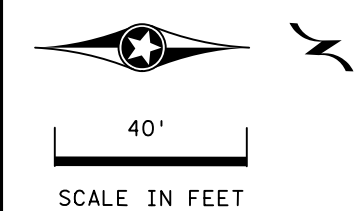


PLOTTED/REVISED: 9-MAY-2019

DISTRICT #: Metro
 IPLOT NAME: 721342L.sgl
 PATH & FILENAME: Projects\DM_R05\09A0000\Traffic\Signal\21342\21342a.sgl.dgn

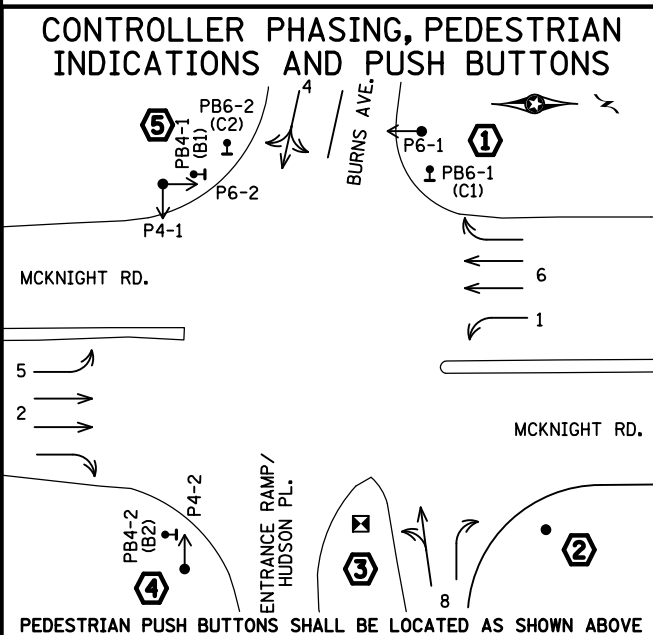
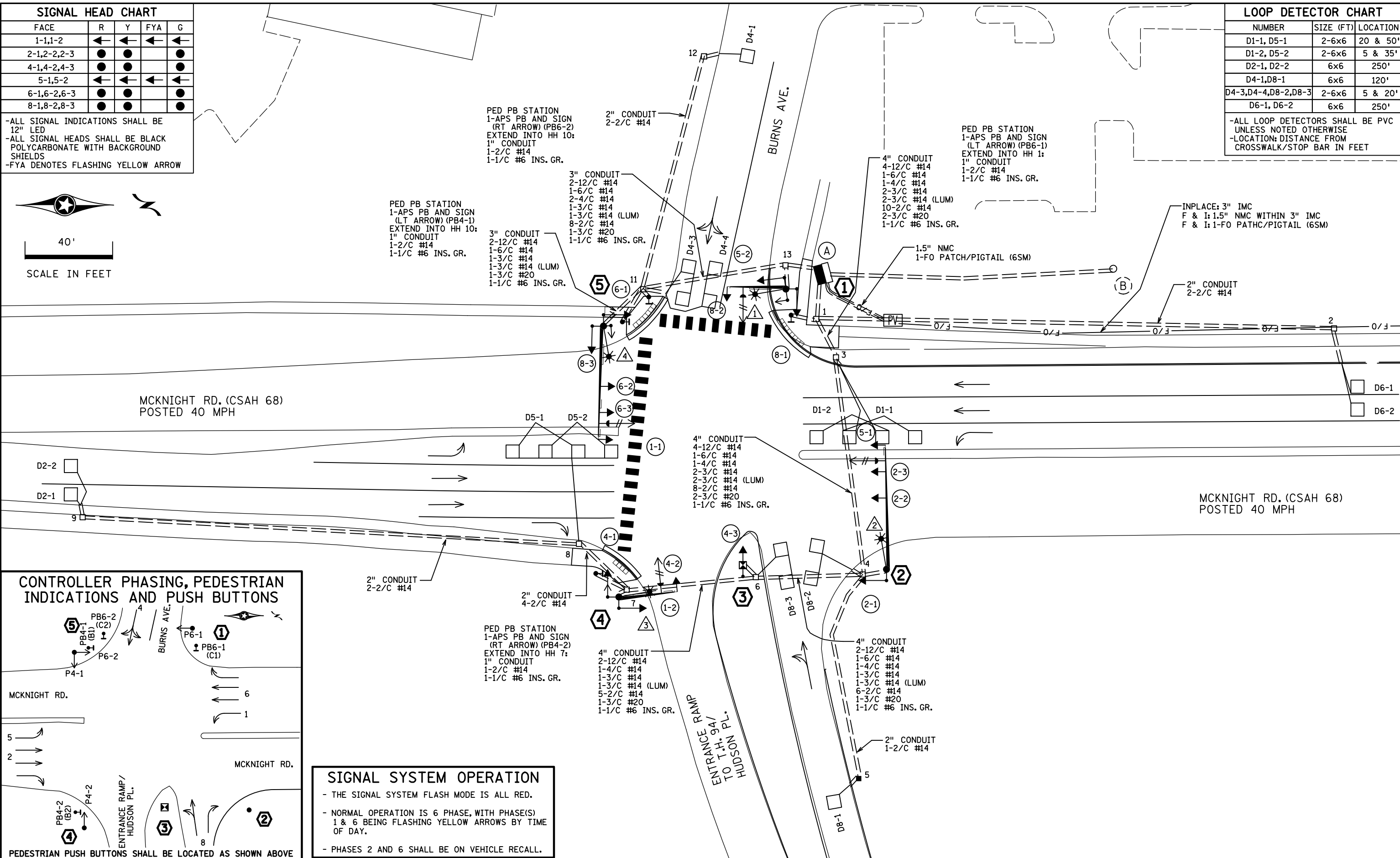
SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1,1-2	←	←	←	←
2-1,2-2,2-3	●	●	●	●
4-1,4-2,4-3	●	●	●	●
5-1,5-2	←	←	←	←
6-1,6-2,6-3	●	●	●	●
8-1,8-2,8-3	●	●	●	●

