

DISTRICT #: Metro
 PLOT NAME: (04 of 36) Sys A Layout
 PATH & FILENAME: Projects\DM_R05\013\0000\Traffic\Signals\21918 (TH 55)\PENDING\E2Dseed.dgn
 PLOTTED/REVISED: 16-SEP-2021

- NOTES:**
- WORK AT SIGNAL CONSISTS OF INSTALL PB ADAPTORS ON POLES 1 AND 3 AND SALVAGE AND REINSTALL EXISTING PB AND SIGNS. LOOP REPLACEMENT WORK WILL BE PAID UNDER RIGID PVC LOOP DETECTOR 6' X 6' PAY ITEM.
 - 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.
 - FOR PAVEMENT MARKINGS SEE PAVEMENT MARKING PLAN. PAVEMENT MARKINGS ARE INCIDENTAL.
 - FOR CONSTRUCTION OF PEDESTRIAN CURB RAMPS, CONCRETE WALK AND MEDIAN WORK SEE INTERSECTION DETAIL 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).

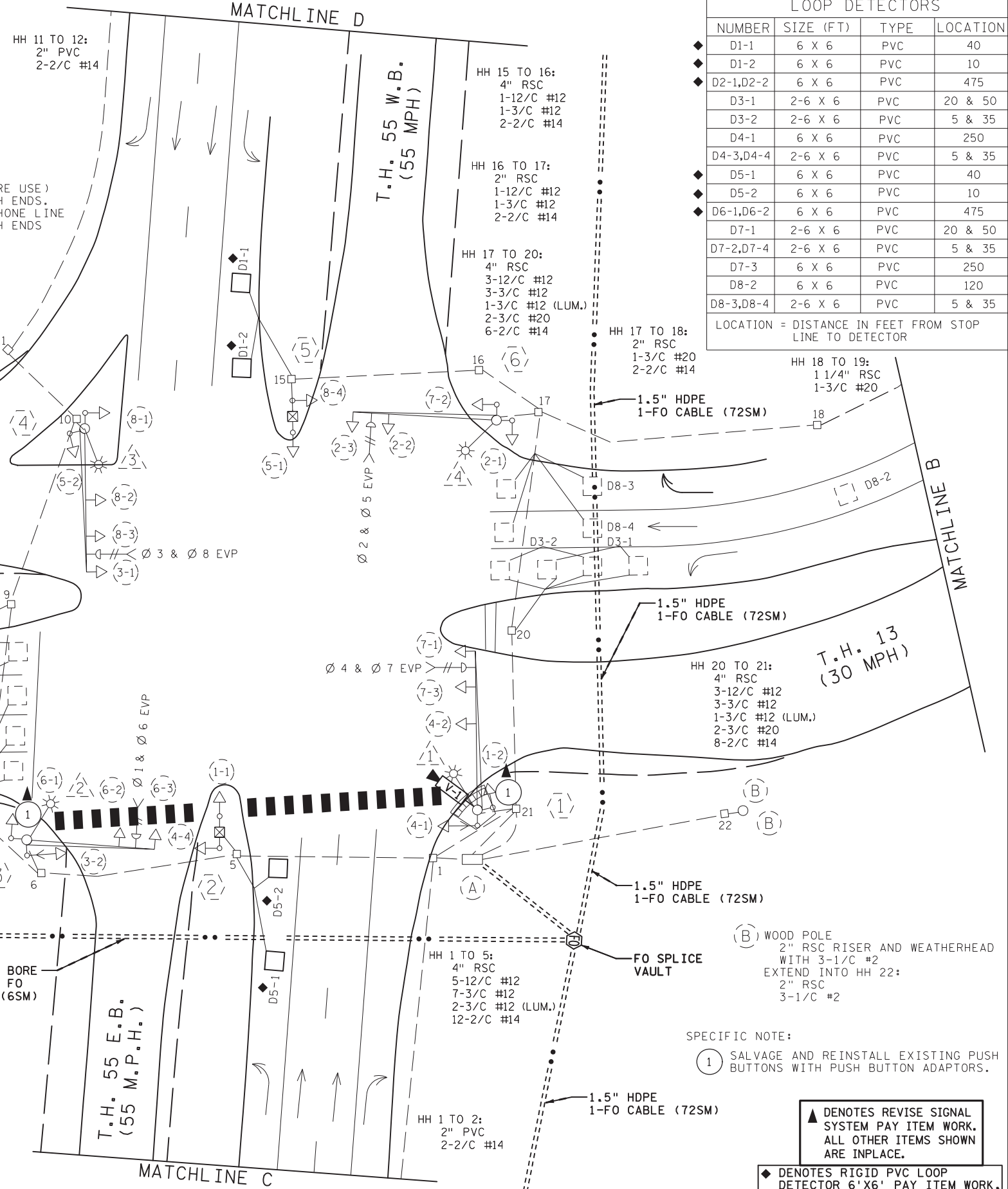
(A) EQUIPMENT PAD
 SERVICE EQUIPMENT - 120/240 VOLT
 PAD MOUNTED METER AND LOAD CENTER
 CONTROLLER AND CABINET
 METER TO HH 22:
 2" RSC
 3-1/C #2
 BETWEEN METER AND LOAD CENTER
 2" RSC
 2-1/C #6
 1-1/C #6 BR. GR.
 LOAD CENTER TO HH 21:
 2" RSC
 4-3/C #12 (LUM)
 INSTALL CONTROLLER
 AND CABINET
 LOAD CENTER TO SIGNAL CABINET
 2" RSC
 2-1/C # 6
 1-1/C # 6 BR. GR.

CABINET TO HH 21:
 4" RSC
 5-12/C #12
 7-3/C #12
 3-3/C #20
 8-2/C #14
 1-3/C #14 (CAM POWER)
 1-COM CABLE
 1-COAXIAL CABLE

CABINET TO HH 1:
 4" RSC
 5-12/C #12
 7-3/C #12
 2-3/C #20
 14-2/C #14

BETWEEN HH 1 AND 21:
 2" RSC
 2-3/C #12 (LUM)
 3" RSC STUBOUT (FUTURE USE)
 THREAD AND CAP BOTH ENDS.
 1" RSC STUBOUT FOR PHONE LINE
 THREAD AND CAP BOTH ENDS

CONTROLLER CABINET
 TO FO SPLICE VAULT
 1-1.5" PVC INSIDE 3" RSC
 1-PRE-TERMINATED ARMORED
 FO PIGTAIL (6SM)

