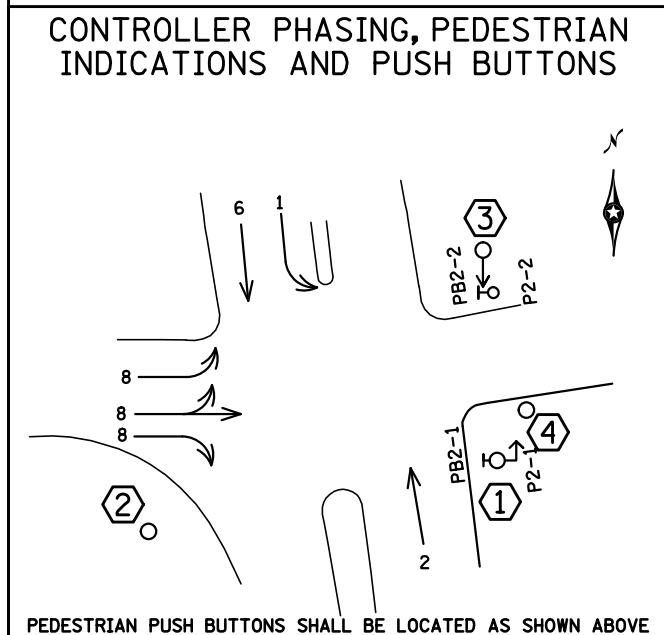
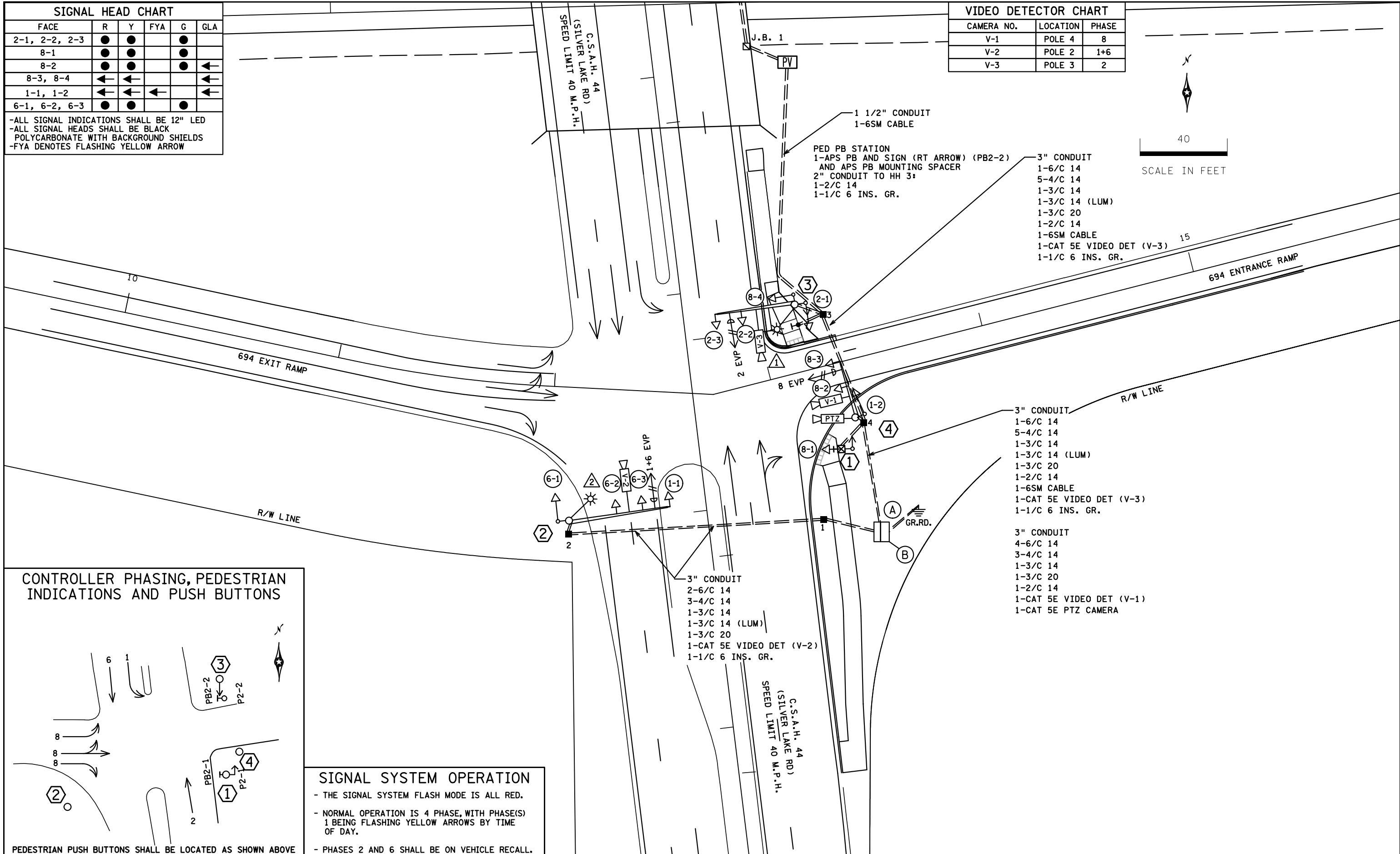
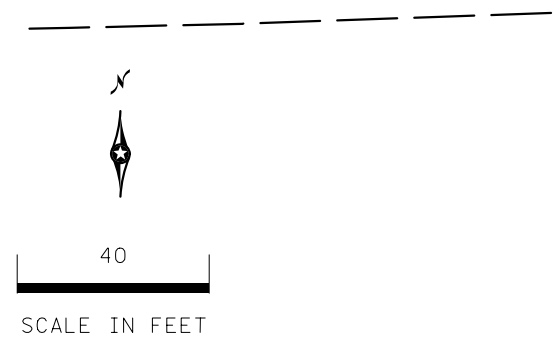


