

I/PLOT NAME: T2415974
 PATH & FILENAME: Projects\DM罗斯\200000\Traffic\SIGNALS\5489_C.S.A.H.101-CENTRAL AVE N.Ramp-2415974.dgn PLOTTED/REVISED: 23-AUG-2022

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

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

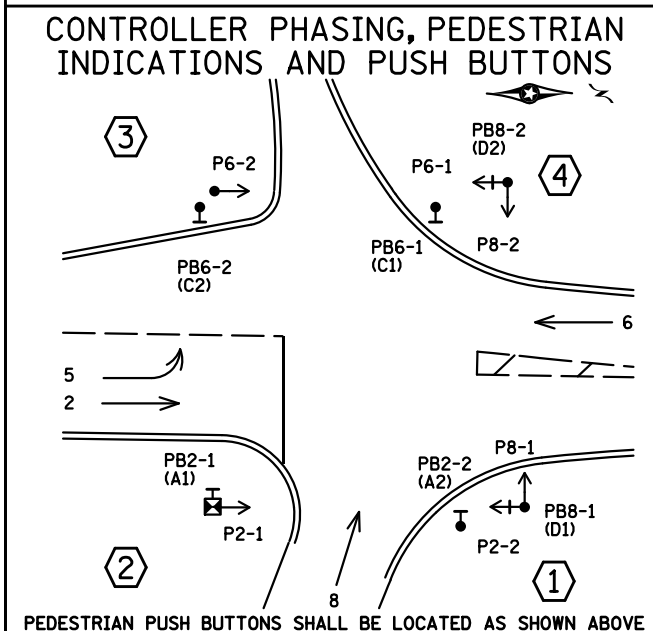
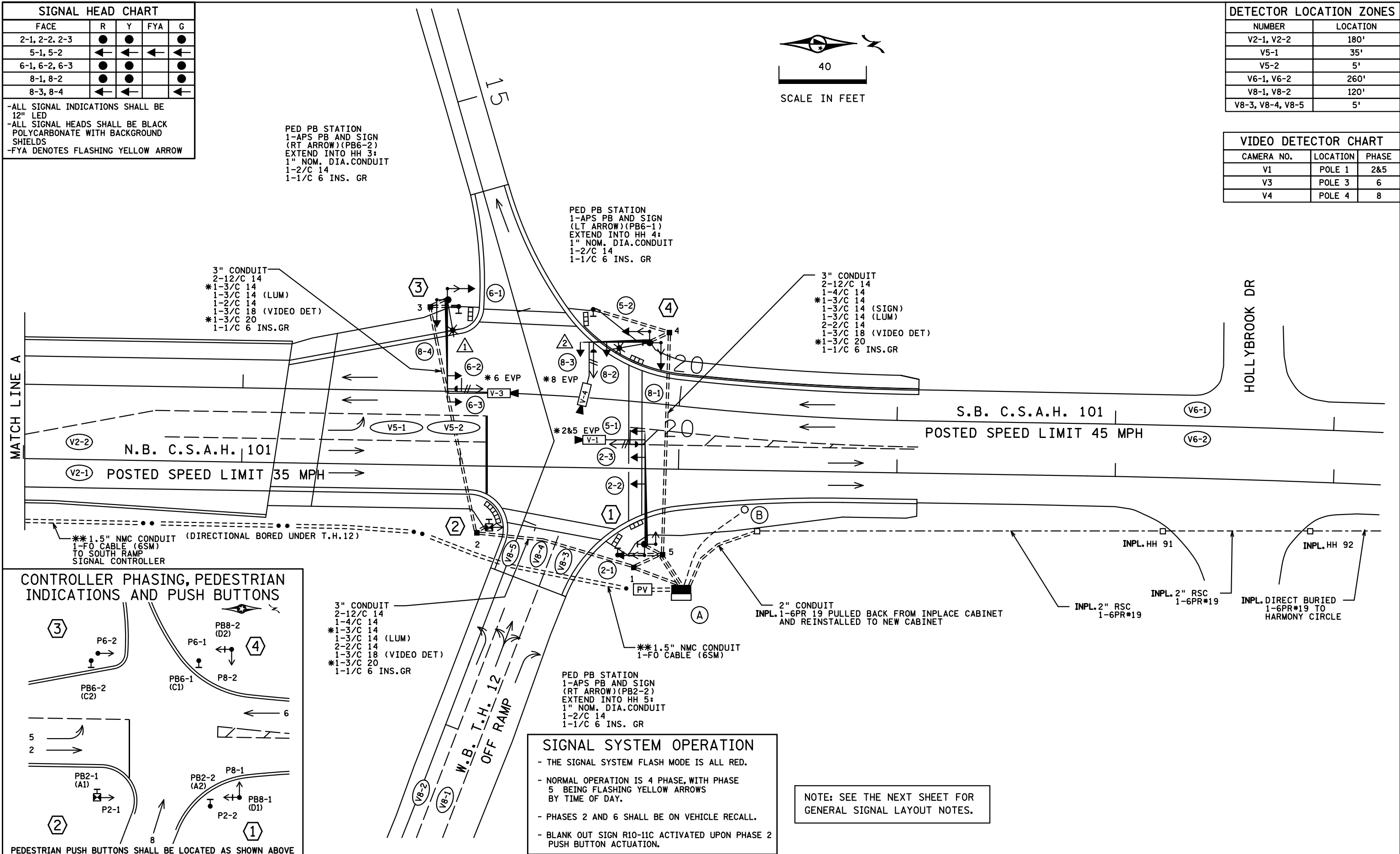
PED PB STATION
 1-APS PB AND SIGN (RT ARROW)(PB6-2)
 EXTEND INTO HH 3:
 1" NOM. DIA.CONDUIT
 1-2/C 14
 1-1/C 6 INS. GR