-ALL SIGNAL INDICATIONS SHALL BE 12" LED
 -ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONATE WITH BACKGROUND SHIELDS
 -FYA DENOTES FLASHING YELLOW ARROW



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'
D4-1, D8-1	6x6	120'
D4-3, D4-4, D8-2, D8-3	2-6x6	5 & 20'
D6-1, D6-2	6x6	250'

-ALL LOOP DETECTORS SHALL BE PVC UNLESS NOTED OTHERWISE
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



SIGNAL SYSTEM OPERATION

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

BY	DATE	REVISIONS	SYSTEM ID: 2017309	T.E. 6346	S.A.P. NO. 062-668-051, 164-216-020, 138-020-041	DRAWN BY: BAM	CKD BY: CDB	DATE: 7-29-15
JBA	11/14/18	AS BUILT CHANGES: REMOVE HH 8 RE-NUMBER HH 9 THRU 14	METER ADDRESS: 251 MCKNIGHT RD. N.		CERTIFIED BY _____	LIC. NO. 19863	DATE: 7-29-15	
JBA	11/14/18	REMOVE D4-2	MASTER ID: 21342	T.E.	INTERSECTION LAYOUT T.H. 94 SOUTH RAMP AT MCKNIGHT RD. N. (CSAH 68) IN MAPLEWOOD, RAMSEY COUNTY			
JBA	11/16/18	UPDATED REVISED TO OPERATIONS PLAN			STATE PROJ. NO. 6283-233 (T.H. 94) SHEET NO. 8 OF 28 SHEETS			
SJK	4/15/19	REVISED OPERATION PLAN						

DISTRICT #: Metro
 PLOT NAME: T21342N_sgl
 PATH & FILENAME: Projects\DM_R05\09A0000\Traffic\Signal\21342\21342a_sgl.dgn
 PLOTTED/REVISED: 9-MAY-2019

⑤

PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11' AND 23'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 2-ANGLE MOUNT C.D. PED HEAD AT 90 AND 270 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 1+6)
 LUMINAIRE-LED
 2-TYPE D SIGNS (D-4 & D-5)
 1-R10-X12 SIGN ADJACENT TO HEAD 1-1
 3" CONDUIT TO HH 11:
 2-12/C #14
 1-6/C #14
 2-4/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-3/C #20
 1-1/C #6 INS. GR.

