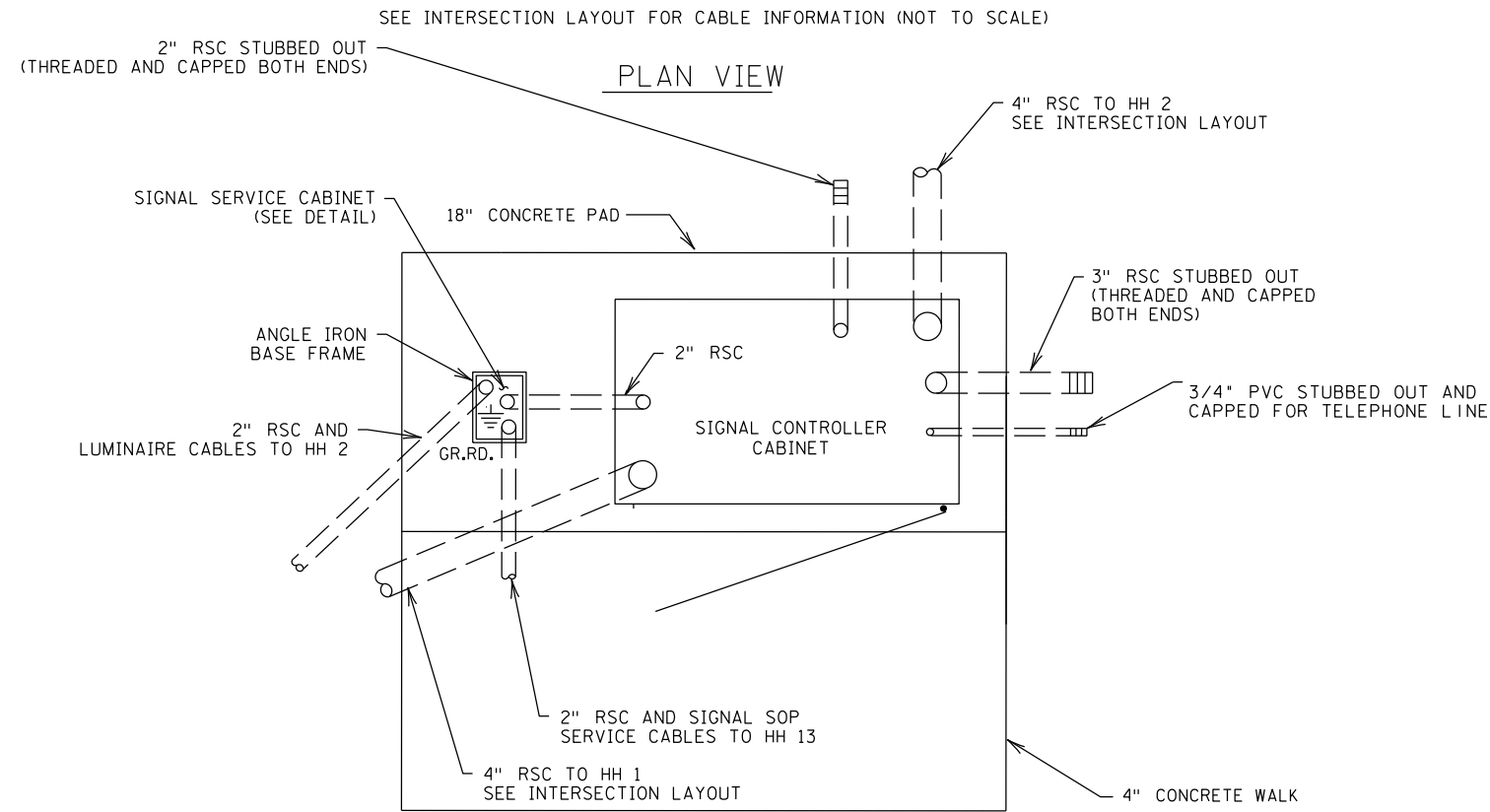
BY	DATE	REVISIONS
BAM	03-07-06	SP 6227-63 PHASES 2 & 8 PEDS ADDED
EJA	03-23-16	PLAN UPDATES

SYSTEM ID: 22606 T.E.
METER ADDRESS: 5700 CENTURY AVE
MASTER ID: T.E.

FIELD WIRING DIAGRAM
TH 120 AT CSAH 39 (HADLEY AVE)/CO RD 109
(JOY RD) MAPLEWOOD, RAMSEY CO.
& OAKDALE, WASHINGTON CO.

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY:	LIC. NO. _____		DATE: _____
STATE PROJ. NO.	(T.H.120)	SHEET NO.	2 OF 3 SHEETS

TYPICAL PAD WITH CONTROLLER CABINET AND SERVICE CABINET



PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

DISTRICT #: \$\$\$@DISTRICT@\$
 PLOT NAME: \$\$\$@PLOT\$NAME@\$\$
 PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$

BY	DATE	REVISIONS	SYSTEM ID: 22606	T.E.	EQUIPMENT PAD DETAIL	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
BAM	03-07-06	SP 6227-63 PHASES 2 & 8 PEDS ADDED	METER ADDRESS: 5700 CENTURY AVE		TH 120 AT CSAH 39 (HADLEY AVE)/CO RD 109	CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
EJA	03-23-16	PLAN UPDATES	MASTER ID:	T.E.	(JOY RD) MAPLEWOOD, RAMSEY CO. & OAKDALE, WASHINGTON CO.	STATE PROJ. NO.	(T.H.120)	SHEET NO.	3 OF 3 SHEETS