

I/PLOT NAME: T2415975  
 PATH & FILENAME: Projects\DM罗斯\02\00000\Traffic\SIGNALS\54.90\_C.S.A.H.101-CENTRAL AVE S.Ramp-2415975.dgn PLOTTED/REVISED: 23-AUG-2022

**SIGNAL FACE CHART**

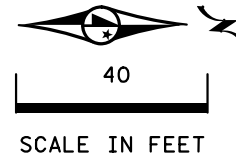
FACE	R	Y	FYA	G	G
1-1, 1-2	←	←	←	←	
2-1, 2-2, 2-3, 2-4	●	●	●	●	
4-1	●	●		●	
4-2	●	●		●	←
4-3	●	←		←	
6-1, 6-2, 6-3	●	●		●	

-ALL SIGNAL INDICATIONS SHALL BE 12" LED  
 -ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONITE WITH BACKGROUND SHIELDS

**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 INS.GR

**PED PB STATION**  
 1-APS PB AND SIGN  
 (LT ARROW) (PB4-1)  
 EXTEND INTO HH 3;  
 1" NOM. DIA. CONDUIT  
 1-2/C 14  
 1-1/C INS.GR

3" CONDUIT  
 2-12/C 14  
 1-4/C 14  
 \*1-3/C 14  
 1-3/C 14 (LUM)  
 2-2/C 14  
 1-3/C 18 (VIDEO DET)  
 \*1-3/C 20  
 1-1/C 6 INS.GR.