④

PA85 POLE FOUNDATION
 TYPE PA85-A-25-D40-9 (DAVIT AT 350 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 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 (PHASE 4)
 LUMINAIRE-LED
 2-TYPE D SIGNS (D-1 & D-2)
 1-R9-3a (NO PED) FACING POLE 2
 3" CONDUIT TO HH 7:
 2-12/C #14
 1-4/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-3/C #20
 1-1/C #6 INS. GR.

③

PEDESTAL FOUNDATION
 13' PEDESTAL POLE PLUS BASE (14' TOTAL)
 TYPE 5A BRACKETING (ALL ALUMINUM COMPONENTS)
 2-R9-3a (NO PED) FACING POLE 2 AND 4
 3" CONDUIT TO HH 6:
 1-6/C #14
 1-1/C #6 INS. GR.

①

PA90 POLE FOUNDATION
 TYPE PA90-A-25-D40-9 (DAVIT AT 350 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 2-ANGLE MOUNT C.D. PED HEAD AT 90 AND 270 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 8)
 LUMINAIRE-LED
 1-TYPE D SIGN (D-1)
 1-R9-3a (NO PED) FACING POLE 2
 3" CONDUIT TO HH 12:
 2-12/C #14
 1-4/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-3/C #20
 1-1/C #6 INS. GR.

②

PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11' AND 23'
 1-ANGLE MOUNT SIGNAL AT 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 2+5)
 LUMINAIRE-LED
 2-R9-3a (NO PED) FACING POLE 1 AND 3
 1-R10-X12 SIGN ADJACENT TO HEAD 5-1
 3" CONDUIT TO HH 4:
 2-12/C #14
 1-3/C #14
 1-3/C #14 (LUM)
 1-3/C #20
 1-1/C #6 INS. GR.

Ⓐ

EQUIPMENT PAD	
SERVICE CABINET (SSB)	
CONTROLLER AND CABINET	
4" CONDUIT TO HH 12:	4" CONDUIT TO HH 1:
4-12/C #14	4-12/C #14
1-6/C #14	1-6/C #14
3-4/C #14	1-4/C #14
2-3/C #14	2-3/C #14
8-2/C #14	11-2/C #14
2-3/C #20	2-3/C #20
1-1/C #6 INS. GR.	1-1/C #6 INS. GR.