SIGNAL HEAD CHART					
FACE	R	Y	FYA	G	GLA
2-1, 2-2, 2-3	●	●		●	
8-1	●	●		●	
8-2	●	●		●	←
8-3, 8-4	←	←			→
1-1, 1-2	←	←	←		←
6-1, 6-2, 6-3	●	●		●	

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

VIDEO DETECTOR CHART		
CAMERA NO.	LOCATION	PHASE
V-1	POLE 4	8
V-2	POLE 2	1+6
V-3	POLE 3	2



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE, WITH PHASE(S) 1 BEING FLASHING YELLOW ARROWS BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

BY: HJC	DATE: 1/8/2024	REVISIONS: 6285-160 AS-BUILT PLAN	SYSTEM ID: 4174619	T.E. 33962	S.A.P. NO. 062-644-040, 147-020-045	DRAWN BY: RMV	CKD BY: MJB	DATE: 08/10/22
			METER ADDRESS: 329 (RAMSEY CO)		CERTIFIED BY: _____		LIC. NO. _____ DATE: _____	
			OLD SYSTEM ID: 1735868		STATE PROJ.NO. 6285-160 (T.H. 694) SHEET NO. SS1 OF SS3 SHEETS			

③ X=542690.4020 Y=199535.3947
 PA90 POLE FOUNDATION
 TYPE PA90-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
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 2)
 1-STRAIGHT MOUNT C.D. PED HEAD AT 180 DEG (P2-2)
 1-VIDEO DETECTION CAMERA (V-3) (STATE FURNISHED)
 MOUNTED ON 6' EXTENSION AT 5' FROM END
 OF MAST ARM
 1-LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
 2-TYPE D SIGNS (D-3, D-4) (SEE SIGN DETAILS)
 1-TYPE R9-3 SIGN (NO PEDS) (SEE SIGN DETAILS)
 3" CONDUIT TO HH 3:
 1-3/C 14
 1-3/C 14 (LUM)
 1-3/C 20
 5-4/C 14
 1-6/C 14
 1-CAT 5E VIDEO DET (V-3)
 1-1/C 6 INS. GR.

④ X=542718.2522 Y=199483.6583
 PA90 POLE FOUNDATION
 TYPE PA90-A-25-X400
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
 1-ANGLE MOUNT SIGNAL AT 90 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 8)
 1-VIDEO DETECTION CAMERA (V-1) (STATE FURNISHED)
 MOUNTED ON 6' EXTENSION AT 16' FROM END
 OF MAST ARM
 1-PTZ CAMERA WITH MOUNT (STATE FURNISHED)
 1-TYPE D SIGN (D-1) (SEE SIGN DETAILS)
 2" CONDUIT TO HH 4:
 1-3/C 14
 1-3/C 20
 1-4/C 14
 3-6/C 14
 1-CAT 5E VIDEO DET (V-1)
 1-CAT 5E PTZ CAMERA
 1-7/16" GROUND BRAID TO GROUND ROD
 1-1/C 6 INS. GR.