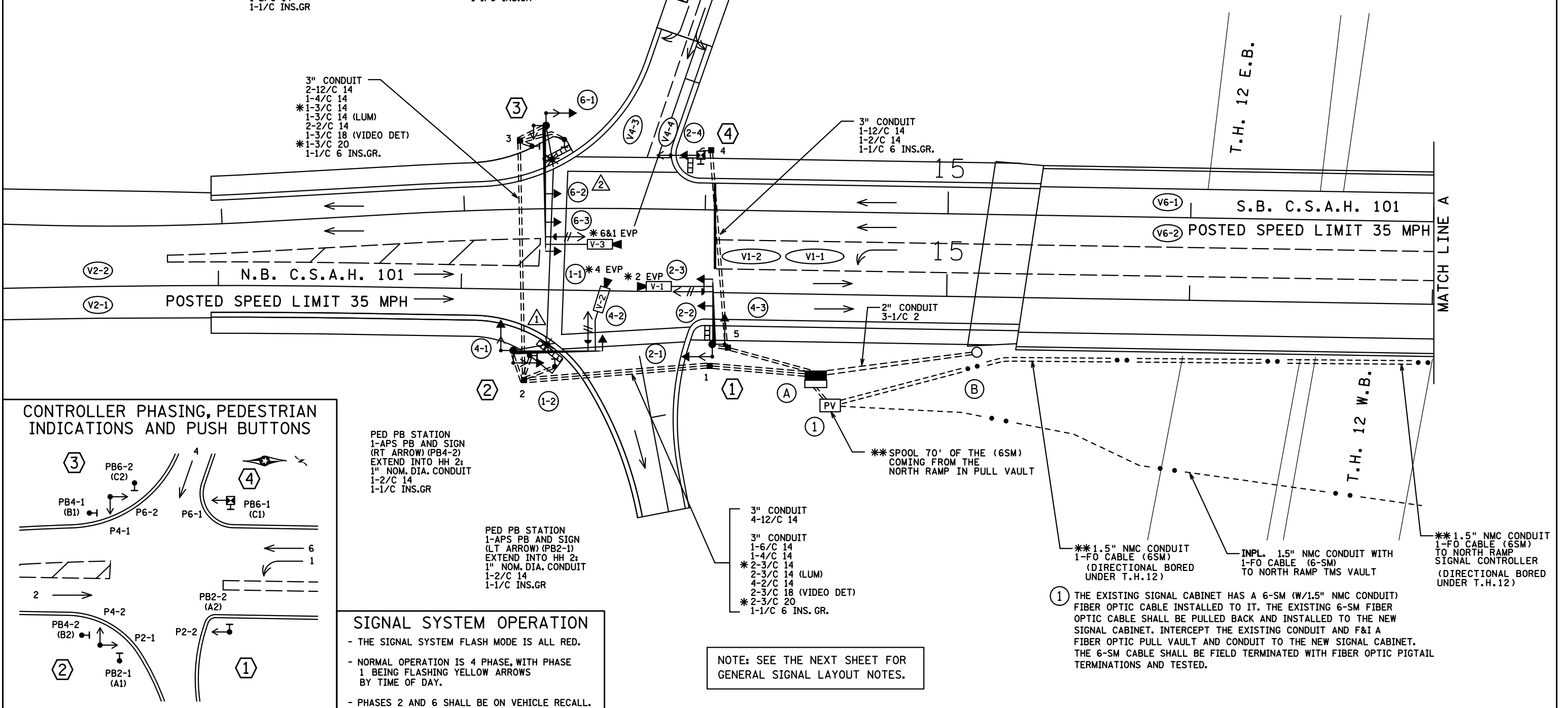


**DETECTOR LOCATION ZONES**

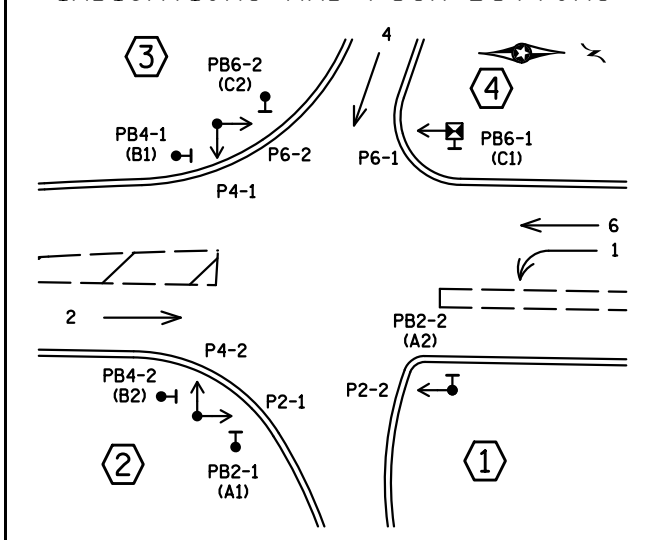
NUMBER	LOCATION
V1-1	35'
V1-2	5'
V2-1, V2-2	180'
V4-1, V4-2	120'
V4-3, V4-4	5'
V6-1, V6-2	180'

**VIDEO DETECTOR CHART**

CAMERA NO.	LOCATION	PHASE
V1	POLE 1	2
V2	POLE 2	4
V3	POLE 3	6 & 1



**CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS**



**PED PB STATION**  
 1-APS PB AND SIGN  
 (RT ARROW) (PB4-2)  
 EXTEND INTO HH 2;  
 1" NOM. DIA. CONDUIT  
 1-2/C 14  
 1-1/C INS.GR

**PED PB STATION**  
 1-APS PB AND SIGN  
 (LT ARROW) (PB2-1)  
 EXTEND INTO HH 2;  
 1" NOM. DIA. CONDUIT  
 1-2/C 14  
 1-1/C INS.GR