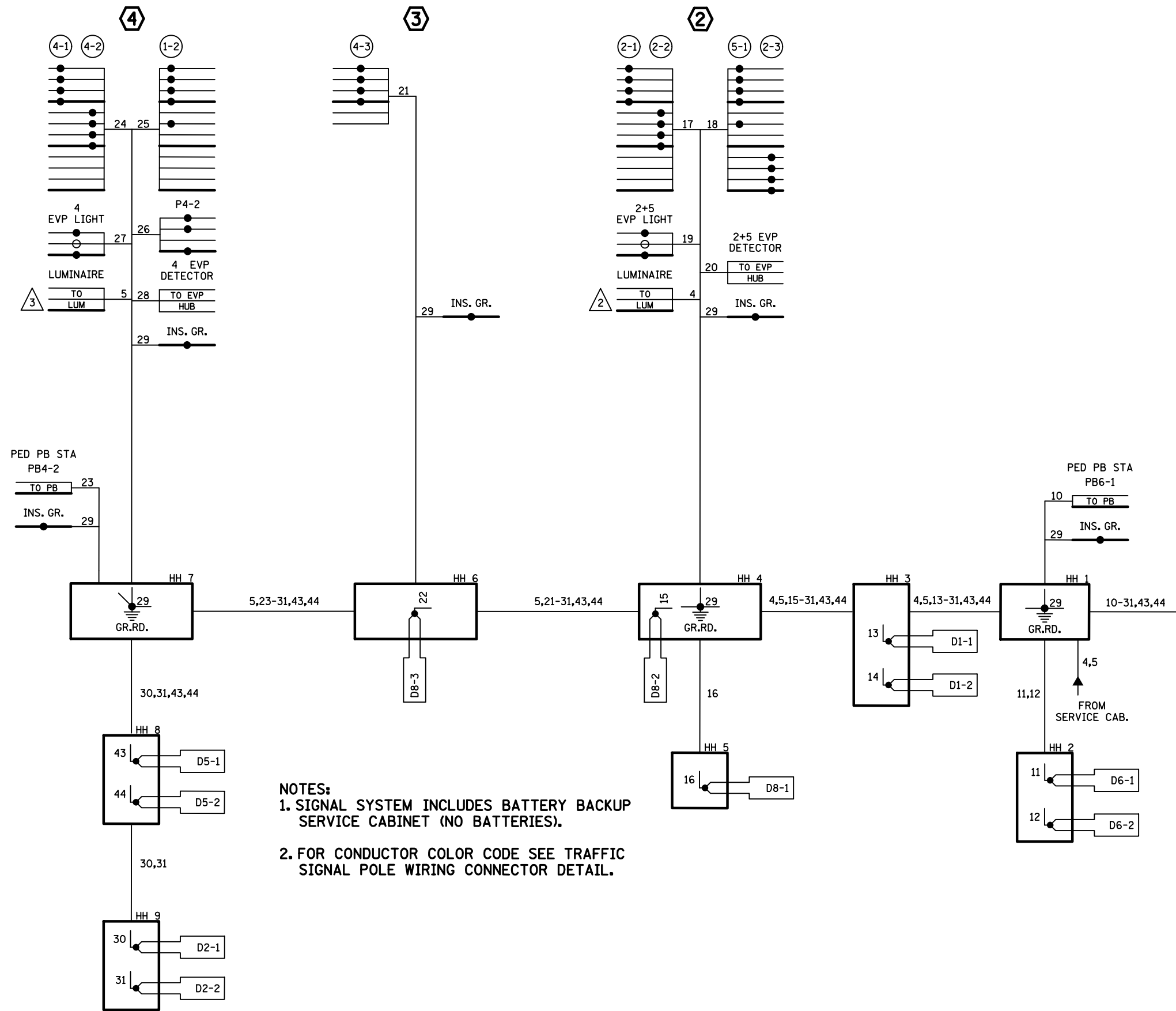
GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD
 2-2" AND 1-3" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)
 3/4" CONDUIT STUBBED OUT (FOR TELEPHONE LINE)
 1-1/2" CONDUIT TO TMS VAULT:
 1-FO PIGTAIL (6-SM)
 CONTROLLER CABINET TO SERVICE CABINET:
 2" CONDUIT
 2-1/C #6
 1-1/C #6 INS. GR.
 CONTROLLER CABINET TO SERVICE CABINET (COMMS):
 2" CONDUIT
 1-6PR #19
 SERVICE CABINET TO POLE MOUNTED TRANSFORMER:
 2" CONDUIT
 3-1/C #2
 SERVICE CABINET TO HH 12:
 2" CONDUIT
 4-3/C #14 (LUM)
 SERVICE CABINET TO EXTERNAL GR. RD.:
 1" CONDUIT
 1-1/C #6 INS. GR.
 (SEE EQUIPMENT PAD LAYOUT)
 HH 12 TO HH 1:
 2" CONDUIT
 2-3/C #14 (LUM)