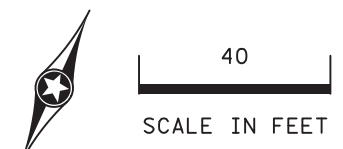
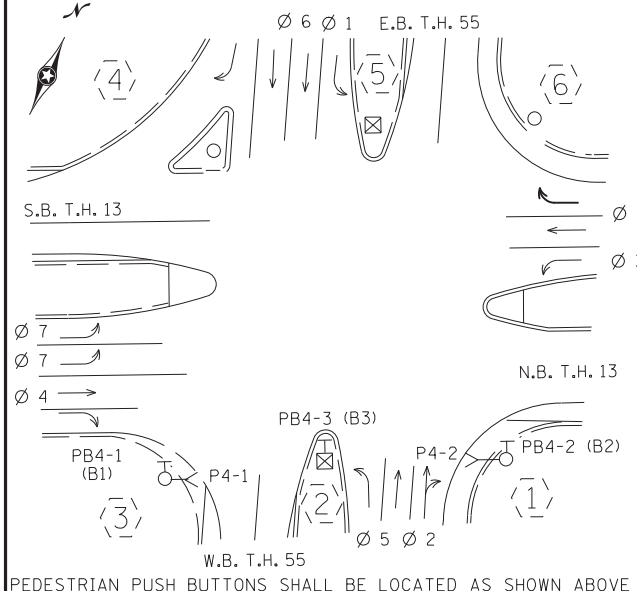


LOOP DETECTORS			
NUMBER	SIZE (FT)	TYPE	LOCATION
D1-1	6 X 6	PVC	40
D1-2	6 X 6	PVC	10
D2-1,D2-2	6 X 6	PVC	475
D3-1	2-6 X 6	PVC	20 & 50
D3-2	2-6 X 6	PVC	5 & 35
D4-1	6 X 6	PVC	250
D4-3,D4-4	2-6 X 6	PVC	5 & 35
D5-1	6 X 6	PVC	40
D5-2	6 X 6	PVC	10
D6-1,D6-2	6 X 6	PVC	475
D7-1	2-6 X 6	PVC	20 & 50
D7-2,D7-4	2-6 X 6	PVC	5 & 35
D7-3	6 X 6	PVC	250
D8-2	6 X 6	PVC	120
D8-3,D8-4	2-6 X 6	PVC	5 & 35

LOCATION = DISTANCE IN FEET FROM STOP LINE TO DETECTOR

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

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SPECIFIC NOTE:
 (1) SALVAGE AND REINSTALL EXISTING PUSH BUTTONS WITH PUSH BUTTON ADAPTORS.

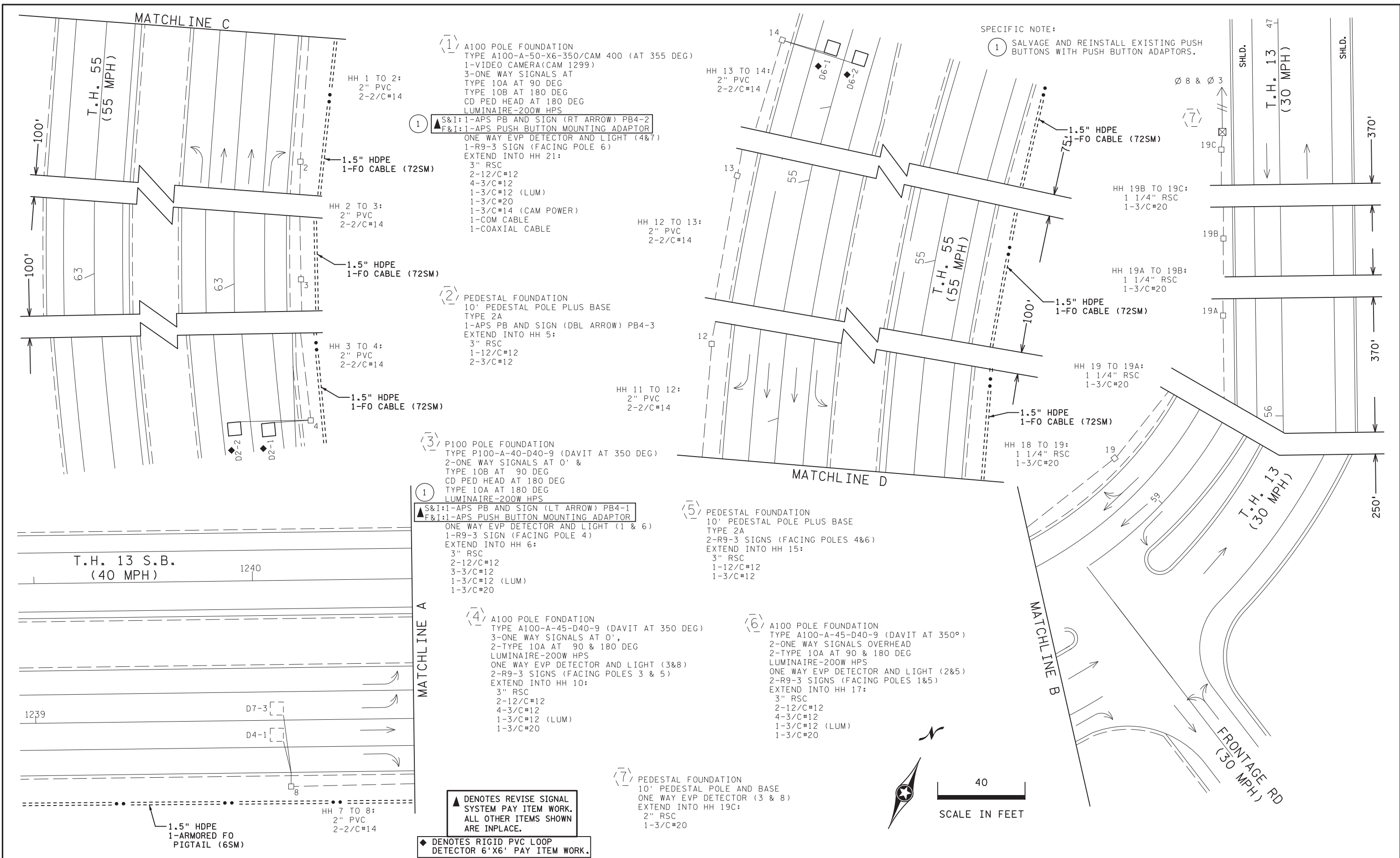
▲ DENOTES REVISE SIGNAL SYSTEM PAY ITEM WORK. ALL OTHER ITEMS SHOWN ARE INPLACE.

◆ DENOTES RIGID PVC LOOP DETECTOR 6' X 6' PAY ITEM WORK.