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

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

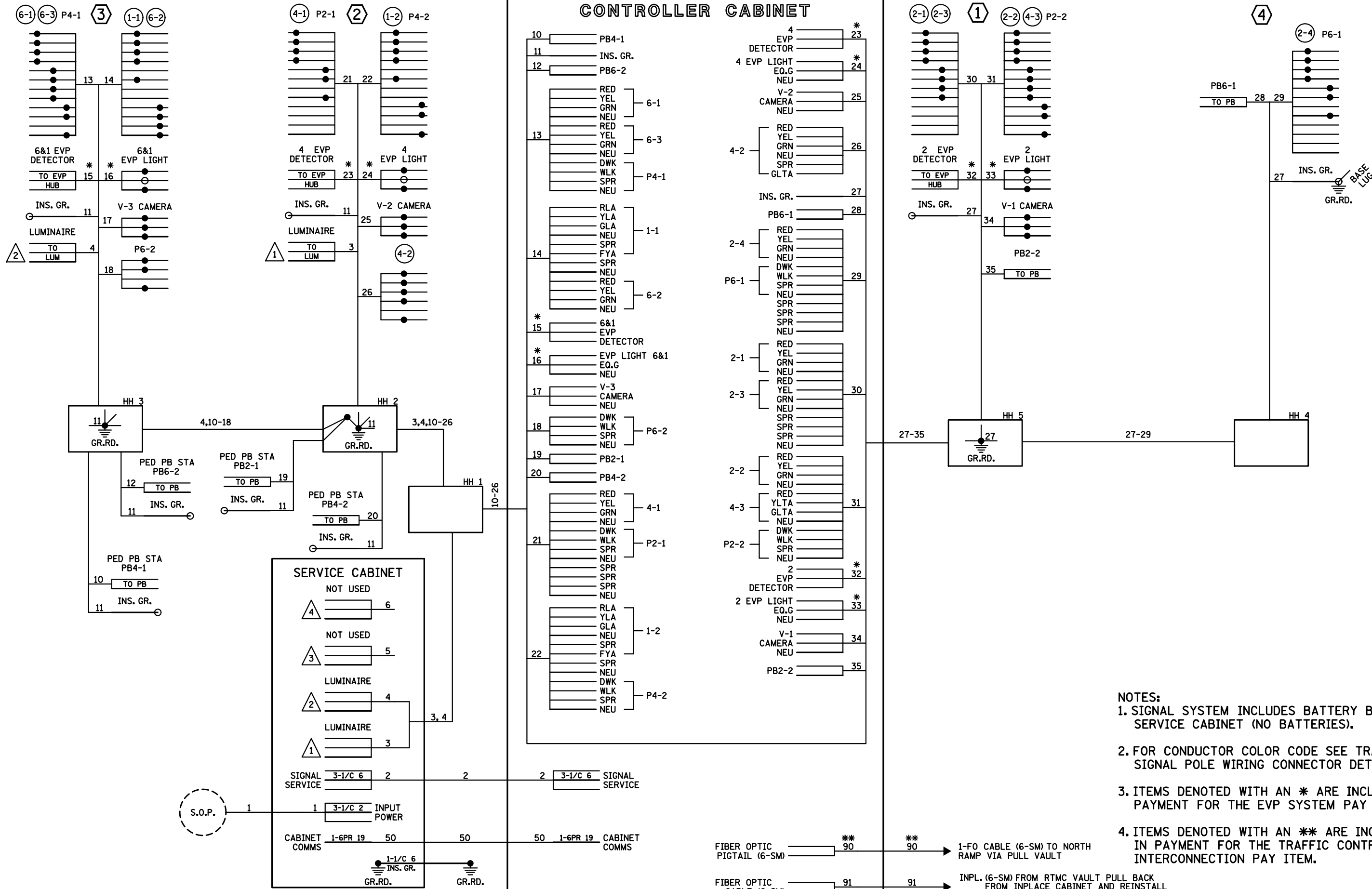
BY	DATE	REVISIONS

SYSTEM ID: 2415975  
 METER ADDRESS:  
 OLD SYSTEM ID: 20273  
 T.E. 7935

**INTERSECTION LAYOUT**  
**TRAFFIC CONTROL SIGNAL SYSTEM A**  
**TH 12 AT C.S.A.H.101 (CENTRAL AVE) S. RAMP**  
**IN WAYZATA, HENNEPIN COUNTY**

S.A.P. NO. 027-701-034  
 CERTIFIED BY: *Michael P. Lubinsky*  
 LICENSED PROFESSIONAL ENGINEER  
 L.C. NO. 19863  
 DATE: 11/27/18  
 DRAWN BY: SJK  
 CKD BY: CDB  
 DATE: 11/27/18  
 STATE PROJ. NO. 2714-145 (T.H.12) SHEET NO. SS9 OF SS22 SHEETS

IPLOT NAME: T2415975  
 PATH & FILENAME: Projects\DM罗斯\02\00000\Traffic\SIGNALS\54.90.CSAH.101-CENTRAL AVE S.Ramp-2415975.dgn PLOTTED/REVISED: 23-AUG-2022



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

FIBER OPTIC PIGTAIL (6-SM) \*\* 90 → 1-FO CABLE (6-SM) TO NORTH RAMP VIA PULL VAULT  
 FIBER OPTIC CABLE (6-SM) 91 → INPL. (6-SM) FROM RTMC VAULT PULL BACK FROM INPLACE CABINET AND REINSTALL TO NEW SIGNAL CABINET VIA F&I PULL VAULT

BY	DATE	REVISIONS	SYSTEM ID: 2415975	T.E. 7935	FIELD WIRING DIAGRAM TRAFFIC CONTROL SIGNAL SYSTEM A TH 12 AT CSAH 101/(CENTRAL AVE) S. 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. Lubusky</i>	LIC. NO. 19863		DATE: 11/27/18
			OLD SYSTEM ID: 20273			STATE PROJ. NO. 2714-145 (T.H.12) SHEET NO. SS11 OF SS22 SHEETS			

I/PLOT NAME: T2415975  
 PATH & FILENAME: Projects\DM罗斯012\000001Traffic\Signal\54.90\_C.S.A.H.101-CENTRAL AVE S.Ramp- 2415975.dgn PLOTTED/REVISED: 23-AUG-2022

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

3" CONDUIT TO HH 1:  
 4-12/C 14

3" CONDUIT TO HH 1:  
 1-6/C 14  
 1-4/C 14  
 \*2-3/C 14  
 4-2/C 14  
 2-3/C 18 (VIDEO DET)  
 \*2-3/C 20  
 1-1/C 6 INS. GR.