Ⓑ

SOP-WOOD POLE BY XCEL ENERGY
 2" NMC RISER, WEATHERHEAD AND
 2" NMC CONDUIT TO SERVICE CABINET
 3-1/C #2

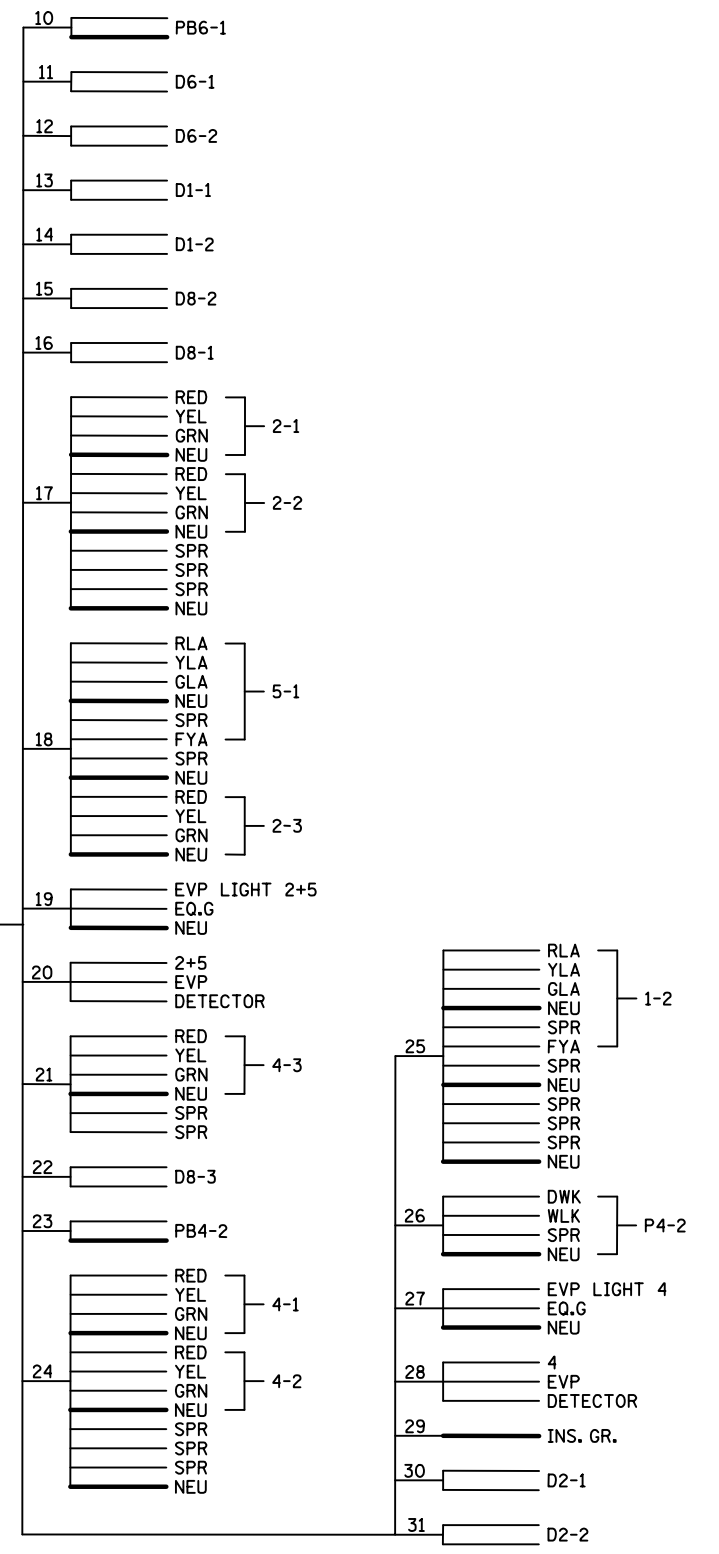
BY	DATE	REVISIONS	SYSTEM ID: 2017309	T.E.	S.A.P. NO. 062-668-051, 164-216-020, 138-020-041	DRAWN BY: BAM	CKD BY: CDB	DATE: 7-29-15
JBA	11/14/18	AS BUILT CHANGES: REMOVE HH 8 RE-NUMBER HH 9 THRU 14	METER ADDRESS: 251 MCKNIGHT RD. N.		INTERSECTION LAYOUT NOTES T.H. 94 SOUTH RAMP AT MCKNIGHT RD. N. (CSAH 68) IN MAPLEWOOD, RAMSEY COUNTY	CERTIFIED BY _____ LIC. NO. 19863 DATE: 7-29-15		
JBA	11/14/18	REMOVE D4-2	MASTER ID: 21342	T.E.		STATE PROJ. NO. 6283-233 (T.H. 94)	SHEET NO. 9	OF 28
JBA	11/16/18	UPDATED REVISED TO OPERATIONS PLAN						
SJK	4/15/19	REVISED OPERATION PLAN						