BY	DATE	REVISIONS	SYSTEM ID: 1735966	T.E.	S.A.P. NO.	DRAWN BY: MJB	CKD BY: RMV	DATE: 9/15/21
			METER ADDRESS: 2325 HWY 55		CERTIFIED BY: <i>Gregory Kim</i>			DATE: 9/16/21
			OLD SYSTEM ID:	T.E.	STATE PROJ. NO. 1909-99 (T.H.55)		SHEET NO. SS4 OF SS36 SHEETS	

**REVISE SIGNAL SYSTEM A
 INTERSECTION LAYOUT
 T.H. 13 AT T.H. 55
 IN MENDOTA HEIGHTS, DAKOTA COUNTY**

DISTRICT #: Metro
 IPLOT NAME: (05 of 36) Sys A Matchlines
 PATH & FILENAME: Projects\DM_R05\013\00000\Traffic\Signals\21918 (TH 55)\PENDING\NGE2Dseed.dgn
 PLOTTED/REVISED: 16-SEP-2021



(1) A100 POLE FOUNDATION
 TYPE A100-A-50-X6-350/CAM 400 (AT 355 DEG)
 1-VIDEO CAMERA(CAM 1299)
 3-ONE WAY SIGNALS AT
 TYPE 10A AT 90 DEG
 TYPE 10B AT 180 DEG
 CD PED HEAD AT 180 DEG
 LUMINAIRE-200W HPS

(1) S&I:1-APS PB AND SIGN (RT ARROW) PB4-2
 F&I:1-APS PUSH BUTTON MOUNTING ADAPTOR
 ONE WAY EVP DETECTOR AND LIGHT (4&7)
 1-R9-3 SIGN (FACING POLE 6)
 EXTEND INTO HH 21:
 3" RSC
 2-12/C#12
 4-3/C#12
 1-3/C#12 (LUM)
 1-3/C#20
 1-3/C#14 (CAM POWER)
 1-COM CABLE
 1-COAXIAL CABLE

(2) PEDESTAL FOUNDATION
 10' PEDESTAL POLE PLUS BASE
 TYPE 2A
 1-APS PB AND SIGN (DBL ARROW) PB4-3
 EXTEND INTO HH 5:
 3" RSC
 1-12/C#12
 2-3/C#12

(3) P100 POLE FOUNDATION
 TYPE P100-A-40-D40-9 (DAVIT AT 350 DEG)
 2-ONE WAY SIGNALS AT 0' &
 TYPE 10B AT 90 DEG
 CD PED HEAD AT 180 DEG
 TYPE 10A AT 180 DEG
 LUMINAIRE-200W HPS

(1) S&I:1-APS PB AND SIGN (LT ARROW) PB4-1
 F&I:1-APS PUSH BUTTON MOUNTING ADAPTOR
 ONE WAY EVP DETECTOR AND LIGHT (1 & 6)
 1-R9-3 SIGN (FACING POLE 4)
 EXTEND INTO HH 6:
 3" RSC
 2-12/C#12
 3-3/C#12
 1-3/C#12 (LUM)
 1-3/C#20

(4) A100 POLE FOUNDATION
 TYPE A100-A-45-D40-9 (DAVIT AT 350 DEG)
 3-ONE WAY SIGNALS AT 0',
 2-TYPE 10A AT 90 & 180 DEG
 LUMINAIRE-200W HPS
 ONE WAY EVP DETECTOR AND LIGHT (3&8)
 2-R9-3 SIGNS (FACING POLES 3 & 5)
 EXTEND INTO HH 10:
 3" RSC
 2-12/C#12
 4-3/C#12
 1-3/C#12 (LUM)
 1-3/C#20

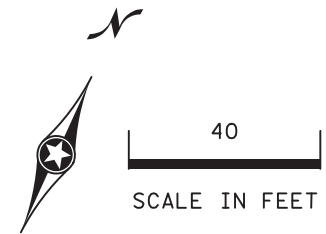
(6) A100 POLE FOUNDATION
 TYPE A100-A-45-D40-9 (DAVIT AT 350°)
 2-ONE WAY SIGNALS OVERHEAD
 2-TYPE 10A AT 90 & 180 DEG
 LUMINAIRE-200W HPS
 ONE WAY EVP DETECTOR AND LIGHT (2&5)
 2-R9-3 SIGNS (FACING POLES 1&5)
 EXTEND INTO HH 17:
 3" RSC
 2-12/C#12
 4-3/C#12
 1-3/C#12 (LUM)
 1-3/C#20

(7) PEDESTAL FOUNDATION
 10' PEDESTAL POLE AND BASE
 ONE WAY EVP DETECTOR (3 & 8)
 EXTEND INTO HH 19C:
 2" RSC
 1-3/C#20

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

◆ DENOTES RIGID PVC LOOP DETECTOR 6'X6' PAY ITEM WORK.

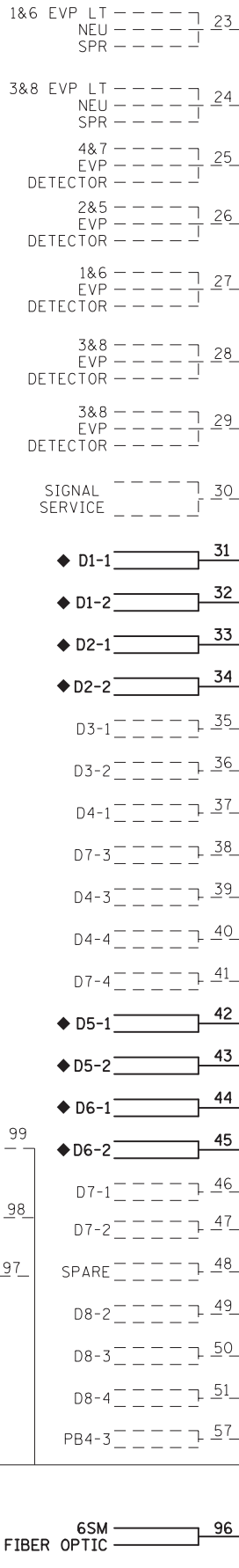
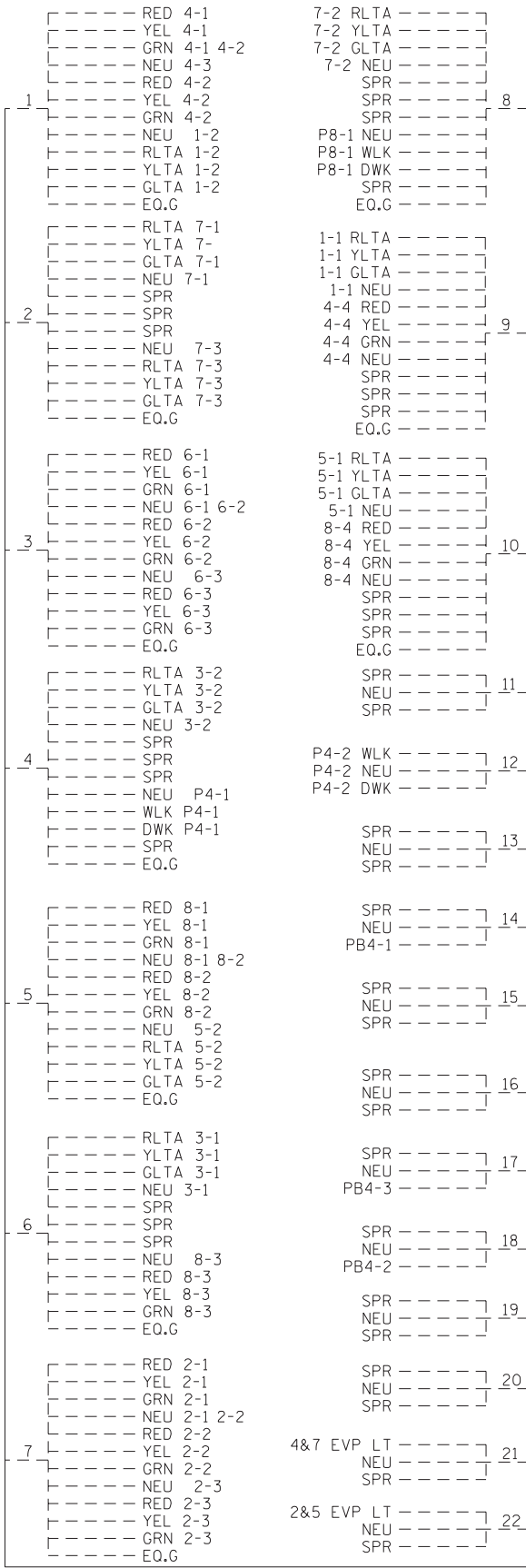
SPECIFIC NOTE:
 (1) SALVAGE AND REINSTALL EXISTING PUSH BUTTONS WITH PUSH BUTTON ADAPTORS.