② X=542587.0311 Y=199436.3537
 PA100 POLE FOUNDATION
 TYPE PA100-A-45-D40-9 (DAVIT AT 350 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
 AND 23'
 1-ANGLE MOUNT SIGNAL AT 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 1+6)
 1-VIDEO DETECTION CAMERA (V-2) (STATE FURNISHED)
 MOUNTED ON 6' EXTENSION AT 18' FROM END
 OF MAST ARM
 1-LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
 1-TYPE D SIGN (D-2) (SEE SIGN DETAILS)
 2-TYPE R9-3 SIGNS (NO PEDS) (SEE SIGN DETAILS)
 3" CONDUIT TO HH 2:
 1-3/C 14
 1-3/C 14 (LUM)
 1-3/C 20
 3-4/C 14
 2-6/C 14
 1-CAT 5E VIDEO DET (V-2)
 1-1/C 6 INS. GR.

① X=542711.8166 Y=199469.1781
 PEDESTAL FOUNDATION (DESIGN 8127-LIGHT FOUNDATION DESIGN E)
 PEDESTAL POLE WITH BASE
 1-ANGLE MOUNT SIGNAL AT 90 DEG
 1-ANGLE MOUNT C.D. HEAD AT 0 DEG (P2-1)
 1-APS PB AND SIGN (LT ARROW) (PB2-1)
 AND APS PB MOUNTING SPACERS
 2" CONDUIT TO HH 4:
 1-2/C 14
 2-4/C 14
 1-6/C 14
 1-1/C 6 INS. GR.

Ⓐ EQUIPMENT PAD (SEE DETAIL SHEET)
 SERVICE CABINET (ATCC) NO BATTERY BACKUP SYSTEM OR BATTERIES
 CONTROLLER AND CABINET (STATE FURNISHED)

3" CONDUIT TO HH 4:
 1-2/C 14
 1-3/C 14
 1-3/C 20
 5-4/C 14
 1-6/C 14
 1-6SM CABLE
 1-CAT 5E VIDEO DET (V-3)
 1-1/C 6 INS. GR.

3" CONDUIT TO HH 1:
 1-3/C 14
 1-3/C 14 (LUM)
 1-3/C 20
 3-4/C 14
 2-6/C 14
 1-CAT 5E VIDEO DET (V-2)
 1-1/C 6 INS. GR.

3" CONDUIT TO HH 4:
 1-2/C 14
 1-3/C 14
 1-3/C 20
 3-4/C 14
 4-6/C 14
 1-CAT 5E VIDEO DET (V-1)
 1-CAT 5E PTZ CAMERA

1-FO PIGTAIL (6-SM)
 (INTERCONNECT TO NORTH RAMP
 SEE INTERCONNECT LAYOUT)

GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD
 2-2" AND 1-3" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)

CONTROLLER CABINET TO SERVICE CABINET:
 2" CONDUIT
 3-1/C 6

1 1/2" STUB OUT
 1 1/2" CONDUIT TO TMS HANDHOLE (SEE TMS PLAN)
 1-FO PIGTAIL (6-SM) (SEE TMS PLAN)

CONTROLLER CABINET TO SERVICE CABINET (COMMS):
 2" CONDUIT
 1-6PR 19

SERVICE CABINET TO GROUND MOUNTED TRANSFORMER:
 2" CONDUIT
 3-1/C 2

SERVICE CABINET TO HH 1:
 2" CONDUIT
 1-3/C 14 (LUM)

SERVICE CABINET TO HH 4:
 2" CONDUIT
 1-3/C 14 (LUM)

SERVICE CABINET TO EXTERNAL GR. RD.:
 1" CONDUIT
 1-1/C 6 INS. GR.
 (SEE EQUIPMENT PAD LAYOUT)

