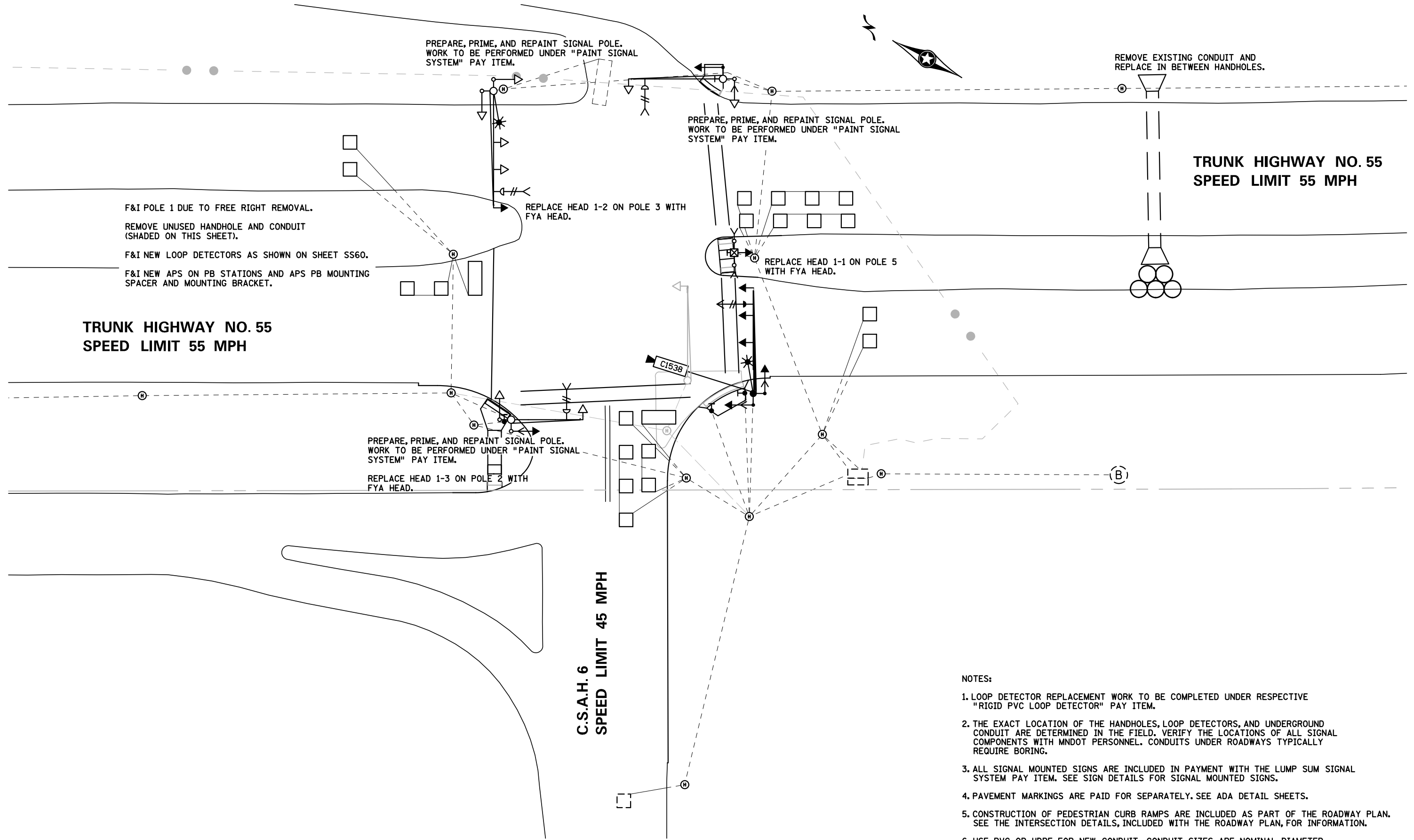


PLOTTED/REVISED: 17-NOV-2023

I/PLOT NAME: (59)CSAH 6 Overview
FILE NAME: Projects\DM_PROS\055\0000\Traffic\Signal\B16 TH55 @ CSAH 6 1735399\PEND\ING\IT 35399.sgi



NOTES:

1. LOOP DETECTOR REPLACEMENT WORK TO BE COMPLETED UNDER RESPECTIVE "RIGID PVC LOOP DETECTOR" PAY ITEM.
2. THE EXACT LOCATION OF THE HANDHOLES, LOOP DETECTORS, AND UNDERGROUND CONDUIT ARE DETERMINED IN THE FIELD. VERIFY THE LOCATIONS OF ALL SIGNAL COMPONENTS WITH MNDOT PERSONNEL. CONDUITS UNDER ROADWAYS TYPICALLY REQUIRE BORING.
3. ALL SIGNAL MOUNTED SIGNS ARE INCLUDED IN PAYMENT WITH THE LUMP SUM SIGNAL SYSTEM PAY ITEM. SEE SIGN DETAILS FOR SIGNAL MOUNTED SIGNS.
4. PAVEMENT MARKINGS ARE PAID FOR SEPARATELY. SEE ADA DETAIL SHEETS.
5. CONSTRUCTION OF PEDESTRIAN CURB RAMPS ARE INCLUDED AS PART OF THE ROADWAY PLAN. SEE THE INTERSECTION DETAILS, INCLUDED WITH THE ROADWAY PLAN, FOR INFORMATION.
6. USE PVC OR HDPE FOR NEW CONDUIT. CONDUIT SIZES ARE NOMINAL DIAMETER.

