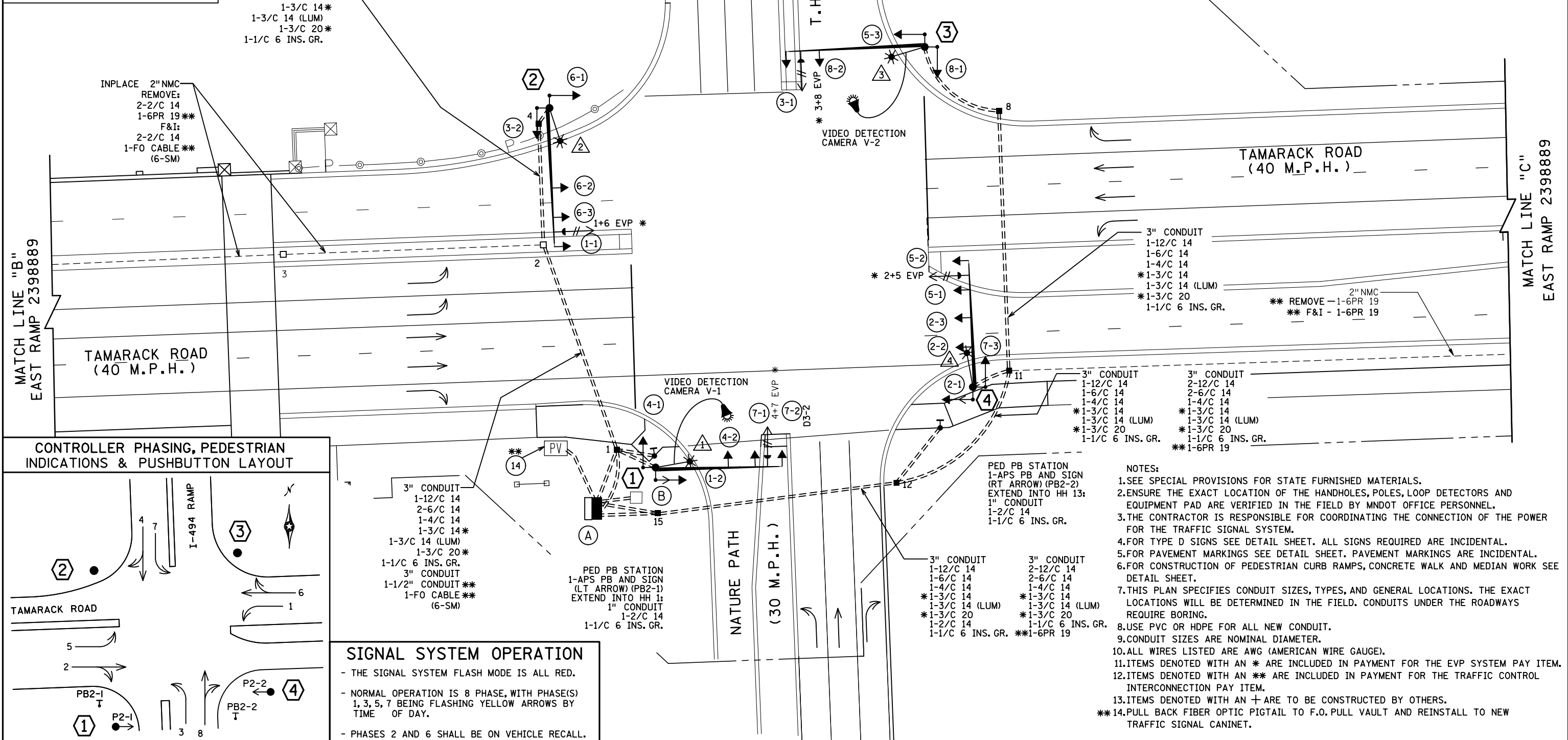


DISTRICT #: Metro  
 IPLOT NAME: layout  
 PATH & FILENAME: Projects\DM罗斯49400000\Traffic\Signal\58.6 TH494 @ TAMARACK RD E RAMP 2398889.sgl  
 REVISED: 4-JAN-2022