Ⓑ INPLACE SOP- PEDESTAL MOUNTED
 TRANSFORMER (XCEL ENERGY)
 2" CONDUIT INTO SERVICE CABINET:
 3-1/C 2

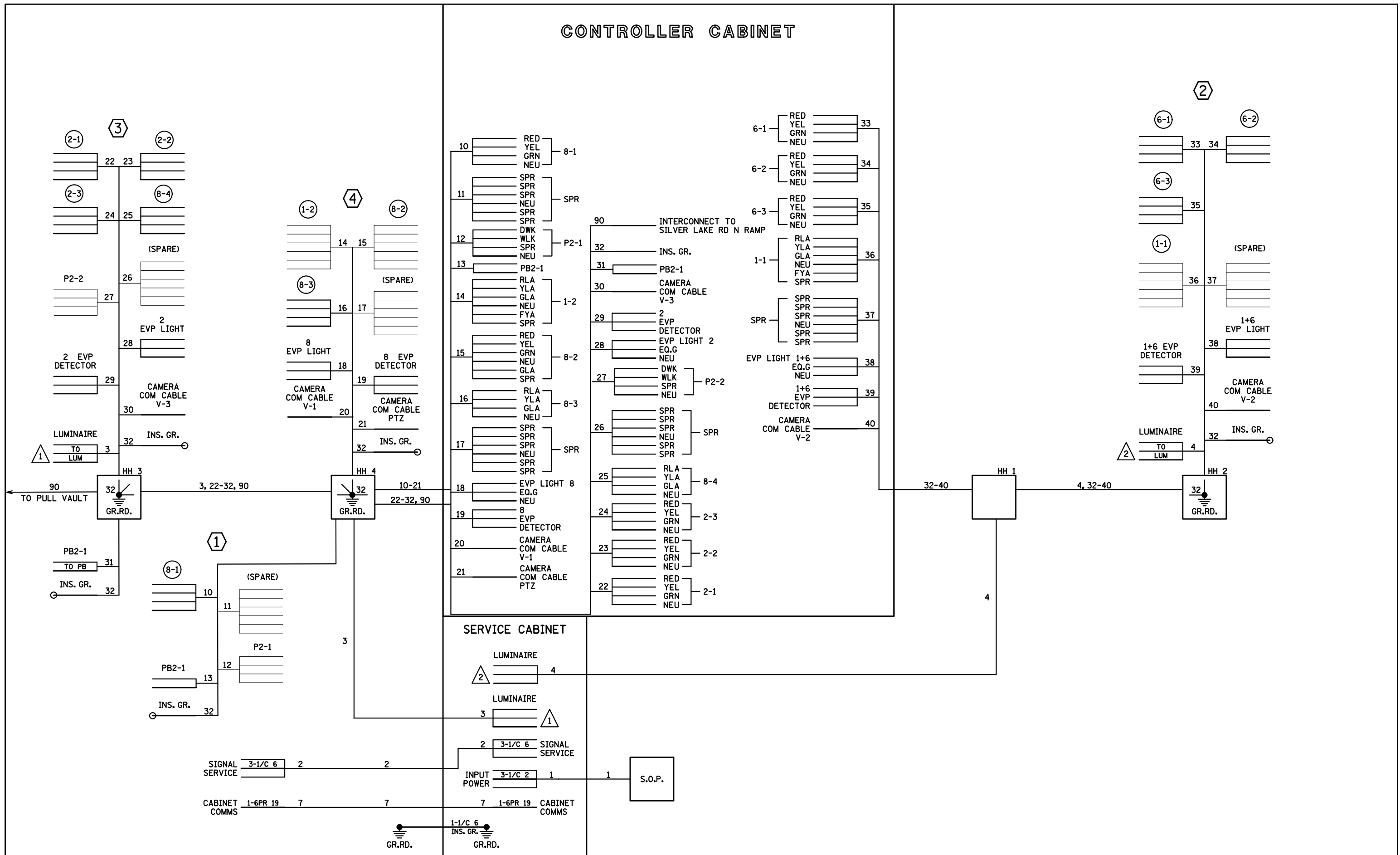
BY	DATE	REVISIONS
HJC	1/8/2024	6285-160 AS-BUILT PLAN

SYSTEM ID: 4174619	T.E.33962
METER ADDRESS: 329 (RAMSEY CO)	
OLD SYSTEM ID: 1735868	

INTERSECTION LAYOUT NOTES
 TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 694 AT SILVER LAKE RD (SOUTH RAMP)
 IN NEW BRIGHTON, RAMSEY COUNTY

S.A.P. NO. 062-644-040, 147-020-045	DRAWN BY: RMV	CKD BY: MJB	DATE: 08/10/22
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO. 6285-160 (T.H. 694) SHEET NO. SS2 OF SS3 SHEETS			