BY	DATE	REVISIONS

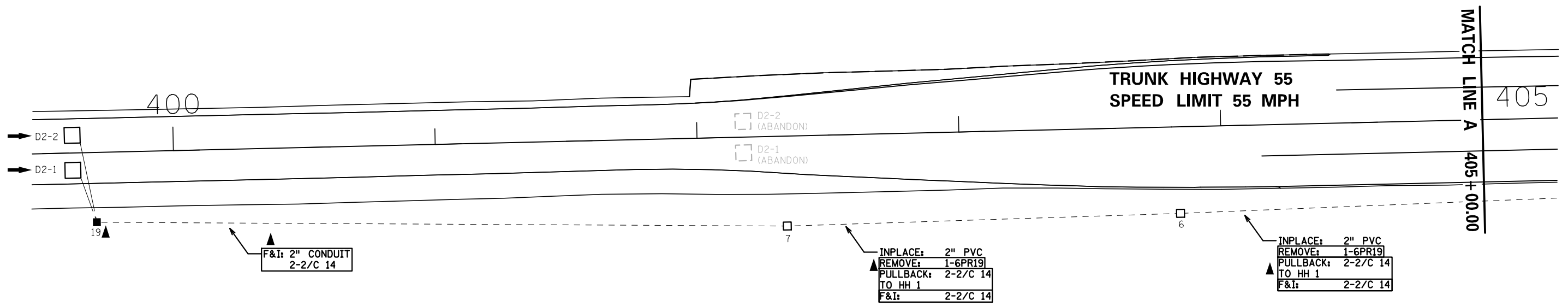
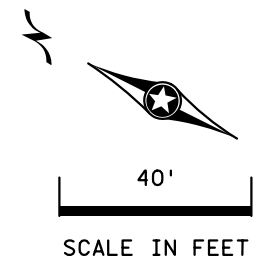
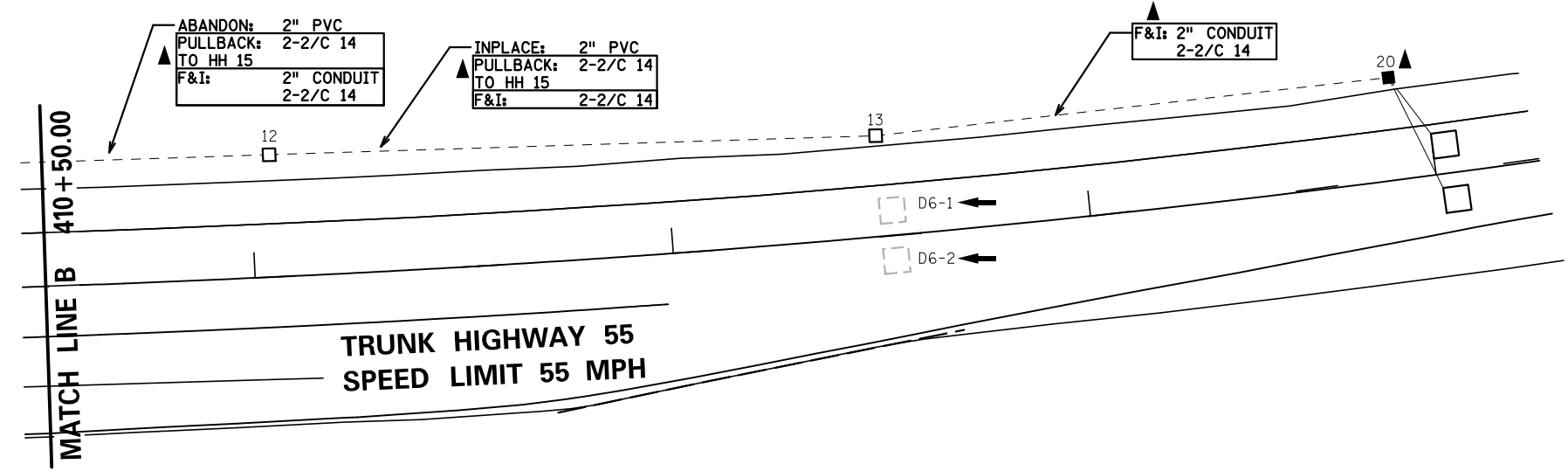
SYSTEM ID: 1735399 T.E. 94910
 METER ADDRESS: 12755 T.H. 55
 OLD SYSTEM ID:

WORK OVERVIEW
 REVISE SIGNAL SYSTEM G
 T.H. 55 AT C.S.A.H. 6
 IN PLYMOUTH, HENNEPIN COUNTY

S.A.P. NO. 155-010-006 DRAWN BY: MJB CKD BY: GAK DATE: 11/17/23
 CERTIFIED BY: *Gregory Ken* LIC. NO. 26829 DATE: 11/17/23
 STATE PROJ. NO. 2723-144 (T.H.55) SHEET NO. SS59 OF SS80 SHEETS

PLOTTED/REVISED: 24-OCT-2023

IPLOT NAME: (61)CSAH 6 Matchlines
 FILENAME: Projects\DM_FROSO55\000001Traffic\Signal\B16 TH55 @ CSAH 6 1735399\PENDING\NIT 35399.sgl



▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.

REPLACE LOOP DETECTOR WORK TO BE COMPLETED WITH THIS PROJECT IS INDICATED WITH A ➡.

BY	DATE	REVISIONS

SYSTEM ID: 1735399 T.E. 94910
 METER ADDRESS: 12755 T.H. 55
 OLD SYSTEM ID:

MATCH LINES
 REVISE SIGNAL SYSTEM G
 T.H. 55 AT C.S.A.H. 6
 IN PLYMOUTH, HENNEPIN COUNTY

S.A.P. NO. 155-010-006 DRAWN BY: MJB CKD BY: GAK DATE: 10/06/23
 CERTIFIED BY *Gregory Ken* LIC. NO. 26829 DATE: 10/24/23
 STATE PROJ. NO. 2723-144 (T.H.55) SHEET NO. SS61 OF SS80 SHEETS

PLOTTED/REVISED: 24-OCT-2023

PLOT NAME: (62)CSAH 6 Notes
FILENAME: Projects\DM罗斯05500000TrafficSignals\B16 TH55 @ CSAH 6 1735399\PEND\ING\IT 35399_.sgl

3 INPLACE: PA100 POLE FOUNDATION
PA100-A50-D40-9 (DAVIT AT 350°)
2-SWING AWAY HINGES
2-ONE WAY SIGNALS OVERHEAD AT
17' & 29' FROM END OF MAST ARM
ONE WAY EVP DETECTOR & LIGHT
(PHASES 1+6)
2-TYPE 10A AT 0° & 270°
2-R9-3 SIGNS (FACING POLES 2 & 4)
3" RSC TO HH 9 WITH
2-12/C 12
1-3/C 12
1-3/C 20

REMOVE: 1-LUMINAIRE-200W HPS
1-SIGNAL INDICATION OVERHEAD AT 0' (1-2)
1-3/C 12
1-3/C 12 (LUM)

F&I: 1-LUMINAIRE-LED
1-SIGNAL INDICATION OVERHEAD AT 0' (1-2) (4-SECTION FYA)
1-R10-X12 SIGN ADJACENT TO HEAD (1-2)
1-6/C 14 (1-2)
1-3/C 14 (LUM)
1-1/C 6 INS. GR.

4 INPLACE: PA100 POLE FOUNDATION
TYPE PA100-A40
ONE WAY SIGNAL OVERHEAD
TYPE 10B AT 180°
1-R9-3 SIGN (FACING POLE 3)
ONE WAY EVP DETECTOR & LIGHT
(PHASE 8)
3" RSC INTO HH 10 WITH
2-12/C 12
1-3/C 20

REMOVE: TYPE 10A AT 90°
1-PED PB & SIGN
1-3/C 12

F&I: 1-D40-9 DAVIT ON TOP OF POLE
(MOUNTED ON 350°)
1-LUMINAIRE-LED
1-ANGLE MOUNT SIGNAL AT 90° (5-2)
1-APS PB AND SIGN (RT ARROW) (PB8-2)
1-APS PB MOUNTING BRACKET
1-3/C 14 (LUM)
1-2/C 14
1-1/C 6 INS. GR.

5 INPLACE: PEDESTAL FOUNDATION
TYPE 1D
10' SIGNAL PEDESTAL PLUS BASE
3" RSC INTO HH 14 WITH
1-12/C 12

REMOVE: 1-SIGNAL INDICATION (1-1) ON SIGNAL BRACKETING
1-PED PUSH BUTTON
1-3/C 12

F&I: 1-SIGNAL INDICATION (1-1) (4-SECTION FYA)
MOUNTED ON SIGNAL BRACKETING
1-APS PB AND SIGN (DOUBLE ARROW) (PB8-3)
ON APS PB MOUNTING SPACER
1-2/C 14
1-1/C 6 INS. GR.