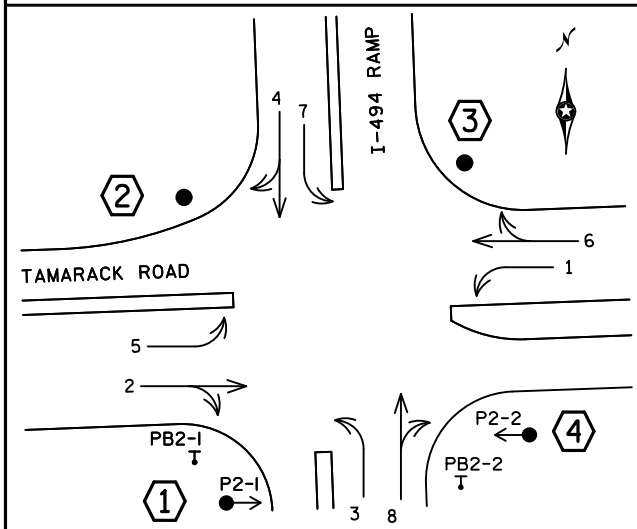
SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2	●	●	●	●
2-1, 2-2, 2-3	●	●	●	●
3-1, 3-2	●	●	●	●
4-1, 4-2	●	●	●	●
5-1, 5-2, 5-3	●	●	●	●
6-1, 6-2, 6-3	●	●	●	●
7-1, 7-2, 7-3	●	●	●	●
8-1, 8-2	●	●	●	●

SEE PAGE SS14 FOR:  
 - INTERSECTION NOTES  
 - LOOP DETECTOR CHART

VIDEO DETECTION				
NO.	CAMERA	LOCATION		PHASE
		POLE	MOUNT LOC.	
V-1	360 DEG.	1	LUM EXTENSION	ALL
V-2	360 DEG.	3	LUM EXTENSION	ALL



**CONTROLLER PHASING, PEDESTRIAN INDICATIONS & PUSHBUTTON LAYOUT**



**SIGNAL SYSTEM OPERATION**

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASE(S) 1, 3, 5, 7 BEING FLASHING YELLOW ARROWS BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

- NOTES:**
- SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
  - ENSURE THE EXACT LOCATION OF THE HANDHOLES, POLES, LOOP DETECTORS 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.
  - FOR TYPE D SIGNS SEE DETAIL SHEET. ALL SIGNS REQUIRED ARE INCIDENTAL.
  - FOR PAVEMENT MARKINGS SEE DETAIL SHEET. PAVEMENT MARKINGS ARE INCIDENTAL.
  - FOR CONSTRUCTION OF PEDESTRIAN CURB RAMPS, CONCRETE WALK AND MEDIAN WORK SEE DETAIL SHEET.
  - 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.
  - ITEMS DENOTED WITH AN + ARE TO BE CONSTRUCTED BY OTHERS.
  - PULL BACK FIBER OPTIC PIGTAIL TO F.O. PULL VAULT AND REINSTALL TO NEW TRAFFIC SIGNAL CANINET.

BY	DATE	REVISIONS	SYSTEM ID: 2398889 T.E. 6019	S.A.P. NO. 192-143-002	DRAWN BY: JAR	CKD BY: BPV	DATE: 7-6-18
SJK	1/4/22	SP 8286-81 AS-BUILT PLAN	METER ADDRESS: 7323 TAMARACK RD.	CERTIFIED BY: <i>B. P. V. [Signature]</i>	LIC. NO. 40444	DATE: 7-9-18	
			OLD SYSTEM ID: 22428	STATE PROJ. NO. 8286-81 (T.H. 694) SHEET NO. SS13 OF SS33 SHEETS			

DISTRICT #: Metro  
 PLOT NAME: pole notes  
 PATH & FILENAME: Projects\DM罗斯\400000Traffic\Signal\58.6 TH494 @ TAMARACK RD E RAMP 2398889\2398889.sgl (REVISED: 4-JAN-2022)

2

PA100 POLE FOUNDATION  
 TYPE PA100-A-55-D40-9 (DAVIT AT 350°)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 2-STRAIGHT MOUNT SIGNALS OVERHEAD  
 AT 12' AND 24'  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG  
 \*1-ONE WAY EVP DETECTOR AND  
 CONFIRMATORY LIGHT (PHASE 1+6)  
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)  
 2-R9-3a SIGN FACING POLE 2 AND POLE 3  
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)  
 1-TYPE D-4 SIGN  
 EXTEND INTO HH 4:  
 3" CONDUIT  
 1-12/C 14  
 2-6/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.