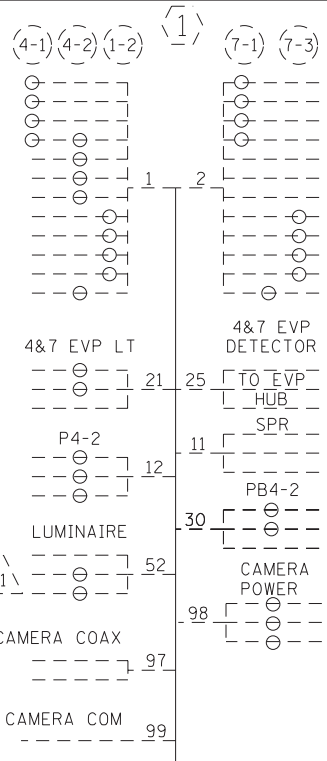
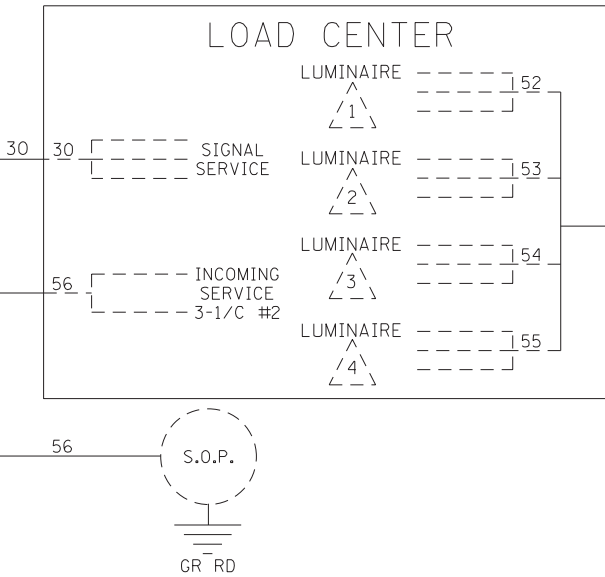
BY	DATE	REVISIONS	SYSTEM ID: 1735966	T.E.	S.A.P. NO.	DRAWN BY: MJB	CKD BY: RMV	DATE: 9/15/21
			METER ADDRESS: 2325 HWY 55		CERTIFIED BY: <i>Gregory Ken</i>	LIC. NO. 26829	DATE: 9/16/21	
			OLD SYSTEM ID:	T.E.	STATE PROJ. NO. 1909-99 (T.H.55) SHEET NO. SS5 OF SS36 SHEETS			
REVISE SIGNAL SYSTEM A INTERSECTION NOTES & MATCHLINES T.H. 13 AT T.H. 55 IN MENDOTA HEIGHTS, DAKOTA COUNTY								

DISTRICT #: Metro
 IPLOT NAME: (06 of 36) Sys A Wiring 1
 PATH & FILENAME: Projects\DM_R05\013\0000\Traffic\Signals\21918 (TH 55)\PENDING\E2Dseed.dgn
 PLOTTED/REVISED: 16-SEP-2021