2 INPLACE: PA85 POLE FOUNDATION
TYPE PA85-A30
ONE WAY SIGNAL OVERHEAD
TYPE 10B AT 0°
TYPE 10A AT 270°
1-R9-3 SIGN (FACING POLE 3)
ONE WAY EVP DETECTOR LIGHT (PHASE 4)
3" RSC INTO HH 4 WITH

REMOVE: 1-SIGNAL INDICATION ON TYPE B AT
0° (1-3)
1-3/C 12

PULLBACK: 2-12/C 12
TO HH 1 1-3/C 20

REPULL: 2-12/C 12
1-3/C 20

F&I: 1-D40-9 DAVIT ON TOP OF POLE
(MOUNTED AT 350°)
1-LUMINAIRE-LED
1-SIGNAL INDICATION ON TYPE B AT
0° (1-3) (4-SECTION FYA)
1-3/C 14 (LUM)
1-1/C 6 INS. GR.

1 REMOVE: PA100 POLE FOUNDATION
PA100-A40-1-X6-350/CAM 400 EXTENSION
(MOUNTED AT 355°)
2-SWING AWAY HINGES
LUMINAIRE 200W HPS
1-VIDEO CAMERA
3-ONE WAY SIGNALS OVERHEAD
0', 11' & 23' FROM END OF MAST ARM
ONE WAY EVP DETECTOR
& LIGHT (PHASES 2&5)
2-TYPE 10B AT 0° & 270°
1-CAMERA POWER SUPPLY
1-PED PB & SIGN
1-R9-3 SIGN (FACING POLE 2)
3" RSC TO HH 3 WITH
2-12/C 12
3-3/C 12
1-3/C 12 (LUM)
1-3/C 14 (CAMERA POWER)
1-3/C 20
1-COM CABLE
1-COAXIAL CABLE

F&I: PED PB STATION
1-APS PB AND SIGN
(LT ARROW) (PB8-1)
EXTEND INTO HH 1:
1" CONDUIT
1-2/C 14
1-1/C 6 INS. GR.

1 F&I: X=484830.5323 Y=175913.6765
PA100 POLE FOUNDATION
TYPE PA100-A-45-X6-350/CAM 400 EXTENSION (MOUNTED
AT 350°) (INCLUDES LIGHTNING ROD, 7/16" GROUND
BRAID AND GROUND ROD)
1-LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)

INSTALL: 1-PTZ VIDEO CAMERA (STATE FURNISHED)

F&I: 1-PAIR SWING AWAY HINGES
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0' (5-1)
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11' AND 23' (2-3, 2-2)
2-ANGLE MOUNT SIGNALS AT 90° AND 180° (4-3) (2-1)
2-ANGLE MOUNT C.D. PED HEADS AT 90° AND 180° (PB-1, P2-2)
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
(PHASES 2+5)
1-R10-X12 SIGN ADJACENT TO HEAD (5-1)
1-SIGN (HENNEPIN COUNTY 6) (SEE SIGN DETAILS)
1-R6-1R "ONE WAY" MOUNTED ON POLE
1-R6-1L "ONE WAY" MOUNTED ON POLE
3" CONDUIT INTO HH 1:
2-6/C 14
6-4/C 14
1-3/C 14
1-3/C 20
1-3/C 14 (LUM)
1-COM CABLE (CAT 5E) (PTZ)
1-7/16" GROUNDING BRAID (LIGHTNING ROD TO GROUND ROD)
1-1/C 6 INS. GR.

F&I: PED PB STATION
1-APS PB AND SIGN
(LT ARROW) (PB2-1)
EXTEND INTO HH 18:
1" CONDUIT
1-2/C 14
1-1/C 6 INS. GR.

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

A EQUIPMENT PAD (SEE DETAIL)
CONTROLLER & CABINET
SERVICE CABINET (PAD MOUNTED)
FURNISH: APS CONTROL UNIT

INPLACE: 4" RSC CABINET TO HH 1
2-12/C 12
1-3/C 20
6-2/C 14

REMOVE: 2-12/C 12
3-3/C 12
1-3/C 20
1-6PR19
1-COM CABLE
1-COAXIAL CABLE

F&I: 2-6/C 14
6-4/C 14
1-3/C 14
1-3/C 20
8-2/C 14
1-COM CABLE (CAT 5E) (PTZ)
1-1/C 6 INS. GR.

INPLACE: 4" RSC CABINET TO HH 15
5-12/C 12
2-3/C 20
6-2/C 14

REMOVE: 1-3/C 12

F&I: 1-6/C 14
5-2/C 14
1-1/C 6 INS. GR.

3" RSC STUBBED OUT OF PAD
1-6PR19

LOAD CENTER TO CABINET
1 1/4" RSC
2-1/C 6
1-1/C 6 INS. STRANDED EQ.G

INPLACE: LOAD CENTER TO HH 15
REMOVE: 2-3/C 12 (LUM)
1-3/C 14 (CAMERA POWER)

F&I: 4-3/C 14 (LUM)

HH 1 TO HH 15
INPLACE: 2" RSC:
F&I: 2-3/C 14 (LUM)