PED PB STATION
 1-APS PB AND SIGN (LT ARROW)(PB6-1)
 EXTEND INTO HH 4:
 1" NOM. DIA.CONDUIT
 1-2/C 14
 1-1/C 6 INS. GR

PED PB STATION
 1-APS PB AND SIGN (RT ARROW)(PB2-2)
 EXTEND INTO HH 5:
 1" NOM. DIA.CONDUIT
 1-2/C 14
 1-1/C 6 INS. GR

DETECTOR LOCATION ZONES	
NUMBER	LOCATION
V2-1, V2-2	180'
V5-1	35'
V5-2	5'
V6-1, V6-2	260'
V8-1, V8-2	120'
V8-3, V8-4, V8-5	5'

VIDEO DETECTOR CHART		
CAMERA NO.	LOCATION	PHASE
V1	POLE 1	2&5
V3	POLE 3	6
V4	POLE 4	8



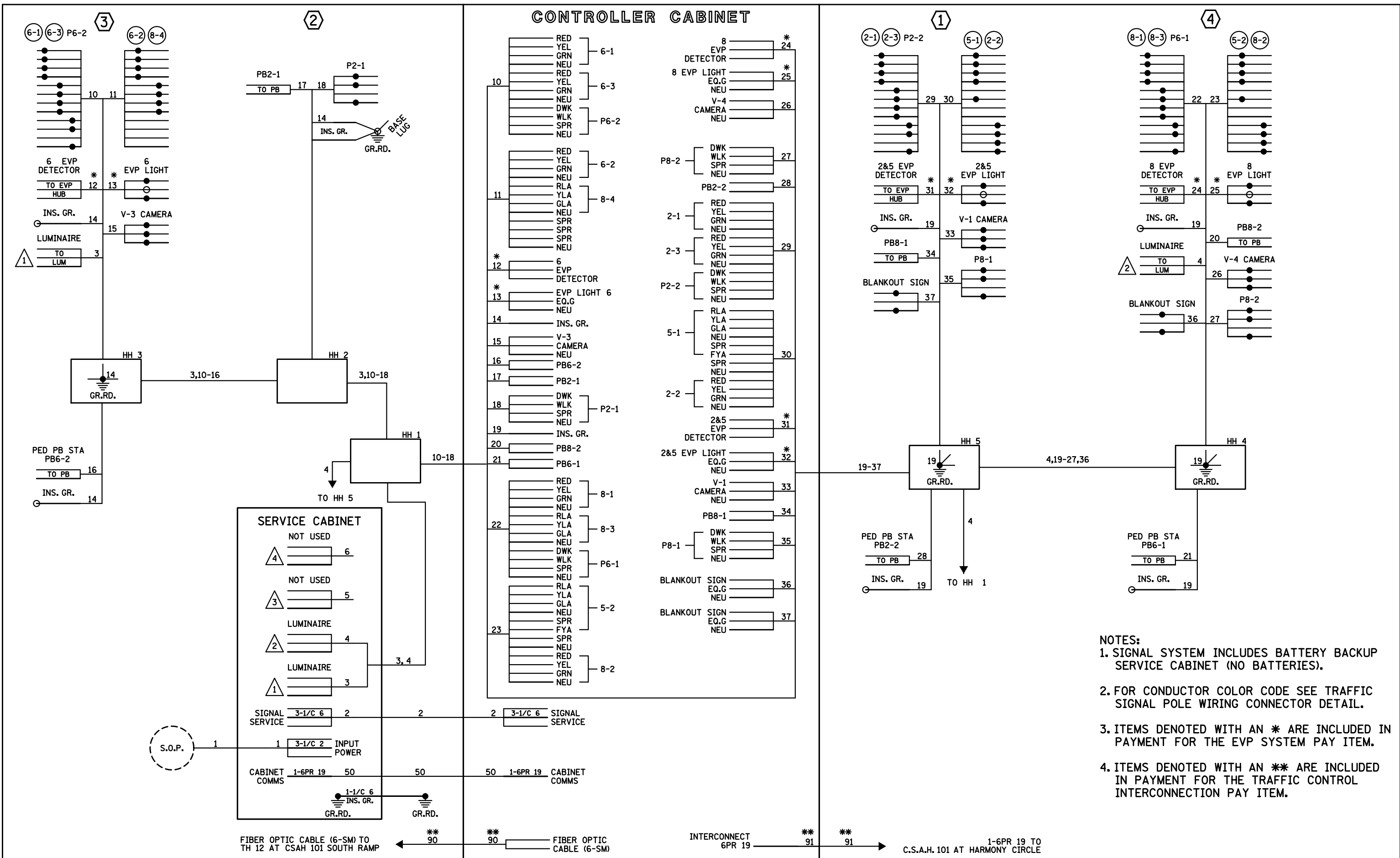
SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE, WITH PHASE 5 BEING FLASHING YELLOW ARROWS BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.
- BLANK OUT SIGN R10-11C ACTIVATED UPON PHASE 2 PUSH BUTTON ACTUATION.

NOTE: SEE THE NEXT SHEET FOR GENERAL SIGNAL LAYOUT NOTES.

BY	DATE	REVISIONS	SYSTEM ID: 2415974	T.E. 8151	INTERSECTION LAYOUT TRAFFIC CONTROL SIGNAL SYSTEM B TH 12 AT C.S.A.H. 101 (CENTRAL AVE) N. RAMP IN WAYZATA, HENNEPIN COUNTY	S.A.P. NO. 027-701-034	DRAWN BY: SJK	CKD BY: CDB	DATE: 11/27/18
			METER ADDRESS:			CERTIFIED BY: <i>Michael P. Gubinsky</i> LICENSED PROFESSIONAL ENGINEER	LIC. NO. 19863	DATE: 11/27/18	