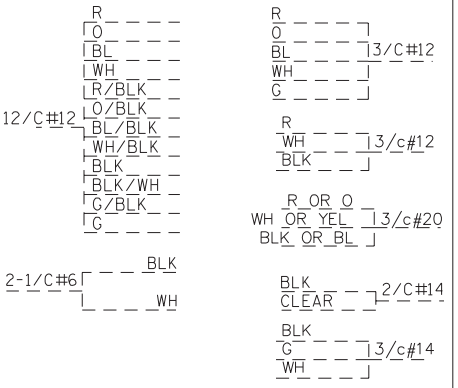
CONTROLLER CABINET



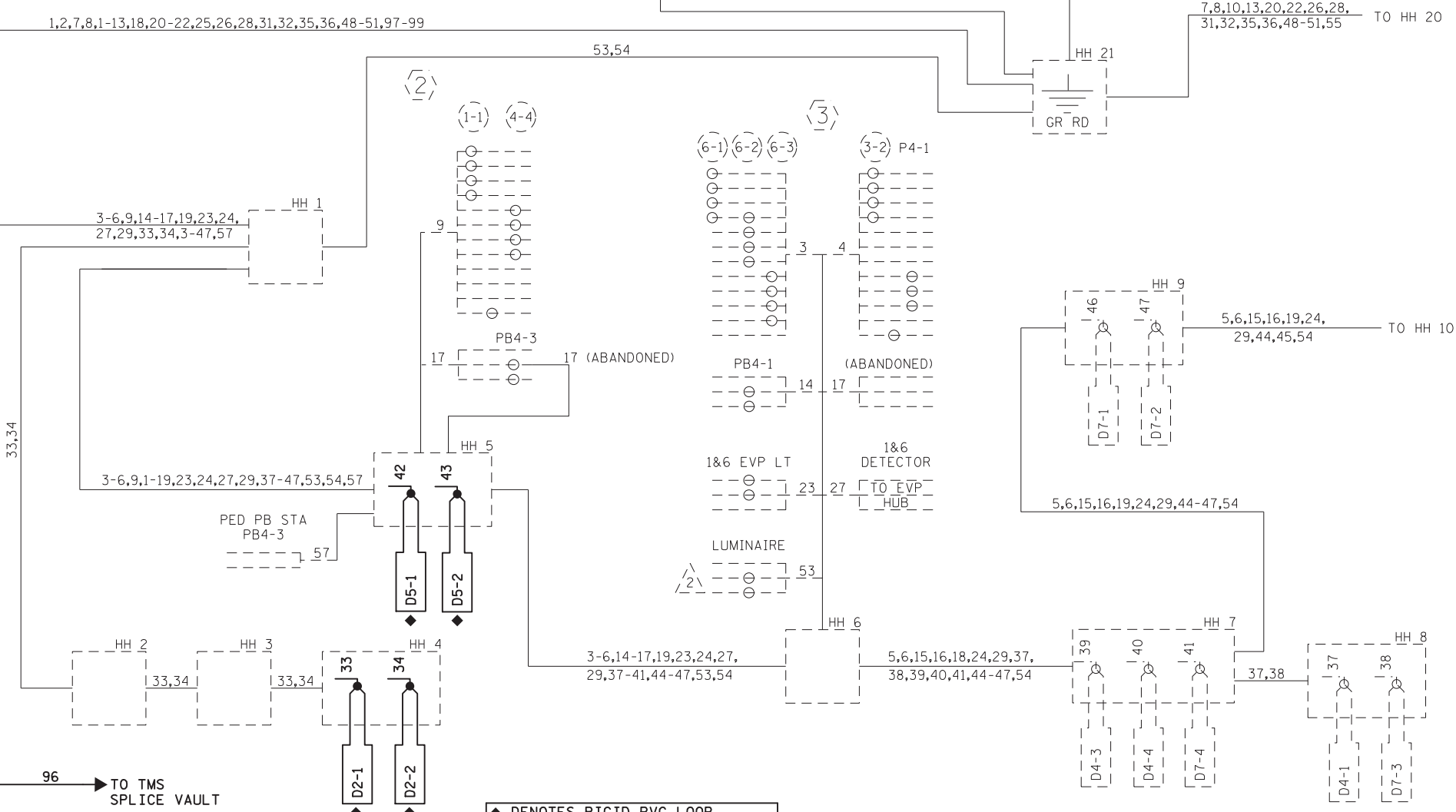
LOAD CENTER



CONDUCTOR COLOR CODING



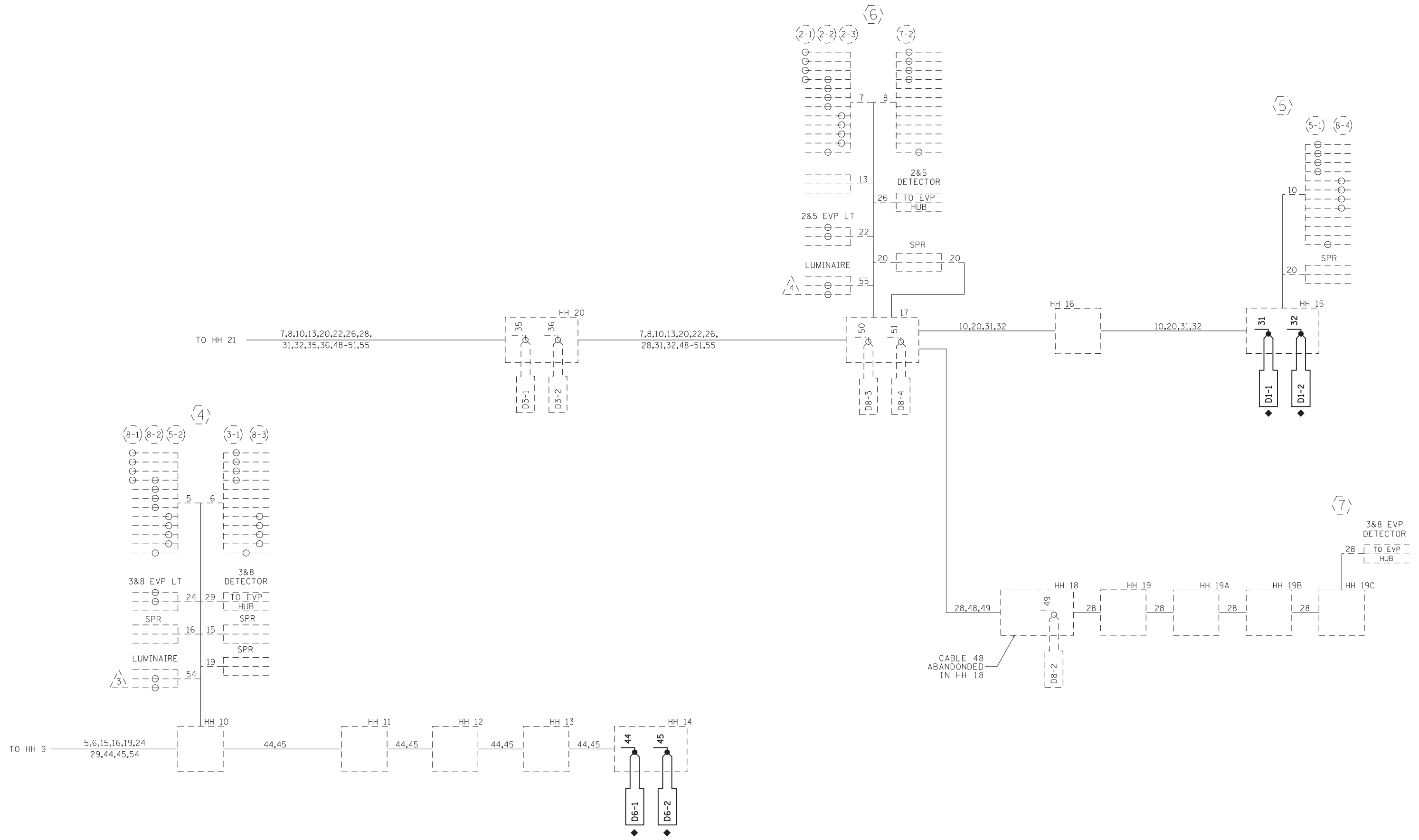
NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE



◆ DENOTES RIGID PVC LOOP DETECTOR 6'X6' PAY ITEM WORK.

BY	DATE	REVISIONS	SYSTEM ID: 1735966	T.E.	REVISE SIGNAL SYSTEM A FIELD WIRING DIAGRAM (1 OF 2) T.H. 13 AT T.H. 55 IN MENDOTA HEIGHTS, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY: MJB	CKD BY: RMV	DATE: 9/15/21
			METER ADDRESS: 2325 HWY 55			CERTIFIED BY: <i>Gregory Kim</i>			DATE: 9/16/21
			OLD SYSTEM ID:	T.E.		STATE PROJ. NO. 1909-99 (T.H. 55)			SHEET NO. SS6 OF SS36 SHEETS