LOAD CENTER TO HH 16
2" RSC
3-1/C 2

B SOP NSP POWER POLE (INPLACE)
2" RSC RISER & WEATHERHEAD
3-1/C 2
2" RSC TO HH 16
3-1/C 2

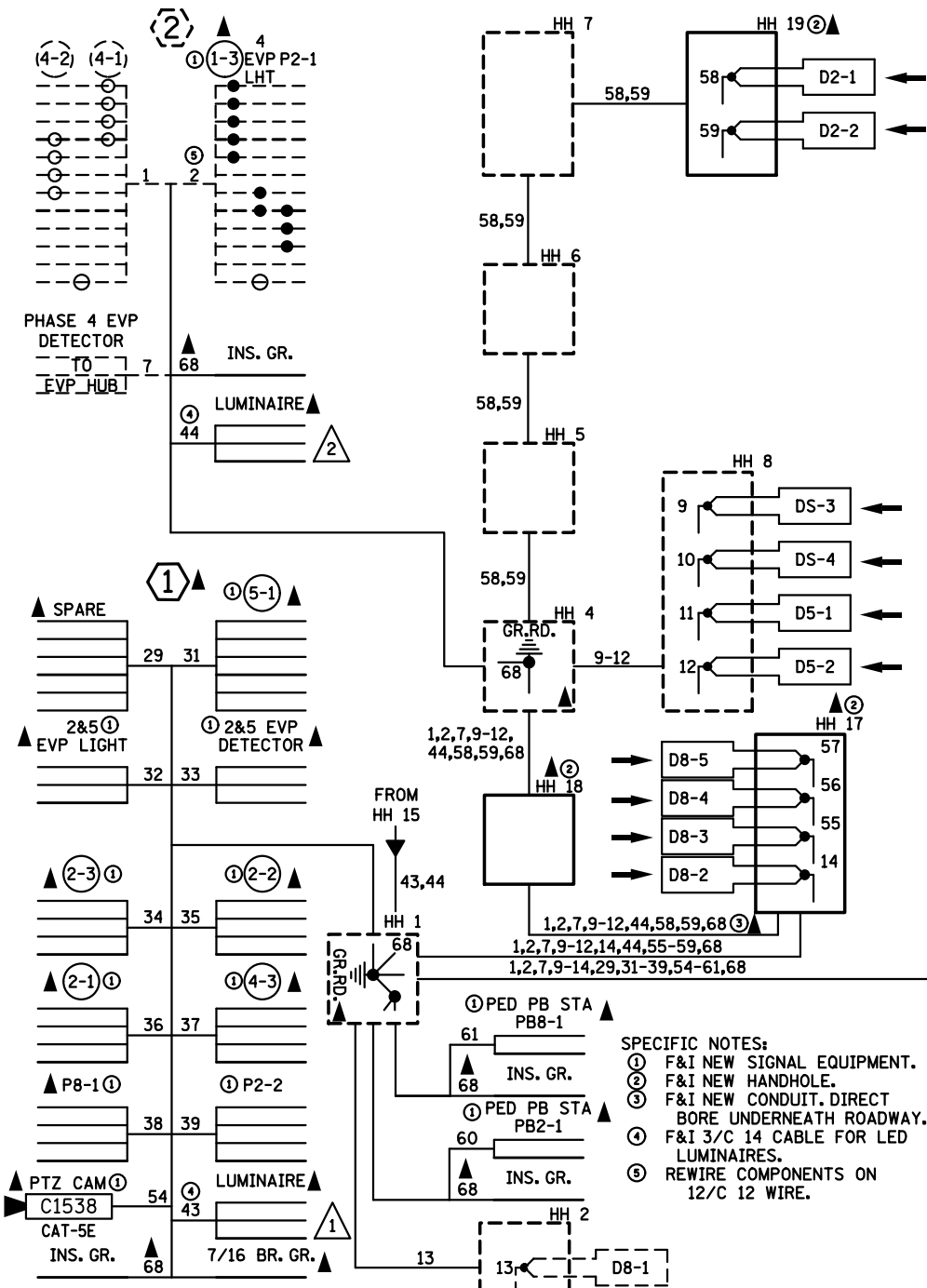
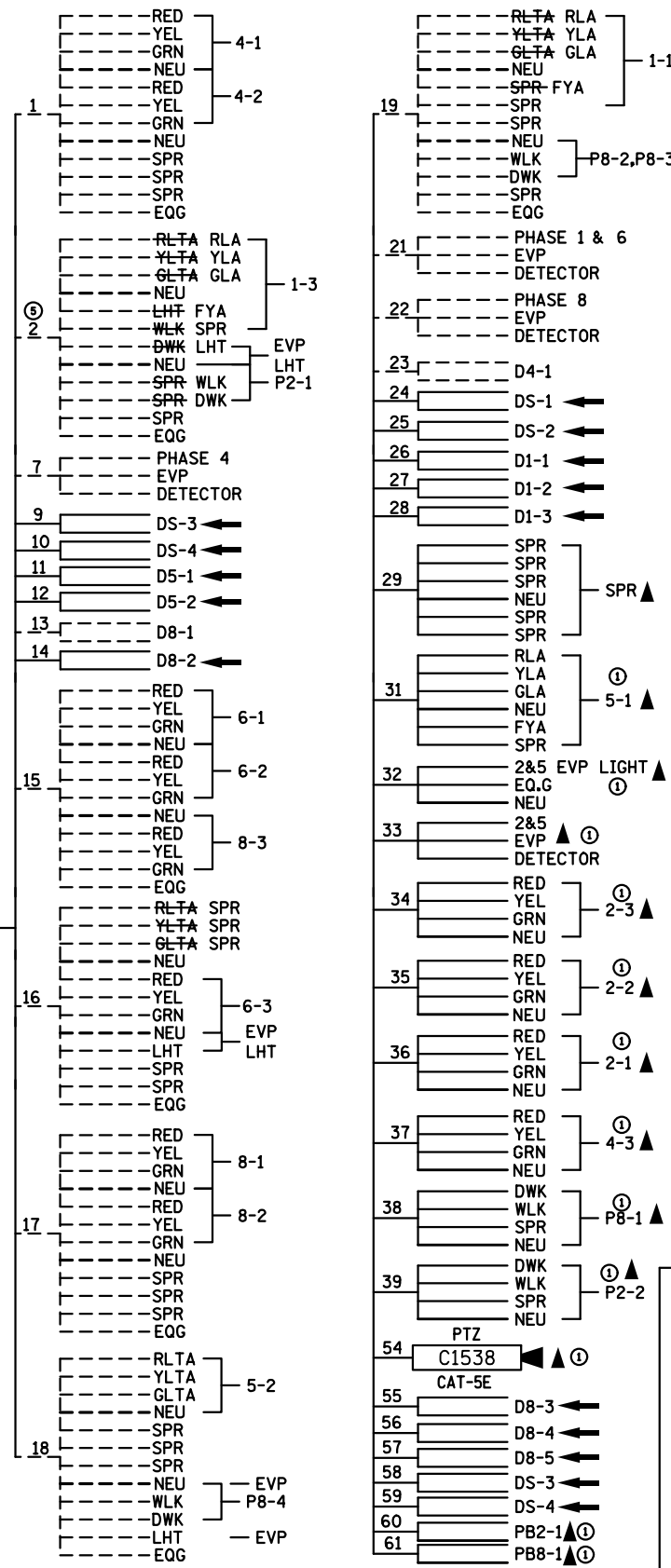
▲ DENOTES REVISE SIGNAL
SYSTEM PAY ITEM WORK.
ALL OTHER ITEMS SHOWN
ARE INPLACE.

BY	DATE	REVISIONS	SYSTEM ID: 1735399	T.E. 94910	POLE NOTES	S.A.P. NO. 155-010-006	DRAWN BY: MJB	CKD BY: GAK	DATE: 10/23/23
			METER ADDRESS: 12755 T.H. 55		REVISE SIGNAL SYSTEM G	CERTIFIED BY: <i>Gregory Ken</i>	LIC. NO. 26829		DATE: 10/24/23
			OLD SYSTEM ID:		T.H. 55 AT C.S.A.H. 6	STATE PROJ. NO. 2723-144 (T.H.55)		SHEET NO. SS62 OF SS80 SHEETS	
					IN PLYMOUTH, HENNEPIN COUNTY				

PLOTTED/REVISED: 17-NOV-2023

PLOT NAME: (65)CSAH 6 Wiring 2 of 2
FILE NAME: Project\DM_ROMS\055\0000\Traffic\Signal\B16 TH55 @ CSAH 6 1735399\PEND\ING\1735399.sgf

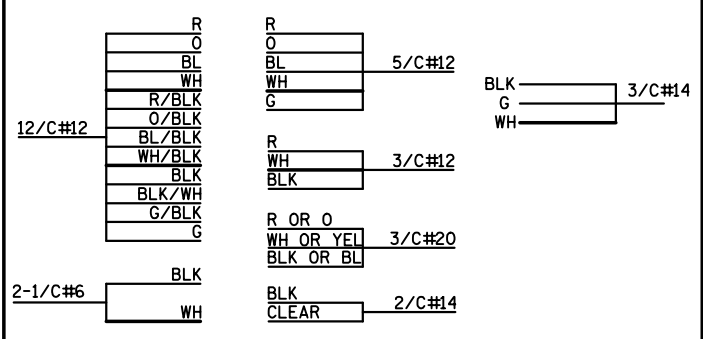
CONTROLLER CABINET



SPECIFIC NOTES:

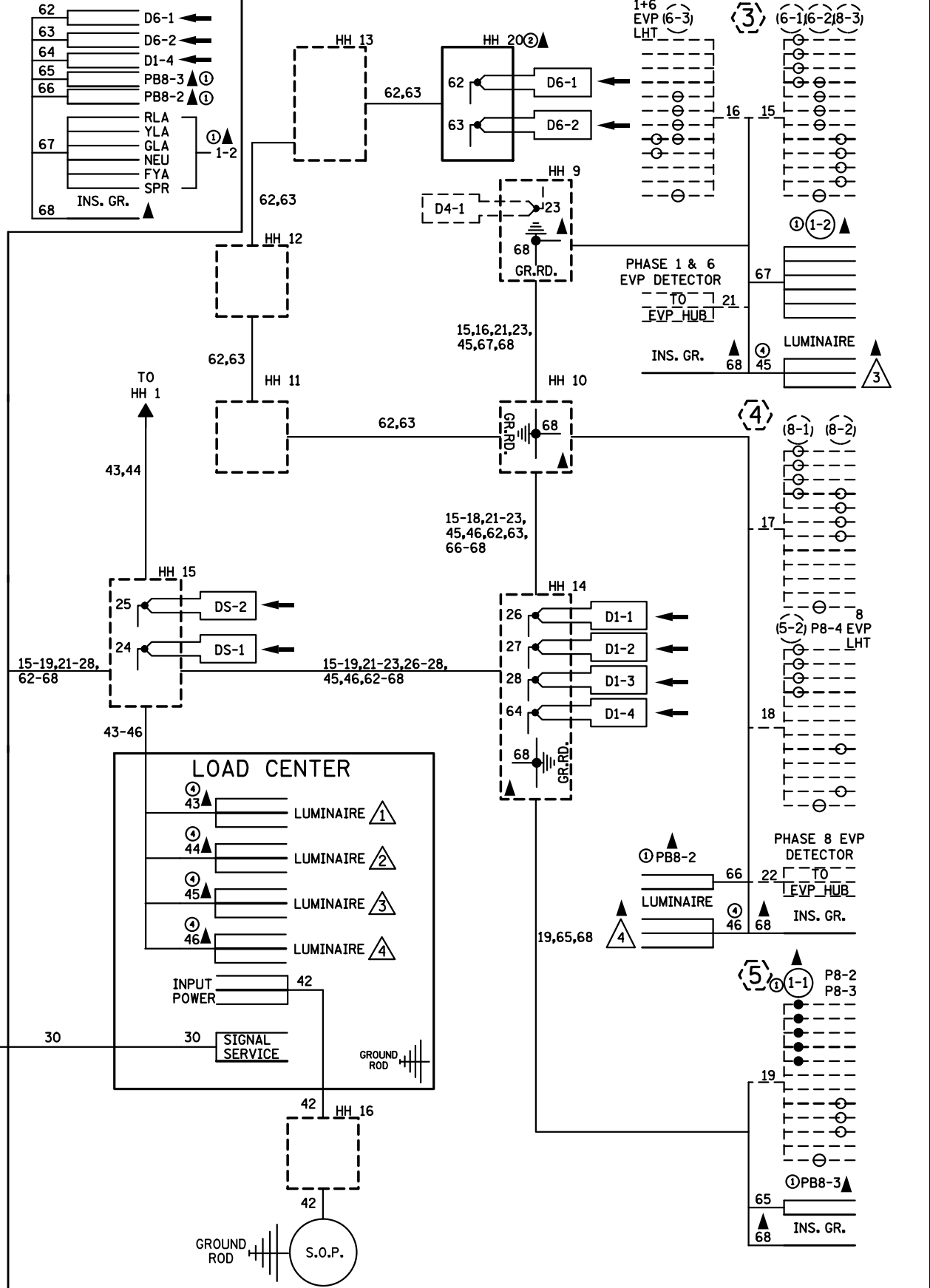
- ① F&I NEW SIGNAL EQUIPMENT.
- ② F&I NEW HANDHOLE.
- ③ F&I NEW CONDUIT, DIRECT BORE UNDERNEATH ROADWAY.
- ④ F&I 3/C 14 CABLE FOR LED LUMINAIRES.
- ⑤ REWIRE COMPONENTS ON 12/C 12 WIRE.

CONDUCTOR COLOR CODING



NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.



REPLACE LOOP DETECTOR WORK TO BE COMPLETED WITH THIS PROJECT IS INDICATED WITH A ▲

BY	DATE	REVISIONS	SYSTEM ID: 1735399	T.E. 94910	REVISED WIRING DIAGRAM	S.A.P. NO. 155-010-006	DRAWN BY: MJB	CKD BY: GAK	DATE: 11/17/23
			METER ADDRESS: 12755 T.H. 55		REVISE SIGNAL SYSTEM G	CERTIFIED BY: <i>Gregory Ken</i>	LIC. NO. 26829		DATE: 11/17/23
			OLD SYSTEM ID:		T.H. 55 AT C.S.A.H. 6	LICENSED PROFESSIONAL ENGINEER			
					IN PLYMOUTH, HENNEPIN COUNTY	STATE PROJ. NO. 2723-144 (T.H.55)			SHEET NO. SS65 OF SS80 SHEETS

PVC LOOP DETECTORS

NUMBER	SIZE (FEET)	LOCATION
D1-1,D1-2	6X6	40
D1-3	2-6X6	10
D2-1,D2-2	6X6	475
D6-1,D6-2	6X6	475
D5-1	6X6	10
D5-2	6X6	40
D4-1	6X20	0
D8-1	6X6	180
D8-2	6X6, 6X12	10 & 40

SIGNAL HEAD CHART

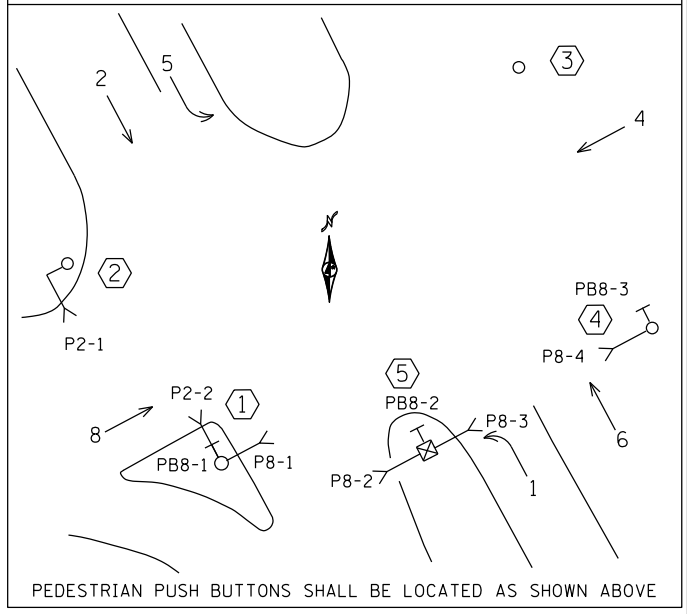
SIGNAL INDICATIONS SHALL BE 12"

FACES	R	Y	G
1-1,1-2,1-3	←	←	←
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	○	○	○

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 5 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES
- PHASE 6 SHALL BE ON VEHICLE RECALL
- PHASE 2 SHALL BE ON PEDESTRIAN RECALL.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS, & PUSH BUTTONS



PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

LOCATION = DISTANCE IN FT. FROM STOP BAR/PEDESTRIAN MARKINGS TO FRONT OF DETECTOR

1 PA100 POLE FOUNDATION
 PA100-A40- 1-X6-350/CAM 400 EXTENSION (MOUNTED AT 355 DEG)
 2-SWING AWAY HINGES
 LUMINAIRE 200W HPS
 1-VIDEO CAMERA
 3-ONE WAY SIGNALS OVERHEAD
 0', 11' & 23' FROM END OF MAST ARM
 ONE WAY EVP DETECTOR & LIGHT (PHASES 2+5)
 2-TYPE 10B AT 0 & 270 DEG
 1-CAMERA POWER SUPPLY
 1-PED PB & SIGN
 1-R9-3 SIGN (FACING POLE 2)
 3" RSC TO HH 3 WITH
 2-12/C#12
 3-3/C#12
 1-3/C#12 (LUM)
 1-3/C#14 (CAMERA POWER)
 1-3/C#20
 1-COM CABLE
 1-COAXIAL CABLE

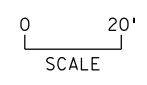
4 PA100 POLE FOUNDATION
 TYPE PA100-A40
 ONE WAY SIGNAL OVERHEAD
 TYPE 10A AT 90 DEG
 TYPE 10B AT 180 DEG
 1-PED PB & SIGN
 1-R9-3 SIGN (FACING POLE 3)
 ONE WAY EVP DETECTOR & LIGHT (PHASE 8)
 3" RSC INTO HH 10 WITH
 2-12/C#12
 2-3/C#12
 1-3/C#20

5 PEDESTAL FOUNDATION
 TYPE 1D
 10' SIGNAL PEDESTAL PLUS BASE
 1-PED PUSH BUTTON
 3" RSC INTO HH 14 WITH
 1-12/C#12
 2-3/C#12

2 PA85 POLE FOUNDATION
 TYPE PA85-A30
 ONE WAY SIGNAL OVERHEAD
 TYPE 10BAT 0 DEG
 TYPE 10A AT 270 DEG
 1-R9-3 SIGN (FACING POLE 3)
 ONE WAY EVP DETECTOR LIGHT (PHASE 4)
 3" RSC INTO HH 4 WITH
 2-12/C#12
 1-3/C#12
 1-3/C#20

3 PA100 POLE FOUNDATION
 PA100-A50-D40-9 (DAVIT AT 350 DEG)
 LUMINAIRE-200W HPS
 2-SWING AWAY HINGES
 3-ONE WAY SIGNALS OVERHEAD
 0', 17' & 29' FROM END OF MAST ARM
 ONE WAY EVP DETECTOR & LIGHT (PHASES 1+6)
 2-TYPE 10A AT 0 & 270 DEG
 2-R9-3 SIGNS (FACING POLES 2 & 4)
 3" RSC TO HH 9 WITH
 2-12/C#12
 1-3/C#12
 1-3/C#12 (LUM)
 1-3/C#20

DISTRICT #: \$@DISTRICT@
 PLOT NAME: \$\$\$@PLOT\$NAME@
 PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$



BY	DATE	REVISIONS
EJA	07-08-14	AS-BUILT OF SP 2700-54 CAMERA & FIBER

SYSTEM ID: 20857 T.E. 5159
 METER ADDRESS: 12755 T.H. 55
 MASTER ID: T.E.