DISTRICT #: Metro
 IPLOT NAME: T21342WI.sgl
 PATH & FILENAME: Projects\DM_R0S\09A0000\Traffic\Signal\21342\21342a_sgl.dgn
 PLOTTED/REVISED: 9-MAY-2019



NOTES:
 1. SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (NO BATTERIES).
 2. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.

CONTROLLER CABINET

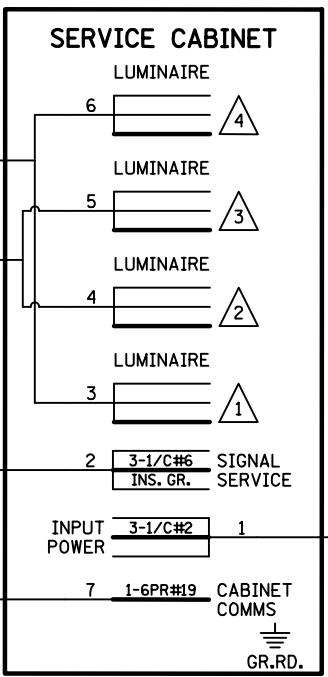
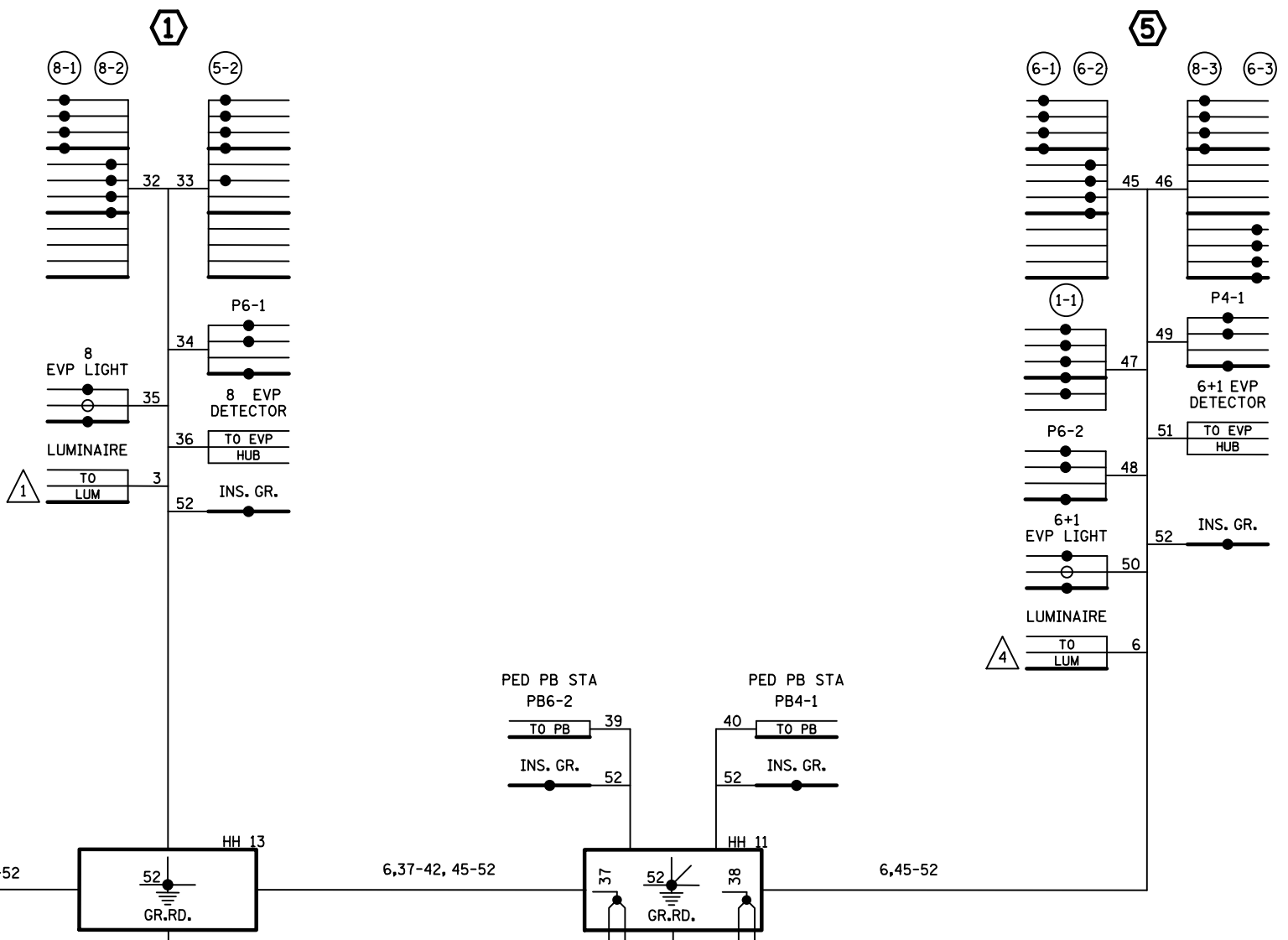
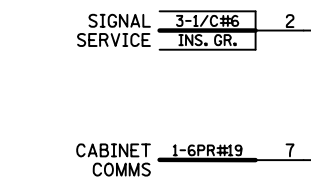
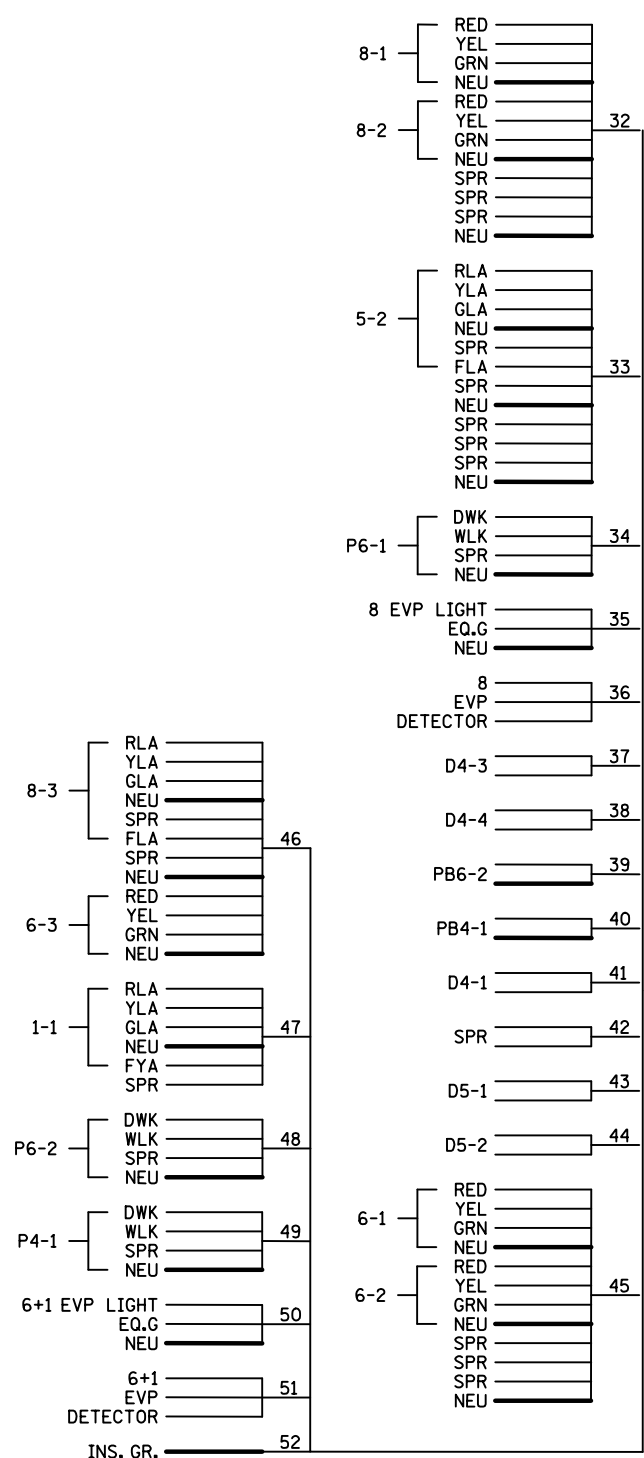