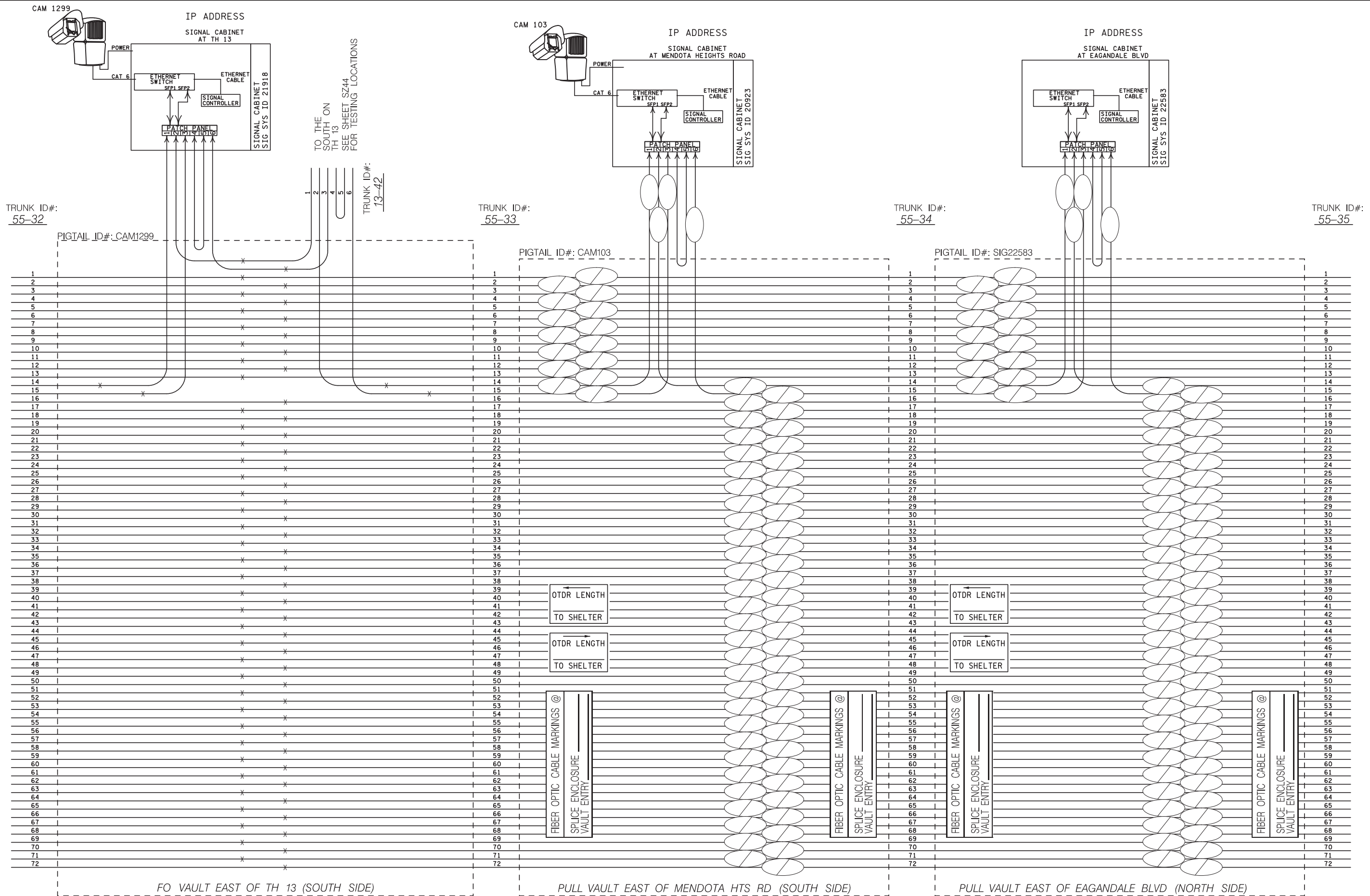
DISTRICT #: Metro
 IPLOT NAME: (07 of 36) Sys A Wiring 2
 PATH & FILENAME: Projects\DM罗斯\300000Traffic\Signals\21918 (TH 55)\PENDING\E2Dseed.dgn
 PLOTTED/REVISED: 16-SEP-2021



◆ DENOTES RIGID PVC LOOP DETECTOR 6'X6' PAY ITEM WORK.

BY	DATE	REVISIONS	SYSTEM ID: 1735966	T.E.	S.A.P. NO.	DRAWN BY: MJB	CKD BY: RMV	DATE: 9/15/21
			METER ADDRESS: 2325 HWY 55		CERTIFIED BY: <i>Gregory Kim</i> <small>LICENSED PROFESSIONAL ENGINEER</small>		LIC. NO. 26829	DATE: 9/16/21
			OLD SYSTEM ID:	T.E.	STATE PROJ. NO. 1909-99 (T.H.55)		SHEET NO. SS7 OF SS36 SHEETS	

**REVISE SIGNAL SYSTEM A
 FIELD WIRING DIAGRAM (2 OF 2)
 T.H. 13 AT T.H. 55
 IN MENDOTA HEIGHTS, DAKOTA COUNTY**



PLOTTED/REVISED: 4-0CT-2018

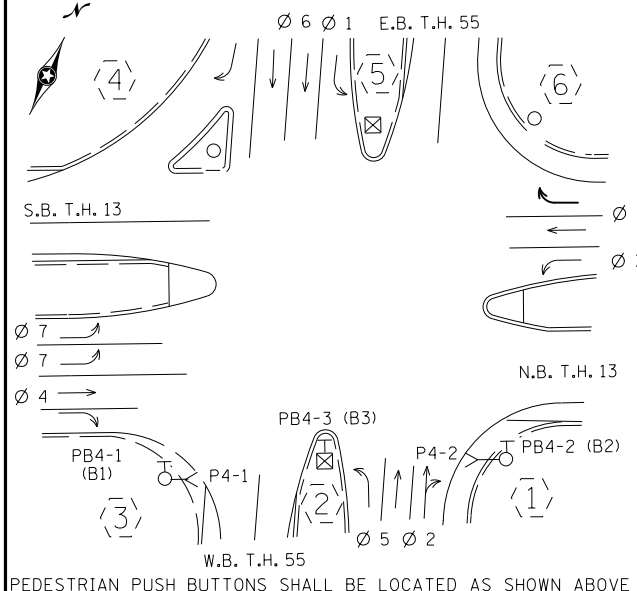
DISTRICT #: Metro
PLOT NAME: layout
PATH & FILENAME: Projects\DM罗斯\0300000\Traffic\Signals\21918 (TH 55\N21918A_sgl.dgn

LOOP DETECTORS			
NUMBER	SIZE (FT)	TYPE	LOCATION
D1-1	6 X 6	PVC	40
D1-2	6 X 6	PVC	10
D2-1,D2-2	6 X 6	PVC	475
D3-1	2-6 X 6	PVC	20 & 50
D3-2	2-6 X 6	PVC	5 & 35
D4-1	6 X 6	PVC	250
D4-3,D4-4	2-6 X 6	PVC	5 & 35
D5-1	6 X 6	PVC	40
D5-2	6 X 6	PVC	10
D6-1,D6-2	6 X 6	PVC	475
D7-1	2-6 X 6	PVC	20 & 50
D7-2,D7-4	2-6 X 6	PVC	5 & 35
D7-3	6 X 6	PVC	250
D8-2	6 X 6	PVC	120
D8-3,D8-4	2-6 X 6	PVC	5 & 35