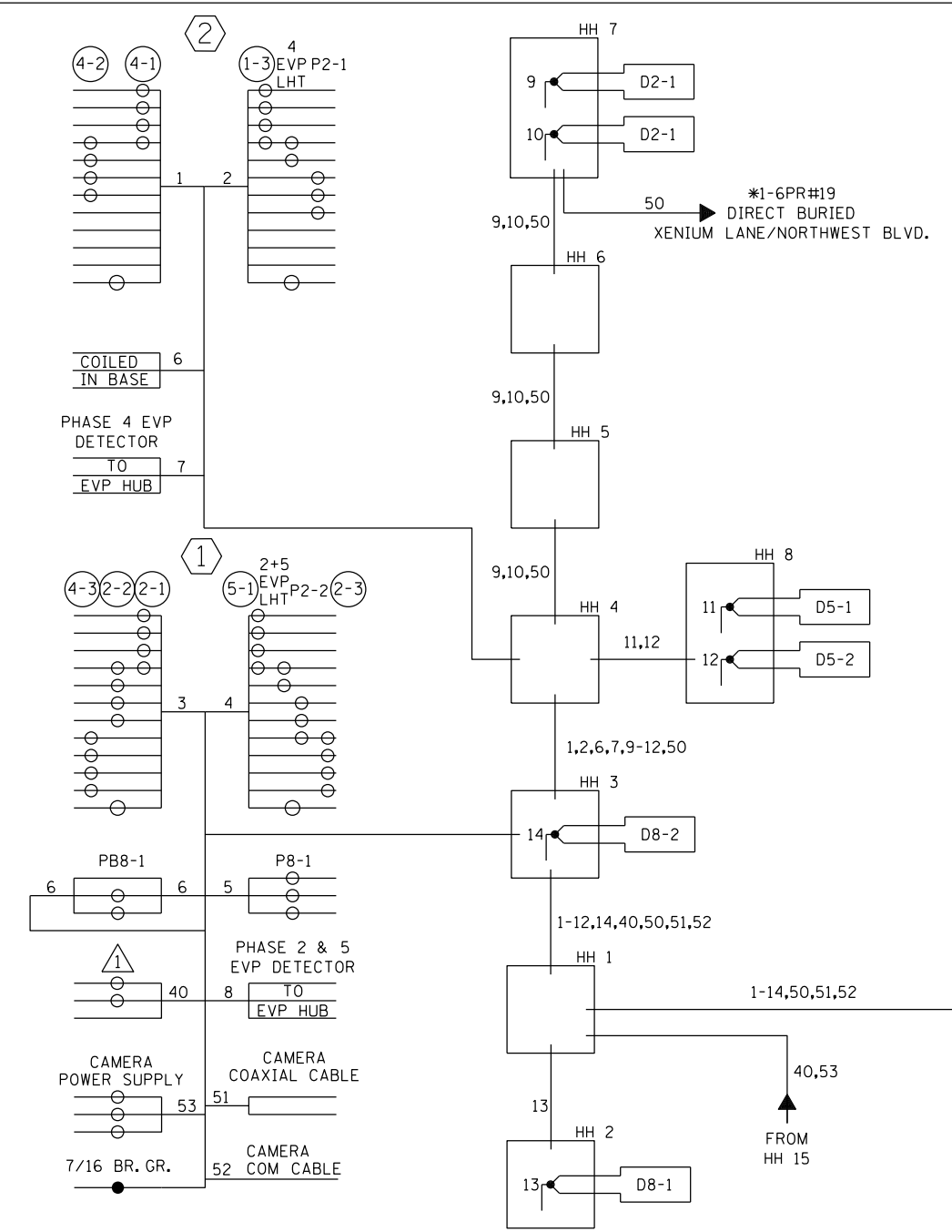
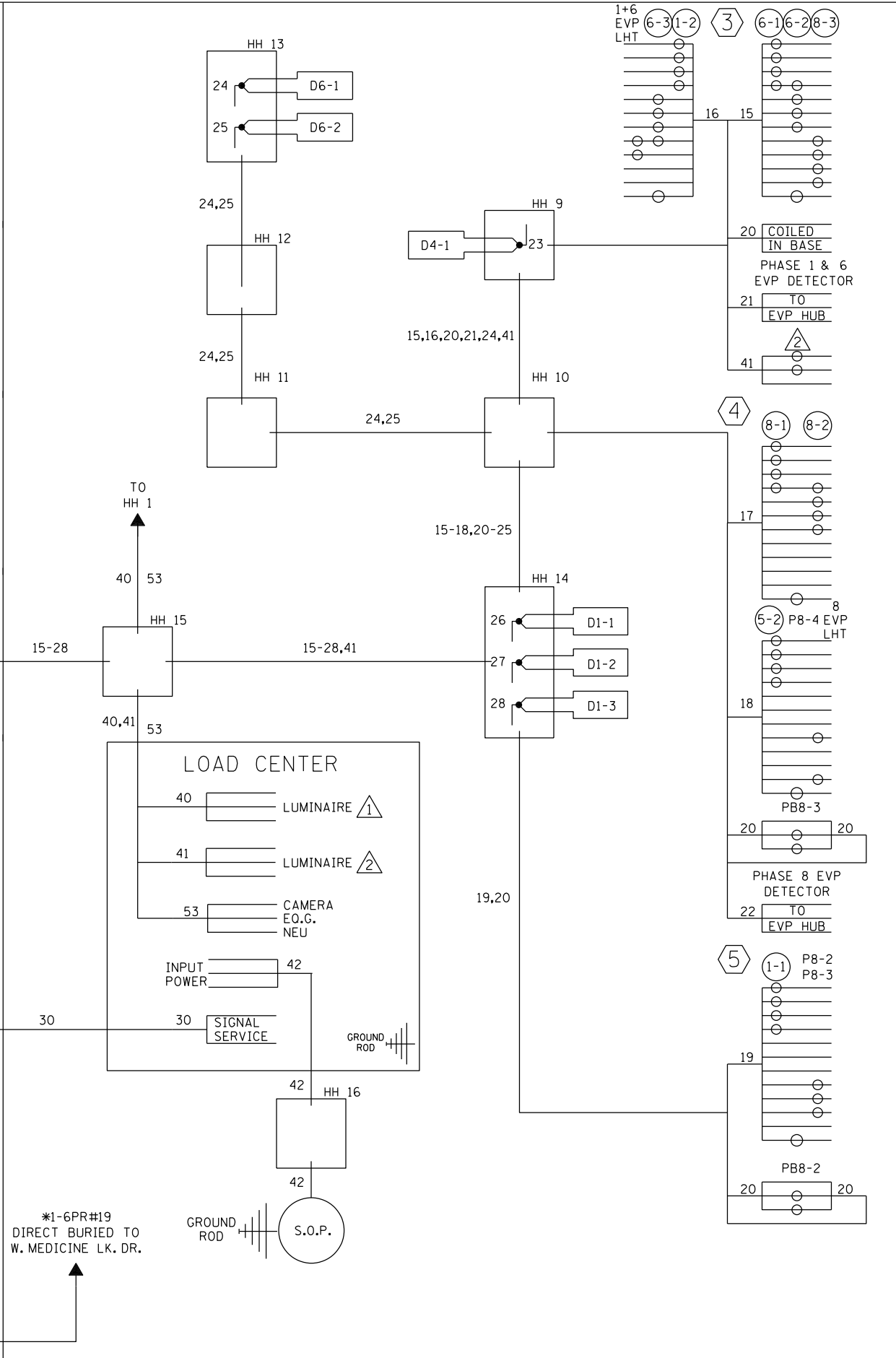
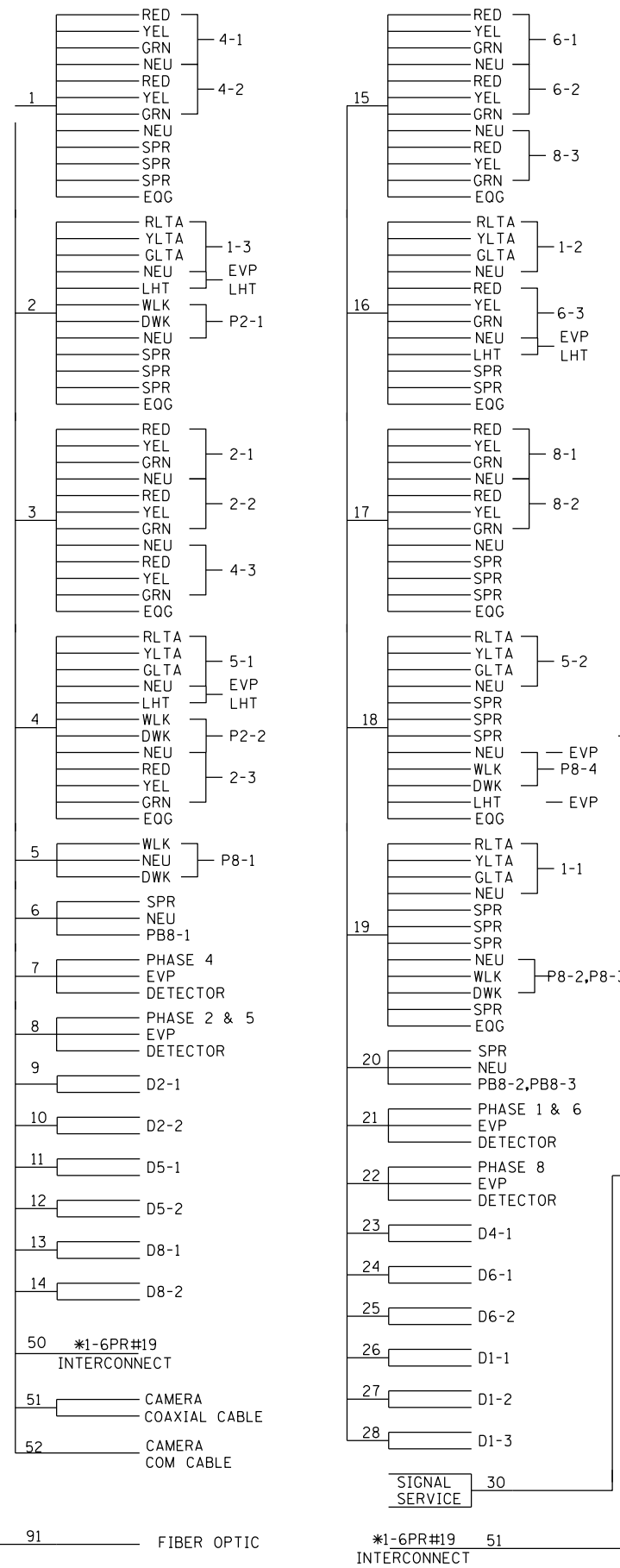
INTERSECTION LAYOUT
 T.H. 55 AT CSAH 6
 IN PLYMOUTH, HENNEPIN COUNTY

S.A.P. NO. _____
 DRAWN BY: MAS CKD BY: MJF DATE: 5-20-10
 CERTIFIED BY *[Signature]* LIC. NO. 43062 DATE: 9-15-10
 LICENSED PROFESSIONAL ENGINEER
 STATE PROJ. NO. (TH 55) SHEET NO. 1 OF 3 SHEETS

PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

DISTRICT #: \$\$\$@DISTRICT@\$\$
PLOT NAME: \$\$\$@PLOT\$NAME@\$\$
PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$