1

PA100 POLE FOUNDATION  
 TYPE PA100-A-50-D40-9 (DAVIT AT 350°)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 2-STRAIGHT MOUNT SIGNALS OVERHEAD  
 AT 11' AND 22'  
 1-VIDEO DETECTION CAMERA (V-1)  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG  
 1-ANGLE MOUNT C.D. PED HEAD AT 90 DEG  
 \*1-ONE WAY EVP DETECTOR AND  
 CONFIRMATORY LIGHT (PHASE 4+7)  
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)  
 1-R9-3a SIGN FACING POLE 2  
 1-R10-X12 SIGN ADJACENT TO HEAD (7-2)  
 1-TYPE D-6 SIGN  
 EXTEND INTO HH 1:  
 3" CONDUIT  
 1-12/C 14  
 2-6/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.  
 1-CABLE CAT 5E

3

PA100 POLE FOUNDATION  
 TYPE PA100-A-55-D40-9 (DAVIT AT 350°)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 13'  
 1-VIDEO DETECTION CAMERA (V-2)  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG  
 \*1-ONE WAY EVP DETECTOR AND  
 CONFIRMATORY LIGHT (PHASE 3+8)  
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)  
 2-R9-3a SIGN FACING POLE 2 AND POLE 4  
 1-R10-X12 SIGN ADJACENT TO HEAD (3-1)  
 1-TYPE D-6 SIGN  
 EXTEND INTO HH 8:  
 3" CONDUIT  
 1-12/C 14  
 2-6/C 14  
 \*1-3/C 14  
 1-3/C 14 (LUM)  
 \*1-3/C 20  
 1-1/C 6 INS. GR.  
 1-CABLE CAT 5E

4

PA100 POLE FOUNDATION  
 TYPE PA100-A-50-D40-9 (DAVIT AT 350°)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 2-STRAIGHT MOUNT SIGNALS OVERHEAD  
 AT 12' AND 23'  
 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 2+5)  
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)  
 1-R9-3a SIGN FACING POLE 3  
 1-R10-X12 SIGN ADJACENT TO HEAD (5-2)  
 1-TYPE D-5 SIGN  
 EXTEND INTO HH 11:  
 3" CONDUIT  
 2-12/C 14  
 2-6/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.

(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: 3" CONDUIT TO HH 15:  
 1-12/C 14 2-12/C 14  
 2-6/C 14 2-6/C 14  
 1-4/C 14 1-4/C 14  
 \*1-3/C 14 \*1-3/C 14  
 \*1-3/C 20 \*1-3/C 20  
 1-1/C 6 INS. GR. 1-2/C 14  
 1-1/C 6 INS. GR. 1-1/C 6 INS. GR.  
 \*\*1-6PR 19  
 3" CONDUIT TO HH 1: 3" CONDUIT TO HH 15:  
 1-12/C 14 1-12/C 14  
 2-6/C 14 1-12/C 14  
 2-4/C 14 1-6/C 14  
 \*1-3/C 14 1-4/C 14  
 \*1-3/C 20 \*1-3/C 14  
 1-2/C 14 \*1-3/C 20  
 1-1/C 6 INS. GR. 1-1/C 6 INS. GR.  
 1-CABLE CAT 5E 1-CABLE CAT 5E

\*\*1-1/2" CONDUIT TO HH 1:  
 \*\*1-FO CABLE (6-SM)

GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD  
 2-2" AND 1-3" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)  
 1-1/2" CONDUIT TO TMS VAULT:  
 1-FO PIGTAIL (6-SM)  
 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 GROUND MOUNTED TRANSFORMER:  
 2" CONDUIT  
 3-1/C 2


SERVICE CABINET TO HH 1:  
 2" CONDUIT  
 2-3/C 14 (LUM)  
 SERVICE CABINET TO HH 15:  
 2" CONDUIT  
 2-3/C 14 (LUM)  
 SERVICE CABINET TO EXTERNAL GR. RD.:  
 1" CONDUIT  
 1-1/C 6 INS. GR.  
 (SEE EQUIPMENT PAD LAYOUT)

(B)