CONTROLLER CABINET



BY	DATE	REVISIONS
HJC	1/8/2024	6285-160 AS-BUILT PLAN

SYSTEM ID: 4174619 T.E. 33962
 METER ADDRESS: 329 (RAMSEY CO)
 OLD SYSTEM ID: 1735868

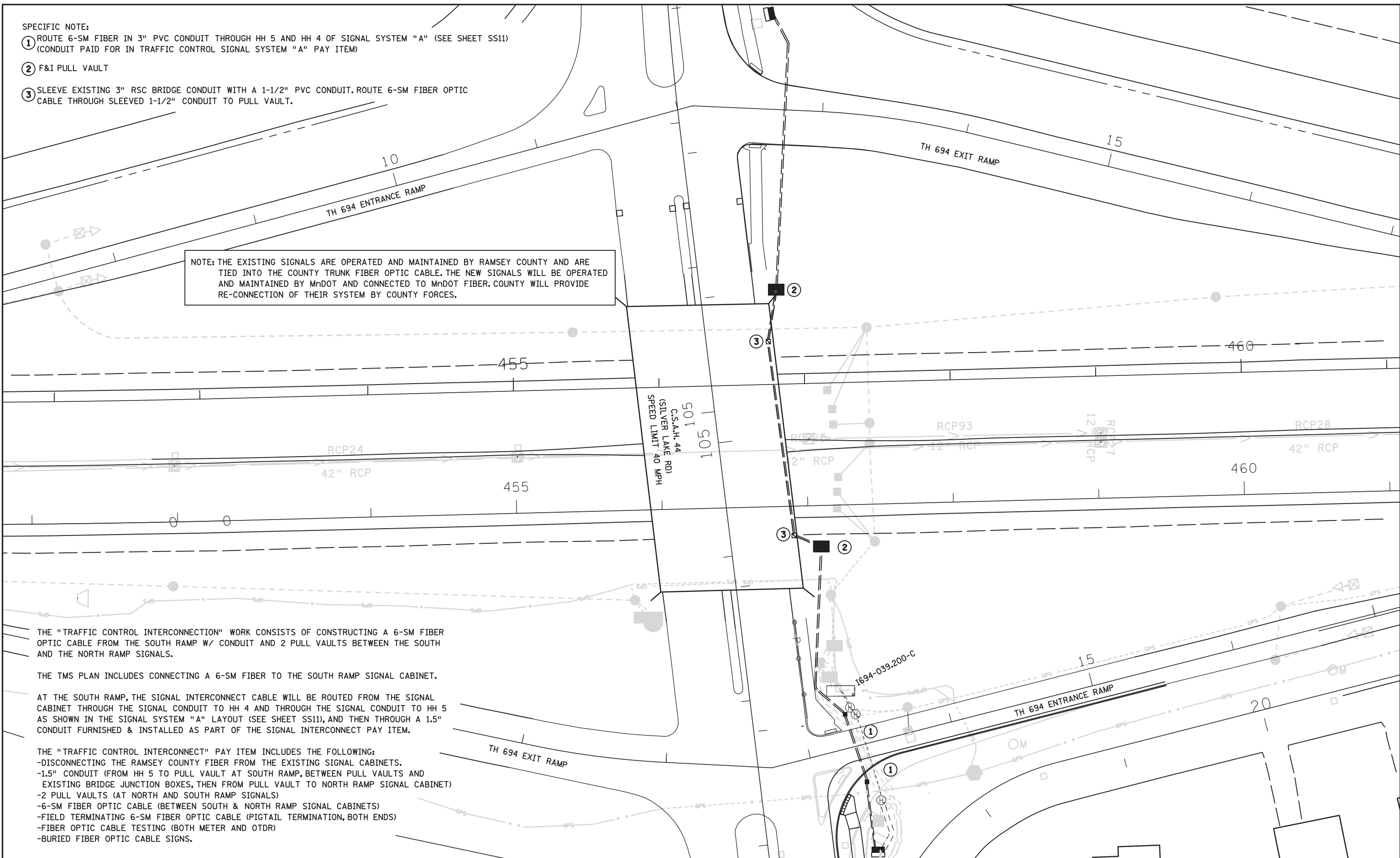
WIRING DIAGRAM
TRAFFIC CONTROL SIGNAL SYSTEM
 T.H. 694 AT SILVER LAKE RD. (SOUTH RAMP)
 IN NEW BRIGHTON, RAMSEY COUNTY