			OLD SYSTEM ID: 20272			STATE PROJ. NO. 2714-145 (T.H.12)	SHEET NO. SS16 OF SS22 SHEETS		

IPLOT NAME: T2415974
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- NOTES:**
- SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (NO BATTERIES).
 - FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.
 - ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
 - ITEMS DENOTED WITH AN ** ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.

BY	DATE	REVISIONS	SYSTEM ID: 2415974	T.E. 8151	FIELD WIRING DIAGRAM TRAFFIC CONTROL SIGNAL SYSTEM B TH 12 AT CSAH 101/(CENTRAL AVE) N. RAMP IN WAYZATA, HENNEPIN COUNTY	S.A.P. 027-701-034	DRAWN BY: SJK	CKD BY: CDB	DATE: 11/27/18
			METER ADDRESS:			CERTIFIED BY: <i>Michael P. Lubinsky</i>	LIC. NO. 19863		DATE: 11/27/18
						STATE PROJ. NO. 2714-145 (T.H.12) SHEET NO. SS18 OF SS22 SHEETS			

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

3" CONDUIT TO HH 5:
 4-12/C 14

3" CONDUIT TO HH 5:
 2-4/C 14

* 2-3/C 14
 2-3/C 14 (SIGN)
 4-2/C 14
 2-3/C 18 (VIDE DET)
 * 2-3/C 20
 1-1/C 6 INS. GR.