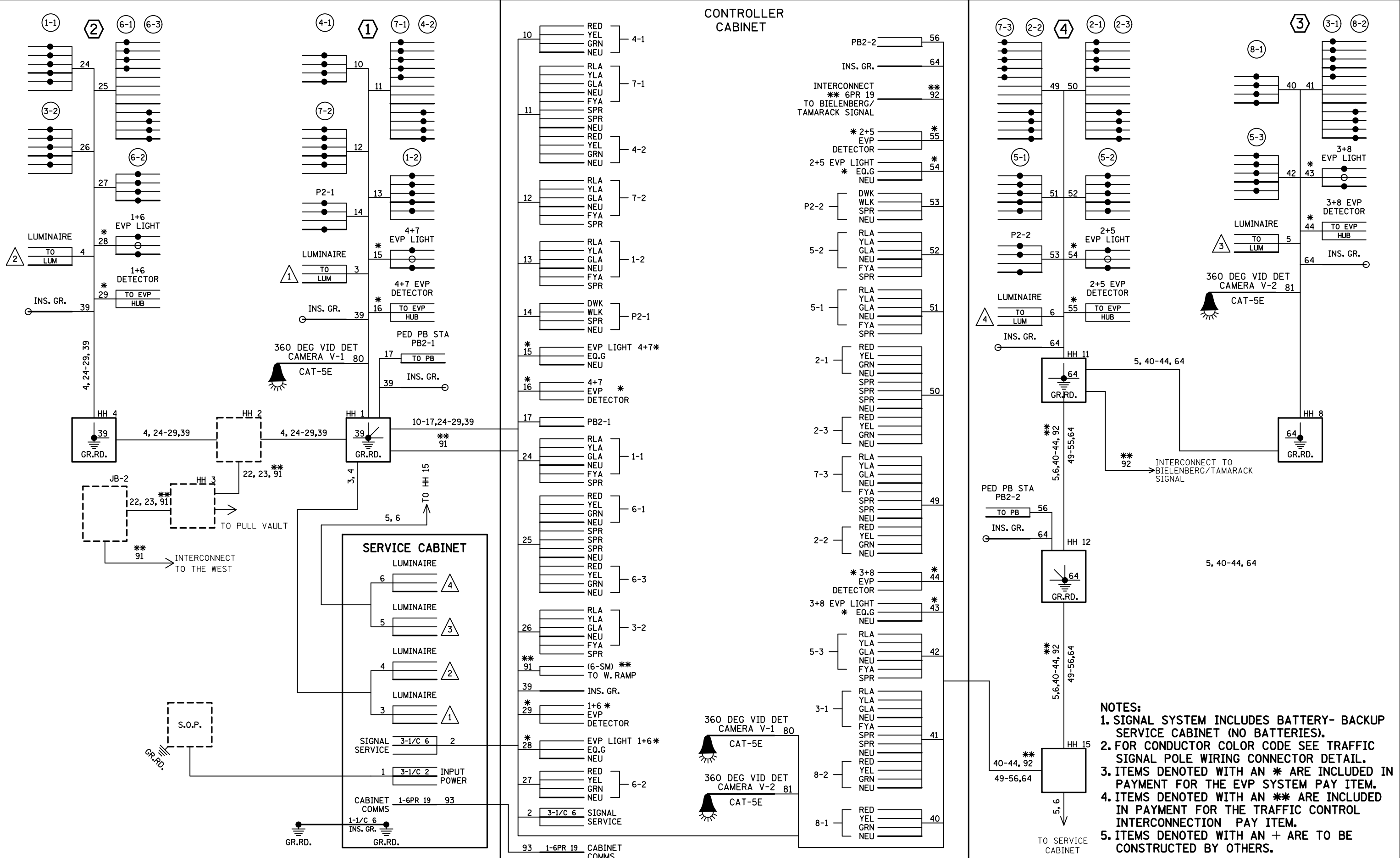
INPLACE SOP - GROUND MOUNTED  
 TRANSFORMER (XCEL ENERGY)  
 2" CONDUIT INTO SERVICE CABINET:  
 3-1/C 2

NOTES:

- 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.
- ITEMS DENOTED WITH AN + ARE TO BE CONSTRUCTED BY OTHERS.