TO TMS PULL VAULT ← 96 6SM FIBER OPTIC

BY	DATE	REVISIONS	SYSTEM ID: 2017309	T.E. 6346	S.A.P. NO. 062-668-051, 164-216-020, 138-020-041	DRAWN BY: BAM	CKD BY: CDB	DATE: 7-29-15
JBA	11/14/18	AS BUILT CHANGES: REMOVE HH8 RE-NUMBER HH9 THRU 14	METER ADDRESS: 251 MCKNIGHT RD. N.		CERTIFIED BY _____ LIC. NO. 19863 DATE: 7-29-15			
JBA	11/14/18	REMOVE D4-2	MASTER ID: 21342		STATE PROJ. NO. 6283-233 (T.H. 94) SHEET NO. 10 OF 28 SHEETS			
JBA	11/16/18	UPDATED REVISED TO OPERATIONS PLAN						
SJK	4/15/19	REVISED OPERATION PLAN						

**FIELD WIRING DIAGRAM (1 OF 2)
 T.H. 94 SOUTH RAMP AT MCKNIGHT RD. N. (CSAH 68)
 IN MAPLEWOOD, RAMSEY COUNTY**

CONTROLLER CABINET



NOTES:
 1. SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (NO BATTERIES).
 2. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.

DISTRICT #: Metro
 IPLOT NAME: T21342W2_sgl
 PATH & FILENAME: Projects\DM_R0S\09A0000\Traffic\Signdis\21342\T21342a_sgl.dgn

BY	DATE	REVISIONS	SYSTEM ID: 2017309	T.E. 6346	S.A.P. NO. 062-668-051, 164-216-020, 138-020-041	DRAWN BY: BAM	CKD BY: CDB	DATE: 7-29-15
JBA	11/14/18	AS BUILT CHANGES: REMOVE HH 8 RE-NUMBER HH 9 THRU 14	METER ADDRESS: 251 MCKNIGHT RD. N.		CERTIFIED BY _____ LIC. NO. 19863 DATE: 7-29-15			
JBA	11/14/18	REMOVE D4-2	MASTER ID: 21342	T.E.	STATE PROJ. NO. 6283-233 (T.H.94) SHEET NO. 11 OF 28 SHEETS			
JBA	11/16/18	UPDATED REVISED TO OPERATIONS PLAN						
SJK	4/15/19	REVISED OPERATION PLAN						

**FIELD WIRING DIAGRAM (2 OF 2)
 T.H. 94 SOUTH RAMP AT MCKNIGHT RD. N. (CSAH 68)
 IN MAPLEWOOD, RAMSEY COUNTY**