CONTROLLER CABINET



CONDUCTOR COLOR CODING

R	5/C#12
BL	5/C#12
WH	5/C#12
R/BLK	3/C#12
O/BLK	3/C#12
BL/BLK	3/C#12
WH/BLK	3/C#12
BLK	3/C#20
BLK/WH	3/C#20
G/BLK	3/C#20
G	3/C#20
R OR O	3/C#20
WH OR YEL	3/C#20
BLK OR BL	3/C#20
BLK	2/C#14
WH	2/C#14
BLK	3/C#14
WH	3/C#14

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE

FIBER TO TMS VAULT (SEE TMS PLAN)
91 FIBER OPTIC

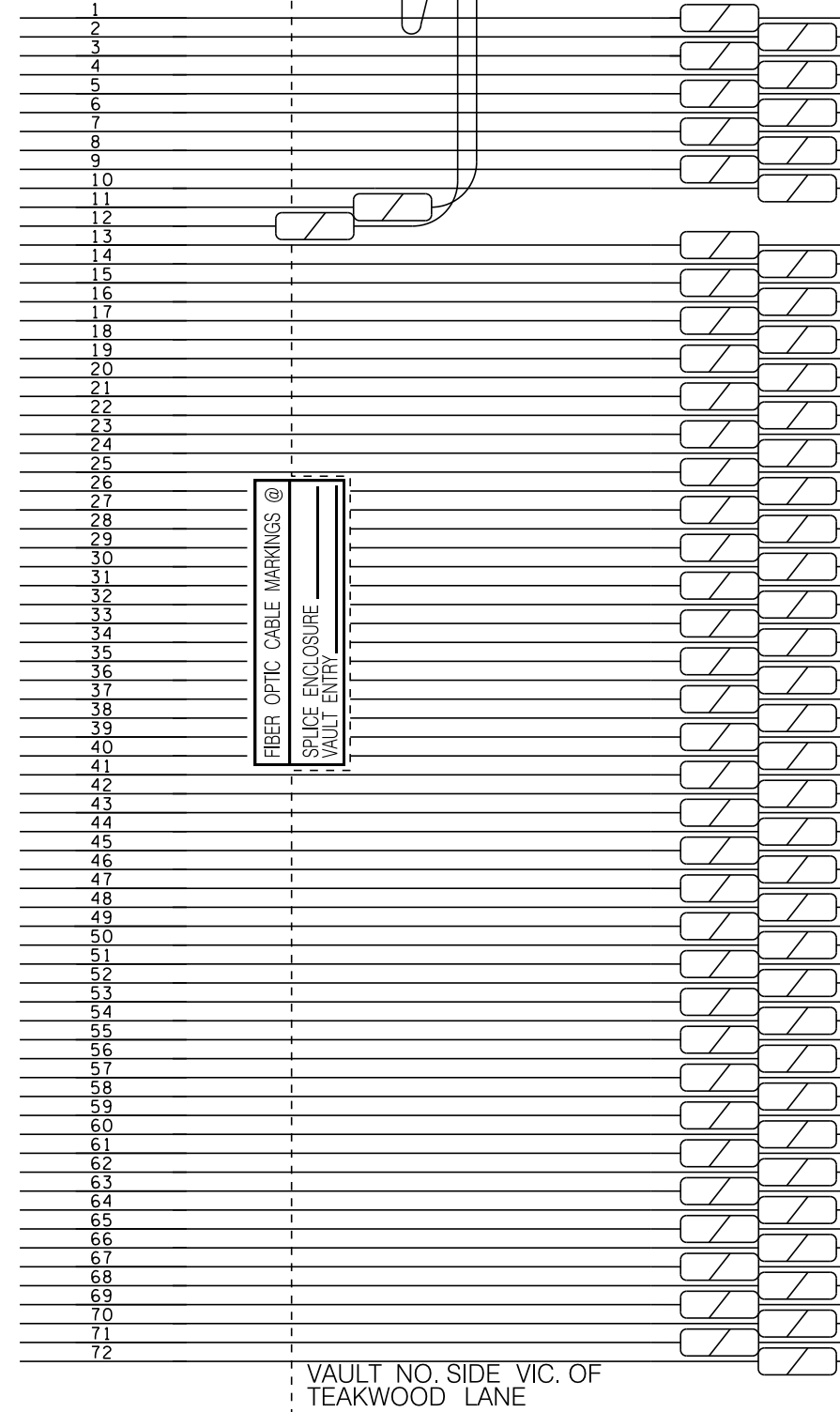
BY	DATE	REVISIONS
EJA	07-08-14	AS-BUILT OF SP 2700-54 CAMERA & FIBER

SYSTEM ID: 20857 T.E. 5159
 METER ADDRESS: 12755 T.H. 55
 MASTER ID: T.E.

WIRING DIAGRAM
 T.H. 55 AT CSAH 6
 IN PLYMOUTH, HENNEPIN COUNTY

S.A.P. NO.	DRAWN BY: MAS	CKD BY: MJF	DATE: 5-20-10
CERTIFIED BY: <i>[Signature]</i>	LIC. NO. 43062	DATE: 9-15-10	
STATE PROJ. NO. (TH 55)	SHEET NO. 3 OF 3 SHEETS		

F-55.26



PIGTAIL ID#:
SIG 22093
ID 1736061

F-55.25



PIGTAIL ID#:
SIG 20857
ID 1735399

F-55.24

DESIGN TEAM				
DESIGNED BY:	JAH			
DRAWN BY:	BWS			
CHECKED BY:	JAH			
NO.	DATE	DWN	CKD	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CERTIFIED BY: *Joel A. Hinnenkamp* LIC NO. 53081
 Licensed Professional Engineer

PRINTED NAME: JOEL A. HINNENKAMP, P.E. DATE: 10/12/2023



TRAFFIC MANAGEMENT SYSTEM PLANS
 COMMUNICATION SCHEMATICS/TESTING

STATE PROJ. NO. 2723-144 (TH 55), SAP 155-010-006

SZ41
 OF SZ42



1-6PR#19
DIRECT BURIED TO
XENIUM LANE/NORTHWEST BLVD.

D2-1
D2-2

7

2" PVC
2-2/C#14
1-6PR#19

6

T.H. 55 E.B.
ZONED 55 M.P.H.

2" PVC
2-2/C#14
1-6PR#19

5

MATCH LINE "A"

MATCH LINE "B"

T.H. 55 W.B.
ZONED 55 M.P.H.

2" PVC
2-2/C#14

12

D6-1
D6-2

13


PLOTTED/REVISED: \$\$\$@DATE@\$\$\$

DISTRICT #: \$@DISTRICT@
PLOT NAME: \$\$\$@PLOT\$NAME@
PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$

BY	DATE	REVISIONS
EJA	07-08-14	AS-BUILT OF SP 2700-54 CAMERA & FIBER

SYSTEM ID: 20857 T.E. 5159
METER ADDRESS: 12755 T.H. 55
MASTER ID: T.E.

MATCHLINE LAYOUT
T.H. 55 AT CSAH 6
IN PLYMOUTH, HENNEPIN COUNTY

S.A.P. NO. _____ DRAWN BY: MAS CKD BY: MJF DATE: 5-20-10
CERTIFIED BY  LIC. NO. 43062 DATE: 9-15-10
STATE PROJ. NO. (TH 55) SHEET NO. 2 OF 3 SHEETS