BY	DATE	REVISIONS	SYSTEM ID: 2398889 T.E. 6019	<b>INTERSECTION NOTES</b> <b>TRAFFIC CONTROL SIGNAL SYSTEM B</b> <b>TH 494 AT TAMARACK RD EAST RAMP</b> <b>IN WOODBURY, WASHINGTON COUNTY</b>	S.A.P. NO. 192-143-002	DRAWN BY: JAR	CKD BY: BPV	DATE: 7-6-18
SJK	1/4/22	SP 8286-81 AS-BUILT PLAN	METER ADDRESS: 7323 TAMARACK RD.		CERTIFIED BY: 	LIC. NO. 40444	DATE: 7-9-18	
			OLD SYSTEM ID: 22428		<b>STATE PROJ. NO. 8286-81 (T.H. 694) SHEET NO. SS14 OF SS33 SHEETS</b>			

DISTRICT #: Metro  
 PLOT NAME: wiring diagram  
 PATH & FILENAME: Projects\DM罗斯4940000\Traffic\Sigals\58.6 TH494 @ TAMARACK RD E RAMP 2398889\2398889\_sgl\dwg\TOTTED/REVISED: 4-JAN-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.
  5. ITEMS DENOTED WITH AN + ARE TO BE CONSTRUCTED BY OTHERS.

BY	DATE	REVISIONS
SJK	1/4/22	SP 8286-81 AS-BUILT PLAN

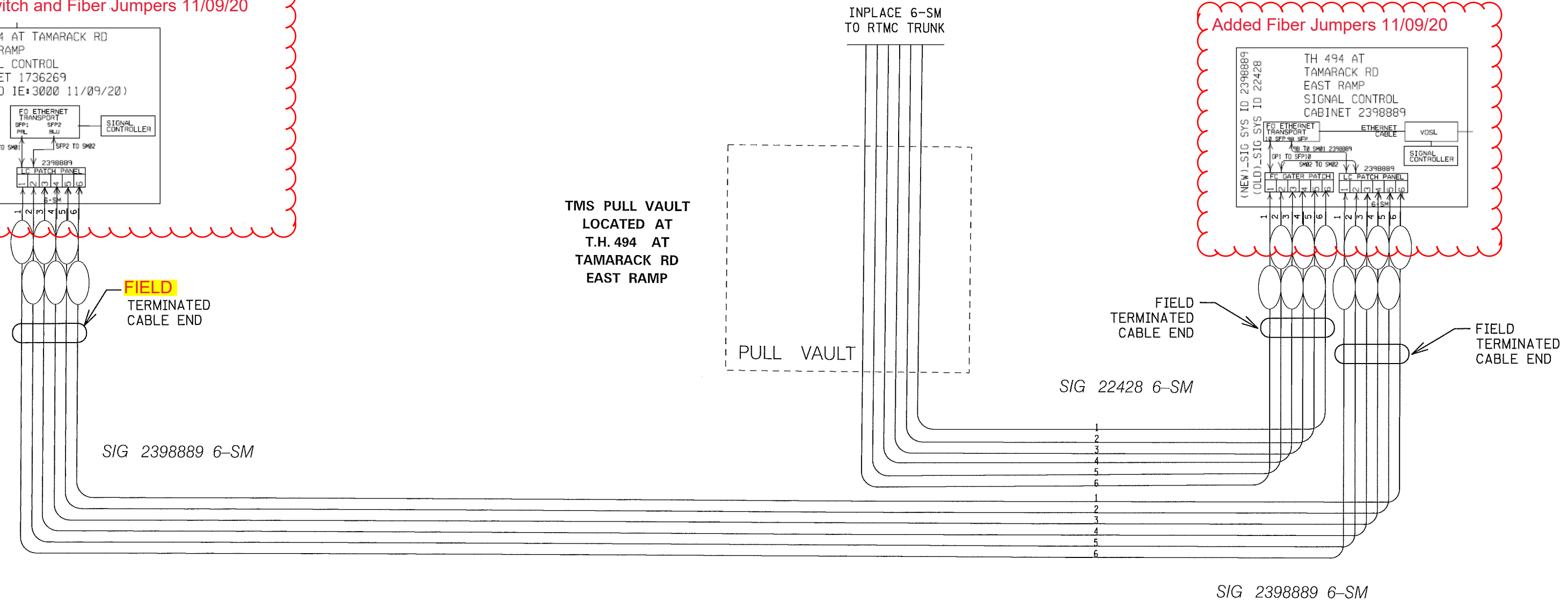
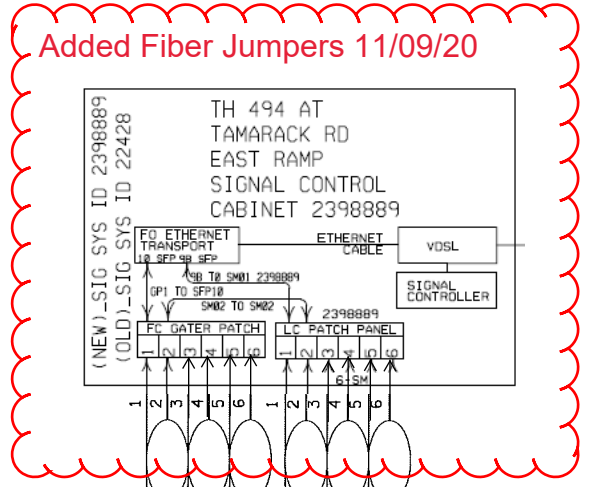
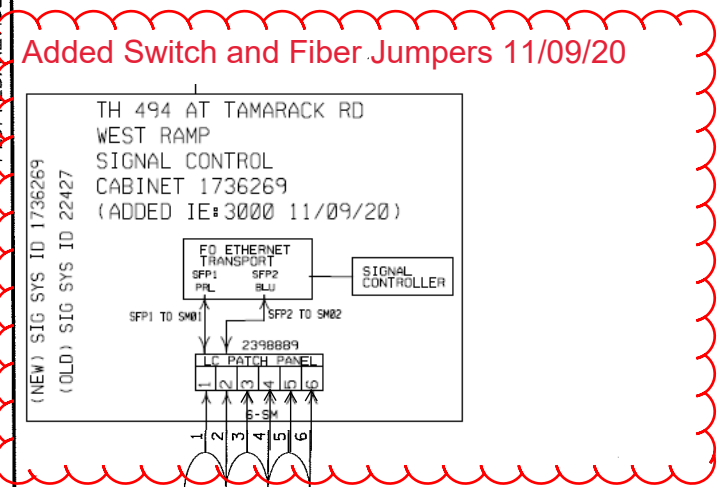
SYSTEM ID: 2398889 T.E. 6019  
 METER ADDRESS: 7323 TAMARACK RD.  
 OLD SYSTEM ID: 22428