S.A.P. NO. 062-644-040, 147-020-045	DRAWN BY: RMV	CKD BY: MJB	DATE: 11/15/21
CERTIFIED BY _____		LIC. NO. _____ DATE: _____	
STATE PROJ. NO. 6285-160 (T.H. 694) SHEET NO. SS3 OF SS3 SHEETS			

DISTRICT #: Metro
 PLOT NAME: Fiber 1
 PATH & FILENAME: Projects\DM罗斯69400000\Traffic\Signal\39.0 TH694 @ (44) SILVER LAKE RD N RAMP (735867-PENDING)\SHEET\REVISED\4-OCT-2021

- SPECIFIC NOTE:**
- ① ROUTE 6-SM FIBER IN 3" PVC CONDUIT THROUGH HH 5 AND HH 4 OF SIGNAL SYSTEM "A" (SEE SHEET SS11) (CONDUIT PAID FOR IN TRAFFIC CONTROL SIGNAL SYSTEM "A" PAY ITEM)
 - ② F&I PULL VAULT
 - ③ SLEEVE EXISTING 3" RSC BRIDGE CONDUIT WITH A 1-1/2" PVC CONDUIT. ROUTE 6-SM FIBER OPTIC CABLE THROUGH SLEEVED 1-1/2" CONDUIT TO PULL VAULT.

NOTE: THE EXISTING SIGNALS ARE OPERATED AND MAINTAINED BY RAMSEY COUNTY AND ARE TIED INTO THE COUNTY TRUNK FIBER OPTIC CABLE. THE NEW SIGNALS WILL BE OPERATED AND MAINTAINED BY MnDOT AND CONNECTED TO MnDOT FIBER. COUNTY WILL PROVIDE RE-CONNECTION OF THEIR SYSTEM BY COUNTY FORCES.



THE "TRAFFIC CONTROL INTERCONNECTION" WORK CONSISTS OF CONSTRUCTING A 6-SM FIBER OPTIC CABLE FROM THE SOUTH RAMP W/ CONDUIT AND 2 PULL VAULTS BETWEEN THE SOUTH AND THE NORTH RAMP SIGNALS.

THE TMS PLAN INCLUDES CONNECTING A 6-SM FIBER TO THE SOUTH RAMP SIGNAL CABINET.

AT THE SOUTH RAMP, THE SIGNAL INTERCONNECT CABLE WILL BE ROUTED FROM THE SIGNAL CABINET THROUGH THE SIGNAL CONDUIT TO HH 4 AND THROUGH THE SIGNAL CONDUIT TO HH 5 AS SHOWN IN THE SIGNAL SYSTEM "A" LAYOUT (SEE SHEET SS11), AND THEN THROUGH A 1.5" CONDUIT FURNISHED & INSTALLED AS PART OF THE SIGNAL INTERCONNECT PAY ITEM.

- THE "TRAFFIC CONTROL INTERCONNECT" PAY ITEM INCLUDES THE FOLLOWING:
- DISCONNECTING THE RAMSEY COUNTY FIBER FROM THE EXISTING SIGNAL CABINETS.
 - 1.5" CONDUIT (FROM HH 5 TO PULL VAULT AT SOUTH RAMP, BETWEEN PULL VAULTS AND EXISTING BRIDGE JUNCTION BOXES, THEN FROM PULL VAULT TO NORTH RAMP SIGNAL CABINET)
 - 2 PULL VAULTS (AT NORTH AND SOUTH RAMP SIGNALS)
 - 6-SM FIBER OPTIC CABLE (BETWEEN SOUTH & NORTH RAMP SIGNAL CABINETS)
 - FIELD TERMINATING 6-SM FIBER OPTIC CABLE (PIGTAIL TERMINATION, BOTH ENDS)
 - FIBER OPTIC CABLE TESTING (BOTH METER AND OTDR)
 - BURIED FIBER OPTIC CABLE SIGNS.