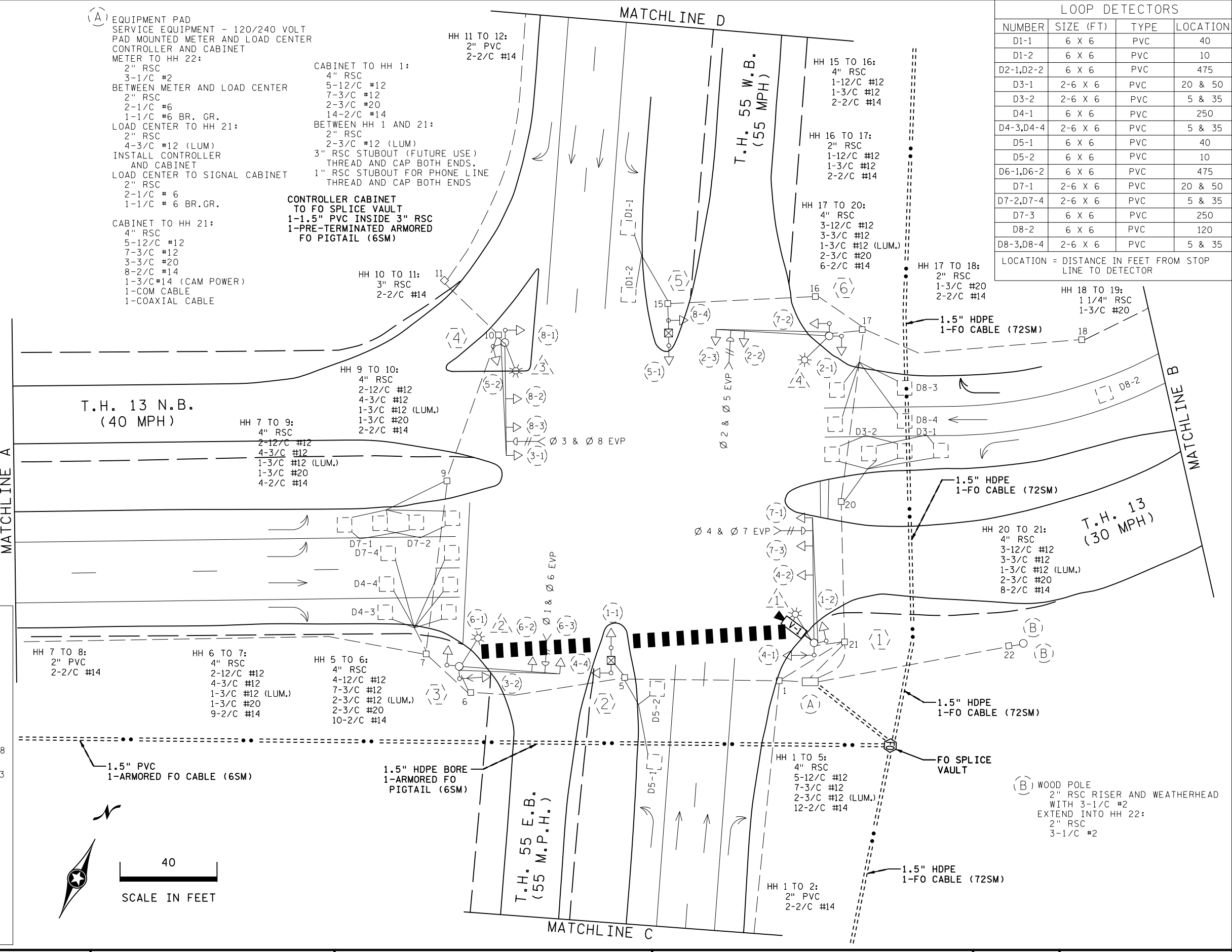
LOCATION = DISTANCE IN FEET FROM STOP LINE TO DETECTOR

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

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE



MATCHLINE A

MATCHLINE B

MATCHLINE C

MATCHLINE D

(A) EQUIPMENT PAD
SERVICE EQUIPMENT - 120/240 VOLT
PAD MOUNTED METER AND LOAD CENTER
CONTROLLER AND CABINET
METER TO HH 22:
2" RSC
3-1/C #2
BETWEEN METER AND LOAD CENTER
2" RSC
2-1/C #6
1-1/C #6 BR. GR.
LOAD CENTER TO HH 21:
2" RSC
4-3/C #12 (LUM)
INSTALL CONTROLLER
AND CABINET
LOAD CENTER TO SIGNAL CABINET
2" RSC
2-1/C # 6
1-1/C # 6 BR. GR.

CABINET TO HH 21:
4" RSC
5-12/C #12
7-3/C #12
3-3/C #20
8-2/C #14
1-3/C #14 (CAM POWER)
1-COM CABLE
1-COAXIAL CABLE

CABINET TO HH 1:
4" RSC
5-12/C #12
7-3/C #12
2-3/C #20
14-2/C #14
BETWEEN HH 1 AND 21:
2" RSC
2-3/C #12 (LUM)
3" RSC STUBOUT (FUTURE USE)
THREAD AND CAP BOTH ENDS.
1" RSC STUBOUT FOR PHONE LINE
THREAD AND CAP BOTH ENDS

CONTROLLER CABINET
TO FO SPLICE VAULT
1-1.5" PVC INSIDE 3" RSC
1-PRE-TERMINATED ARMORED
FO PIGTAIL (6SM)

HH 11 TO 12:
2" PVC
2-2/C #14

HH 15 TO 16:
4" RSC
1-12/C #12
1-3/C #12
2-2/C #14

HH 16 TO 17:
2" RSC
1-12/C #12
1-3/C #12
2-2/C #14

HH 17 TO 20:
4" RSC
3-12/C #12
3-3/C #12
1-3/C #12 (LUM.)
2-3/C #20
6-2/C #14

HH 17 TO 18:
2" RSC
1-3/C #20
2-2/C #14

HH 18 TO 19:
1 1/4" RSC
1-3/C #20

HH 9 TO 10:
4" RSC
2-12/C #12
4-3/C #12
1-3/C #12 (LUM.)
1-3/C #20
4-2/C #14

HH 7 TO 9:
4" RSC
2-12/C #12
4-3/C #12
1-3/C #12 (LUM.)
1-3/C #20
4-2/C #14

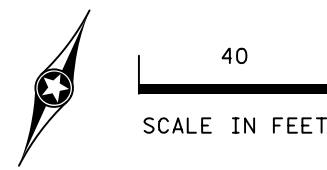
HH 20 TO 21:
4" RSC
3-12/C #12
3-3/C #12
1-3/C #12 (LUM.)
2-3/C #20
8-2/C #14