**FIELD WIRING DIAGRAM**  
**TRAFFIC CONTROL SIGNAL SYSTEM B**  
**TH 494 AT TAMARACK RD EAST RAMP**  
**IN WOODBURY, WASHINGTON COUNTY**

S.A.P. NO. 192-143-002  
 DRAWN BY: JAR CKD BY: BPV DATE: 7-6-18  
 CERTIFIED BY: *[Signature]* L.C. NO. 40444 DATE: 7-9-18  
 STATE PROJ. NO. 8286-81 (T.H. 694) SHEET NO. SS15 OF SS33 SHEETS

# FIBER OPTIC SCHEMATIC (FOR SIGNAL COMMUNICATIONS)

PLOT FILE REVISED: 5-JUL-2018  
 I/PLOT NAME: SS009  
 PATH & FILENAME: Projects\DM\_R0S\694\8286\08\Traf\fo\Sig\dm\Traf\fo\Sig\dm\SSP\_8286-81.dgn



① SEE SHEET SS7 FOR DETAILS ON TESTING AND SPLICING.

SP\_8286-81 03/08/21  
 TMS REDLINE  
 by Steve Pasnik TMS Integrator

BY	DATE	REVISIONS		FIBER OPTIC SCHEMATIC TRAFFIC CONTROL SIGNAL SYSTEM T.H. 494 AT TAMARACK RD WEST & EAST RAMP IN WOODBURY, WASHINGTON COUNTY	S.A.P. NO. 192-143-002 CERTIFIED BY  LIC. NO. 40444 LICENSED PROFESSIONAL ENGINEER	DRAWN BY: JAR CKD BY: BPV DATE: 7-6-18	DATE: 7-9-18 STATE PROJ. NO. 8286-81 (T.H. 694) SHEET NO. SS9 OF SS33 SHEETS
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