3" CONDUIT TO HH 5:  
 3-12/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)

\*\*3" NMC CONDUIT TO PULL VAULT WITH:  
 1-FO CABLE (6SM) AND  
 1-(6SM) PULLED BACK FROM INPLACE CABINET  
 AND REINSTALLED TO NEW SIGNAL 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)

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

**(B)** S.O.P. WOOD POLE (XCEL ENERGY)  
 2" CONDUIT RISER WITH WEATHER  
 FROM WOOD POLE TO SERVICE CABINET VIA HH 6:  
 3-1/C 2

**(1)** PA90 POLE FOUNDATION  
 TYPE PA90-A-25  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'  
 1-VIDEO CAMERA MOUNTED ON 6' EXTENSION 5' FROM THE  
 END OF MAST ARM (STATE FURNISHED)  
 \*1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2)  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG  
 1-ANGLE MOUNT C.D. PED IND AT 180 DEG  
 1-APS PB AND SIGN (RT ARROW) (PB2-2) WITH POLE MOUNTING ADAPTER  
**S&I**-1-TYPE D SIGN (SALVAGED FROM INPLACE POLE 1)  
**S&I**-1-R9-3 FACING POLE 4 (SALVAGED FROM INPLACE POLE 1)  
 3" CONDUIT TO HH 5:  
 2-12/C 14  
 \*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)** PA90 POLE FOUNDATION  
 TYPE PA90-A-35-D40-9 (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 1-VIDEO CAMERA MOUNTED ON 6' EXTENSION AT 5' FROM THE  
 END OF MAST ARM (STATE FURNISHED)  
 \*1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 4)  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG  
 2-ANGLE MOUNT C.D. PED IND AT 90 AND 180 DEG  
**S&I**-2-TYPE D SIGNS (SALVAGED FROM INPLACE POLE 2)  
**S&I**-2-R6-1 (1 EACH LEFT AND RIGHT) (SALVAGED FROM INPLACE POLE 2)  
 LUMINAIRE -LED (FOR 40' MOUNTING HEIGHT)  
 3" CONDUIT TO HH 2:  
 2-12/C 14  
 1-6/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.

**(3)** PA100 POLE FOUNDATION  
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 2-STRAIGHT MOUNT SIGNAL 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 6&1)  
 1-ANGLE MOUNT SIGNALS AT 180 DEG  
 2-ANGLE MOUNT C.D. PED IND AT 90 AND 180 DEG  
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)  
**S&I**-TYPE D SIGN (42X48) (SALVAGED FROM INPLACE POLE 3)  
 1-R10X12 SIGN ADJACENT TO HEAD 1-1  
 3" CONDUIT TO HH 3:  
 2-12/C 14  
 1-4/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.