3" CONDUIT TO HH 1:
 2-12/C 14

1-4/C 14
 * 1-3/C 14
 2-2/C 14
 1-3/C 18 (VIDEO DET)
 * 1-3/C 20
 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)

** 1.5" NMC CONDUIT TO PULL VAULT WITH:
 1-FO CABLE (6SM)

** 6PR 19 (INTERCONNECT TO HARMONY CIRCLE)
 PULL BACK FROM INPLACE CABINET
 AND REINSTALL TO NEW CABINET

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

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

SERVICE CABINET TO WOOD POLE:
 2" CONDUIT
 3-1/C 2

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

HH 1 TO HH 5:
 2" CONDUIT
 1-3/C 14 (LUM)

SERVICE CABINET TO EXTERNAL GR. RD.:
 1" CONDUIT
 1-1/C 6 INS. GR.

(B) S.O.P. WOOD POLE (XCEL ENERGY)
 NEW 240/480V POLE MOUNTED TRANSFORMER
 2" CONDUIT RISER WITH WEATHERHEAD
 FROM WOOD POLE TO SERVICE CABINET VIA HH 6:
 3-1/C 2

NOTE:

THE EXISTING SIGNAL S.O.P. IS A POLE MOUNTED 240/480V TRANSFORMER. THE SIGNAL
 CABINET PAD HAS A STEP DOWN TRANSFORMER THAT STEPS THE POWER DOWN TO 120V FOR
 THE SIGNAL. THE 240/480 TRANSFORMER IS ALSO USED FOR MN/DOT LIGHTING WHICH REQUIRES
 240/480V. THE NEW SIGNAL S.O.P. WILL BE A NEW POLE MOUNTED 120/240V TRANSFORMER BY
 XCEL ENERGY ON THE NEXT POLE NORTH.

(1) PA100 POLE FOUNDATION
 TYPE PA100-A-50
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11' AND 23'
 1-VIDEO CAMERA MOUNTED ON 6' EXTENSION AT 5' FROM
 END OF MAST ARM (STATE FURNISHED)
 * 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2&5)
 1-ANGLE MOUNT SIGNAL AT 180 DEG
 2-ANGLE MOUNT C.D. PED IND AT 90 AND 180 DEG
 1-APS PB AND SIGN (LT ARROW)(PB8-1) WITH POLE MOUNTING ADAPTER
 1-TYPE D SIGN (SALVAGED FROM INPLACE POLE 1)
 S&I- 1-R10X12 SIGN (42X48) ADJACENT TO HEAD (5-1)
 1-BLANKOUT SIGN R3-1 NO RIGHT TURN SYMBOL/WITH TEXT "ON RED"
 3" CONDUIT TO HH 5:
 2-12/C 14
 1-4/C 14
 1-3/C 14 (SIGN)
 * 1-3/C 14
 1-2/C 14
 1-3/C 18 (VIDEO DET)
 * 1-3/C 20
 1-1/C 6 INS. GR.

(2) PEDESTAL FOUNDATION
 10' PEDESTAL POLE PLUS BASE
 1-STRAIGHT MOUNT C.D. PED HEAD
 1-APS PB AND SIGN (LT ARROW)(PB2-1)
 S&I- 1-R9-3 FACING POLE 3 (SALVAGED FROM INPLACE POLE 2)
 S&I- 2-R6-1 (1 EACH LEFT AND RIGHT) (SALVAGED FROM INPLACE POLE 2)
 3" CONDUIT TO HH 2:
 1-4/C 14
 1-2/C 14
 2-1/C 6 INS. GR.

(3) PA100 POLE FOUNDATION
 TYPE PA100-A-45-D40-9 (DAVIT AT 350 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'
 1-VIDEO CAMERA MOUNTED ON 6' EXTENSION AT 5' FROM
 END OF MAST ARM (STATE FURNISHED)
 * 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 6)
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 1-ANGLE MOUNT C.D. PED IND AT 180 DEG
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
 S&I- 1-TYPE D SIGNS (SALVAGED FROM INPLACE POLE 3)
 S&I- 1-R9-3a FACING POLE 2 (SALVAGED FROM INPLACE POLE 3)
 3" CONDUIT TO HH 3:
 2-12/C 14
 * 1-3/C 14
 1-3/C 14 (LUM)
 1-3/C 18 (VIDEO DET)
 * 1-3/C 20
 1-1/C 6 INS. GR.