BY	DATE	REVISIONS

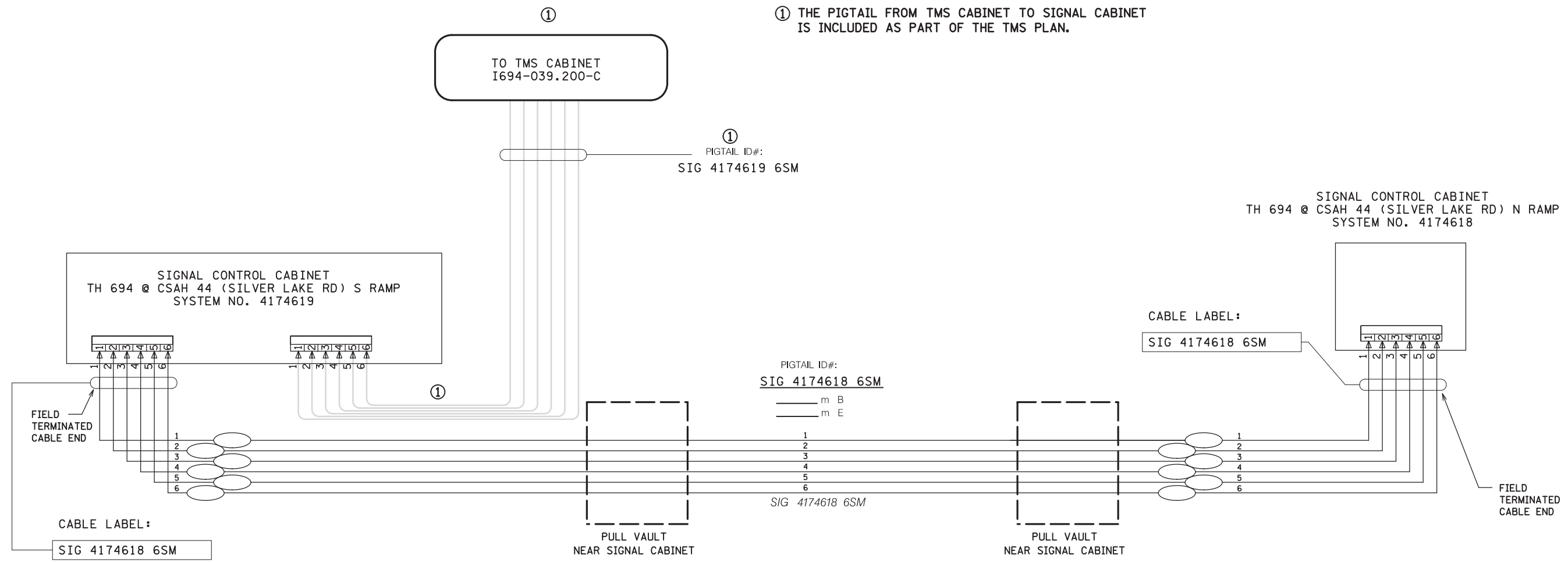
SYSTEM ID: 4174618, 4174619 T.E.
 METER ADDRESS:
 MASTER ID: T.E.

TRAFFIC CONTROL INTERCONNECT

S.A.P. NO. 062-644-040, 147-020-045
 DRAWN BY: MJB CKD BY: DATE: 5/12/21
 CERTIFIED BY: *Gregory Kim* LIC. NO. 26829 DATE: 10/1/21
 STATE PROJ. NO. 6285-160 (T.H.694) SHEET NO. SS23 OF SS27 SHEETS

FIBER OPTIC SCHEMATIC

(FOR SIGNAL COMMUNICATIONS)



NOTES:
FURNISHING, INSTALLING, SPLICING AND TESTING OF THE 6SM FIBER OPTIC CABLE IS INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.

DISTRICT #: Metro
 PLOT NAME: Fiber 2
 PATH & FILENAME: Projects\DM_POS\6940000\Traffic\Signal\390 TH694 @ (44) SILVER LAKE RD N RAMP (735867\PEND\N390211\ED\Fiber\560: 4-OCT-2021

BY	DATE	REVISIONS	SYSTEM ID: 4174618, 4174619 T.E.	FIBER OPTIC SCHEMATIC TRAFFIC CONTROL SIGNAL SYSTEM TH 694 @ SILVER LAKE RD S & N RAMPS IN NEW BRIGHTON, RAMSEY COUNTY	S.A.P. NO. 062-644-040, 147-020-045	DRAWN BY: MJB	CKD BY:	DATE: 5/12/21
			METER ADDRESS:		CERTIFIED BY: <i>Gregory Ken</i> LIC. NO. 26829 DATE: 10/1/21			
			MASTER ID: T.E.		STATE PROJ. NO. 6285-160 (T.H.694) SHEET NO. SS24 OF SS27 SHEETS			