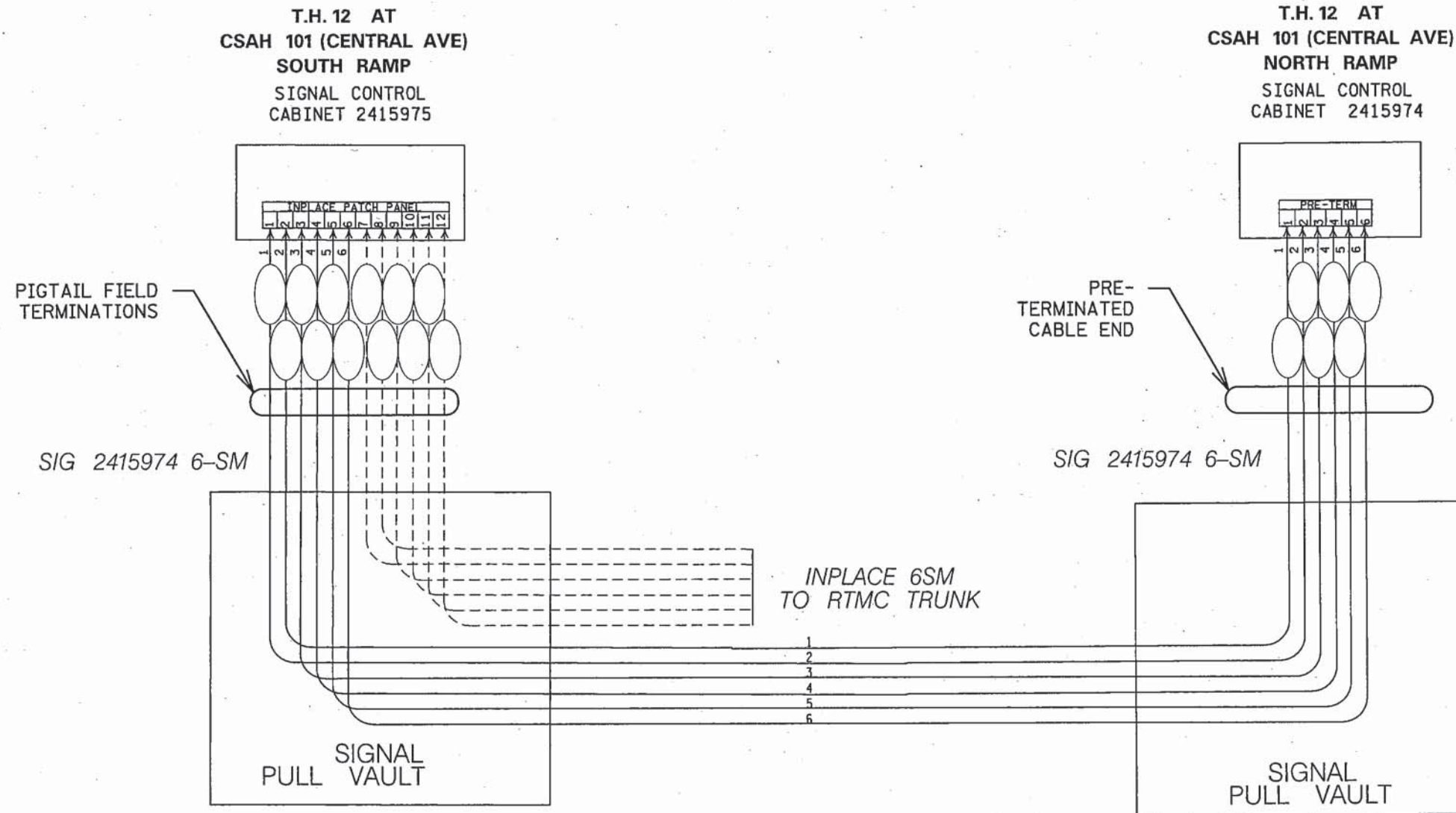
**(4)** PEDESTAL FOUNDATION  
 10' PEDESTAL POLE PLUS BASE  
 1-STRAIGHT MOUNT SIGNAL  
 1-STRAIGHT MOUNT C.D. PED HEAD  
 1-APS PB AND SIGN (LT ARROW)(PB6-1)  
**S&I**-2-R6-1 (1 EACH LEFT AND RIGHT) (SALVAGED FROM INPLACE SIGNAL POLE 4)  
**S&I**-1-R9-3 FACING POLE 1 (SALVAGED FROM INPLACE POLE 4)  
 3" CONDUIT TO HH 4:  
 1-12/C 14  
 1-2/C 14  
 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: 2415975	T.E. 7935	<b>POLE NOTES</b> <b>TRAFFIC CONTROL SIGNAL SYSTEM A</b> <b>TH 12 AT C.S.A.H. 101 (CENTRAL AVE) S. RAMP</b> <b>IN WAYZATA, HENNEPIN COUNTY</b>	S.A.P. NO. 027-701-034	DRAWN BY: SJK	CKD BY: CDB	DATE: 11/27/18	
			METER ADDRESS:			CERTIFIED BY: <i>Michael P. Gelinsky</i>	LIC. NO. 19863	DATE: 11/27/18		
			OLD SYSTEM ID: 20273				STATE PROJ. NO. 2714-145 (T.H.12)	SHEET NO. SS10 OF SS22 SHEETS		

# 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. Sulimsky*      LIC. NO. 19863      DATE: 11/27/18  
LICENSED PROFESSIONAL ENGINEER  
 STATE PROJ. NO. 2714-145 (T.H.12)    SHEET NO. SS22 OF SS22 SHEETS