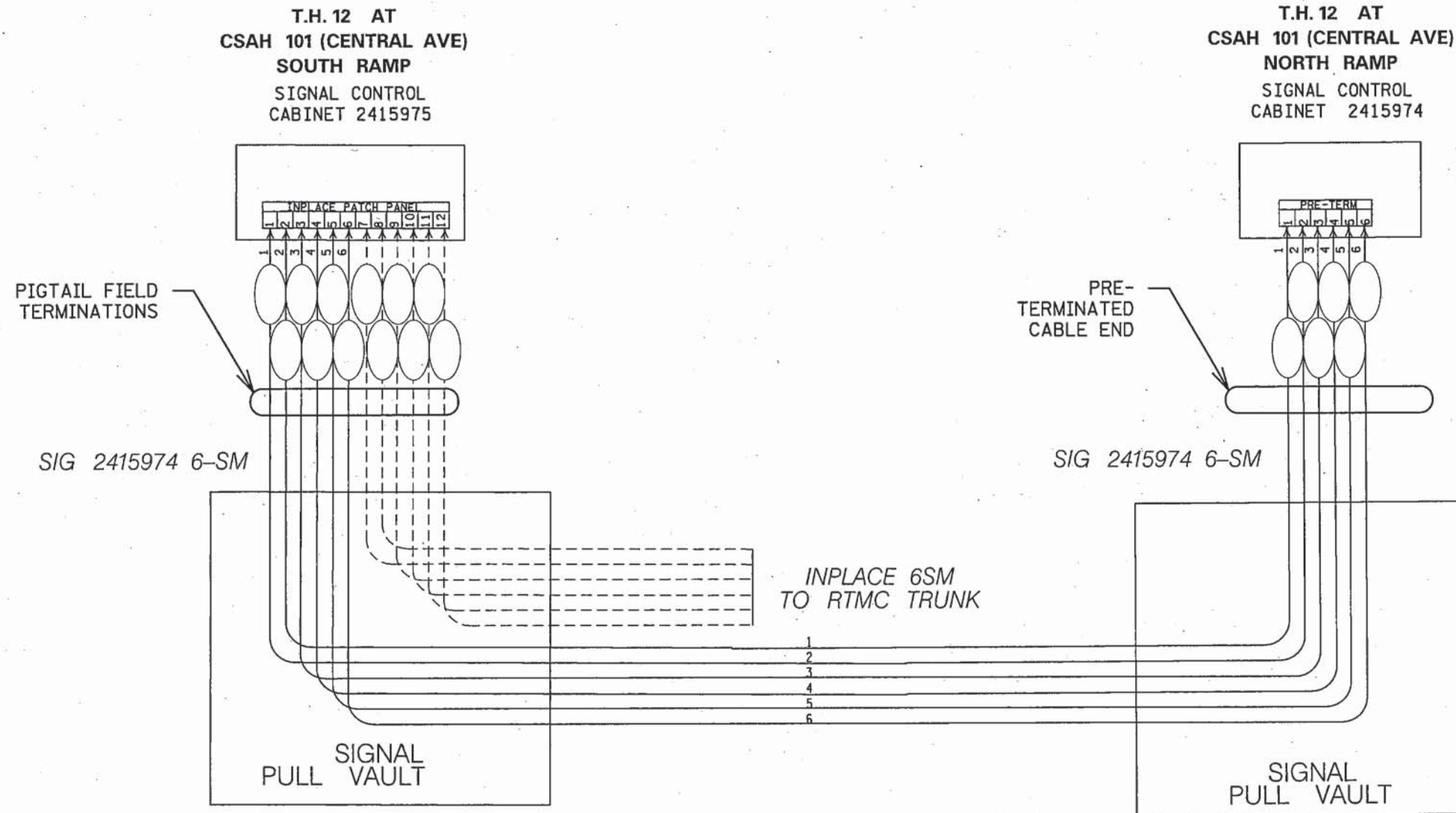
(4) PA90 POLE FOUNDATION
 TYPE PA90-A-30-D40-9 (DAVIT AT 350 DEG)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT OVERHEAD AT 11'
 1-VIDEO CAMERA MOUNTED ON 6' EXTENSION AT 5' FROM
 END OF MAST ARM (STATE FURNISHED)
 * 1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 8)
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 2-ANGLE MOUNT C.D. PED IND AT 90 AND 180 DEG
 1-APS PB AND SIGN (RT ARROW) (PB8-2) WITH POLE MOUNTING ADAPTER
 LUMINAIRE -LED (FOR 40' MOUNTING HEIGHT)
 S&I- 2-TYPE D SIGNS (SALVAGED FROM INPLACE POLE 4)
 S&I- 2-R6-1 (1 EACH LEFT AND RIGHT) (SALVAGED FROM INPLACE POLE 4)
 1-BLANKOUT SIGN R3-1 NO RIGHT TURN SYMBOL/WITH TEXT "ON RED"
 3" CONDUIT TO HH 4:
 2-12/C 14
 1-4/C 14
 1-3/C 14 9SIGN)
 * 1-3/C 14
 1-3/C 14 (LUM)
 1-2/C 14
 1-3/C 18 (VIDEO DET)
 * 1-3/C 20
 1-1/C 6 INS. GR.

NOTES:

- SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
- ENSURE THE EXACT LOCATION OF THE HANDHOLES, POLES, VIDEO CAMERAS AND EQUIPMENT PAD ARE VERIFIED IN THE FIELD BY MNDOT OFFICE PERSONNEL.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TRAFFIC SIGNAL SYSTEM.
- PAVEMENT MARKINGS ARE INCLUDED AS PART OF THE PAVEMENT MARKING SECTION OF THE PLAN.
- THE CONSTRUCTION OF PEDESTRIAN CURB RAMPS AND CONCRETE WALK ARE INCLUDED AS PART OF THE ROADWAY SECTION OF THE PLAN.
- THIS PLAN SPECIFIES CONDUIT SIZES, TYPES, AND GENERAL LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD. CONDUITS UNDER THE ROADWAYS REQUIRE BORING.
- USE PVC OR HDPE FOR ALL NEW CONDUIT.
- CONDUIT SIZES ARE NOMINAL DIAMETER.
- ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
- ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
- ITEMS DENOTED WITH AN ** ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.
- S&I ALL THE INPLACE MAST ARM AND POLE MOUNTED SIGNING. SEE SIGNING DETAIL SHEET.

BY	DATE	REVISIONS	SYSTEM ID: 2415974	T.E. 8151	S.A.P. NO. 027-701-034	DRAWN BY: SJK	CKD BY: CDB	DATE: 11/27/18
			METER ADDRESS:		CERTIFIED BY: <i>Michael P. Lubinsky</i>	LIC. NO. 19863	DATE: 11/27/18	
			OLD SYSTEM ID: 20272		STATE PROJ. NO. 2714-145 (T.H.12) SHEET NO. SS17 OF SS22 SHEETS			
POLE NOTES TRAFFIC CONTROL SIGNAL SYSTEM B TH 12 AT C.S.A.H. 101 (CENTRAL AVE) N. RAMP IN WAYZATA, HENNEPIN COUNTY								

FIBER OPTIC SCHEMATIC (FOR SIGNAL COMMUNICATIONS)



PLOTTED/REVISED: 27-NOV-2018
 I/PLOT NAME: fiber schematic
 PATH & FILENAME: Projects\JM_ROS\02\0000\Traffic\Signals\2023_ C.S.A.H.101 S.Ramp\T20273.dgn

BY	DATE	REVISIONS

**FIBER OPTIC SCHEMATIC
TRAFFIC CONTROL SIGNAL SYSTEM**

S.A.P. 027-701-034 DRAWN BY: SJK CKD BY: CDB DATE: 11/27/18
 CERTIFIED BY: *Michael P. Sulovsky* LIC. NO. 19863 DATE: 11/27/18
LICENSED PROFESSIONAL ENGINEER
STATE PROJ. NO. 2714-145 (T.H.12) SHEET NO. SS22 OF SS22 SHEETS