HH 5 TO 6:
4" RSC
4-12/C #12
7-3/C #12
2-3/C #12 (LUM.)
2-3/C #20
10-2/C #14

HH 6 TO 7:
4" RSC
2-12/C #12
4-3/C #12
1-3/C #12 (LUM.)
1-3/C #20
9-2/C #14

HH 1 TO 2:
2" PVC
2-2/C #14

HH 1 TO 5:
4" RSC
5-12/C #12
7-3/C #12
2-3/C #12 (LUM.)
12-2/C #14



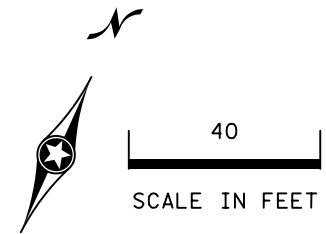
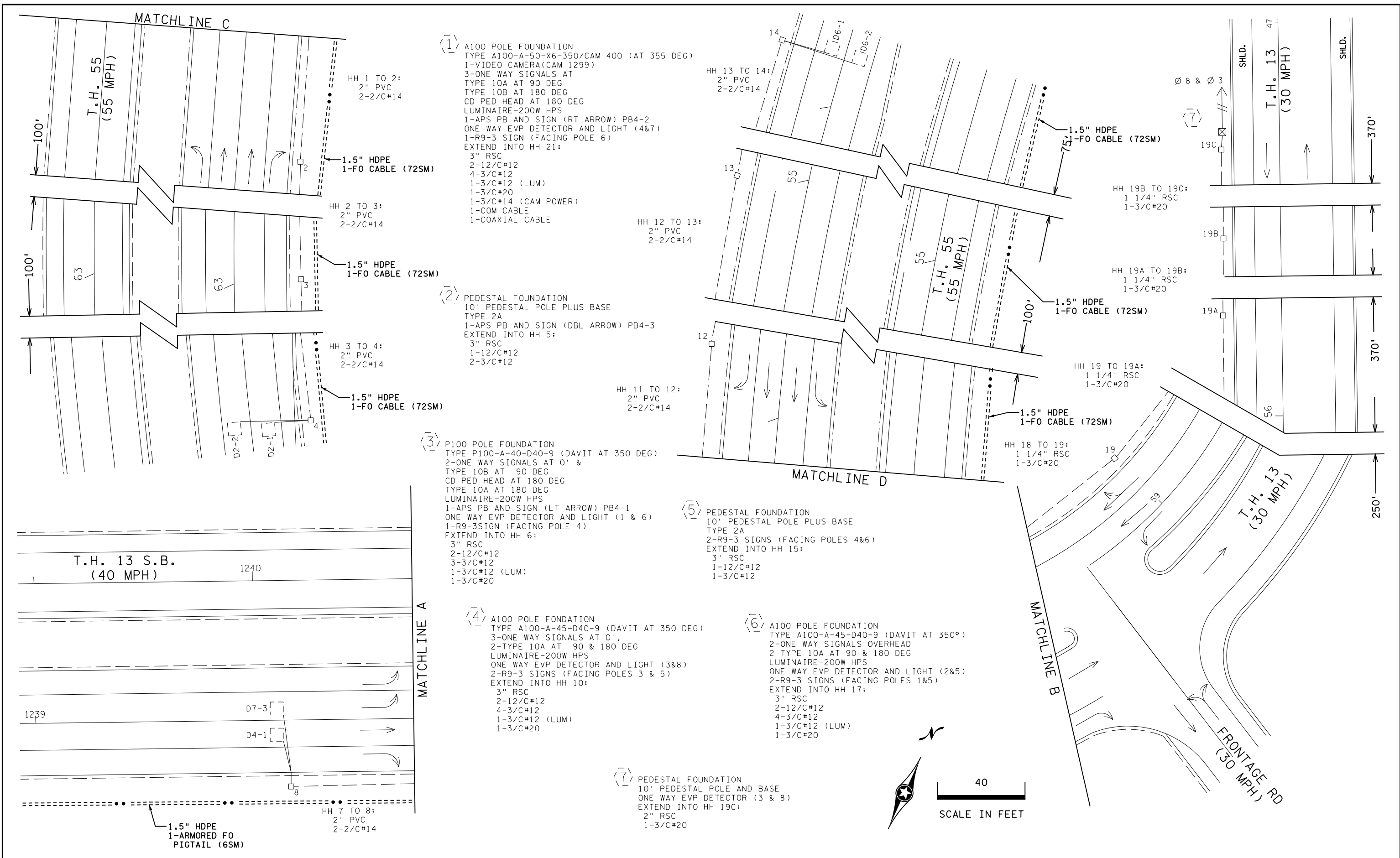
BY	DATE	REVISIONS
EJA	07-24-15	AS-BUILT OF SP 8825-388 FIBER & CAMERA
JBA	10-04-18	AS BUILT CHANGE LANE PHASE 8, REMOVE D8-1

SYSTEM ID: 1735966	T.E.
METER ADDRESS: 2325 HWY 55	
OLD SYSTEM ID: 21918	T.E.

INTERSECTION LAYOUT
TRAFFIC CONTROL SIGNAL SYSTEM
T.H. 13 AT T.H. 55
IN MENDOTA HEIGHTS, DAKOTA COUNTY

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO.	(T.H. 13)	SHEET NO.	1 OF 4 SHEETS

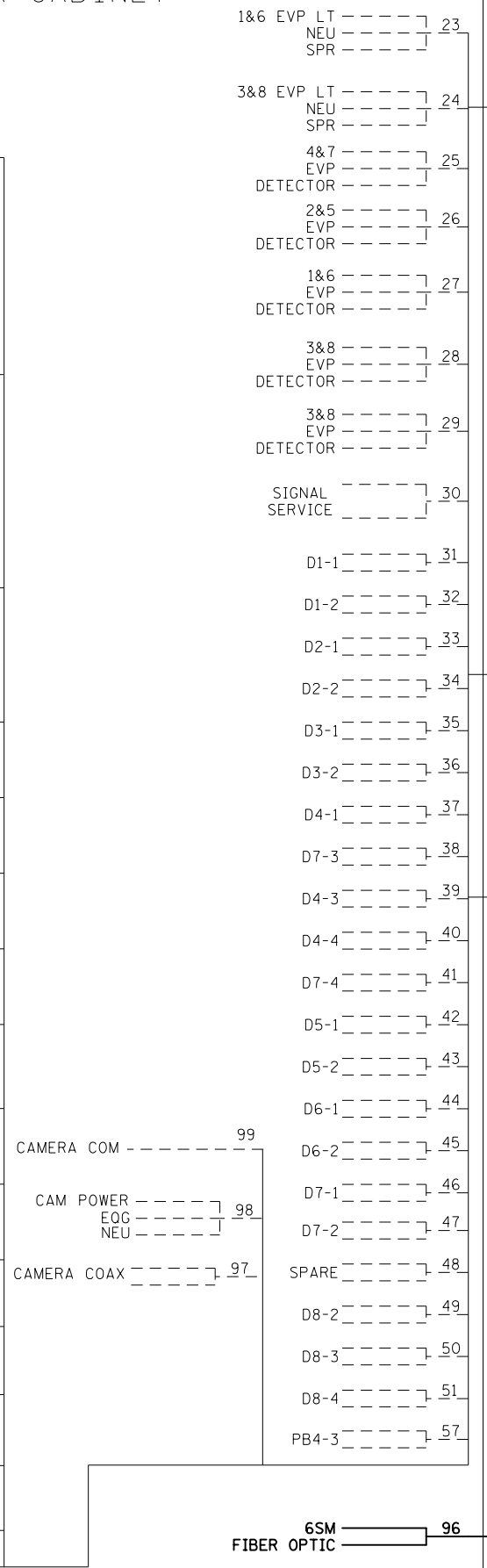
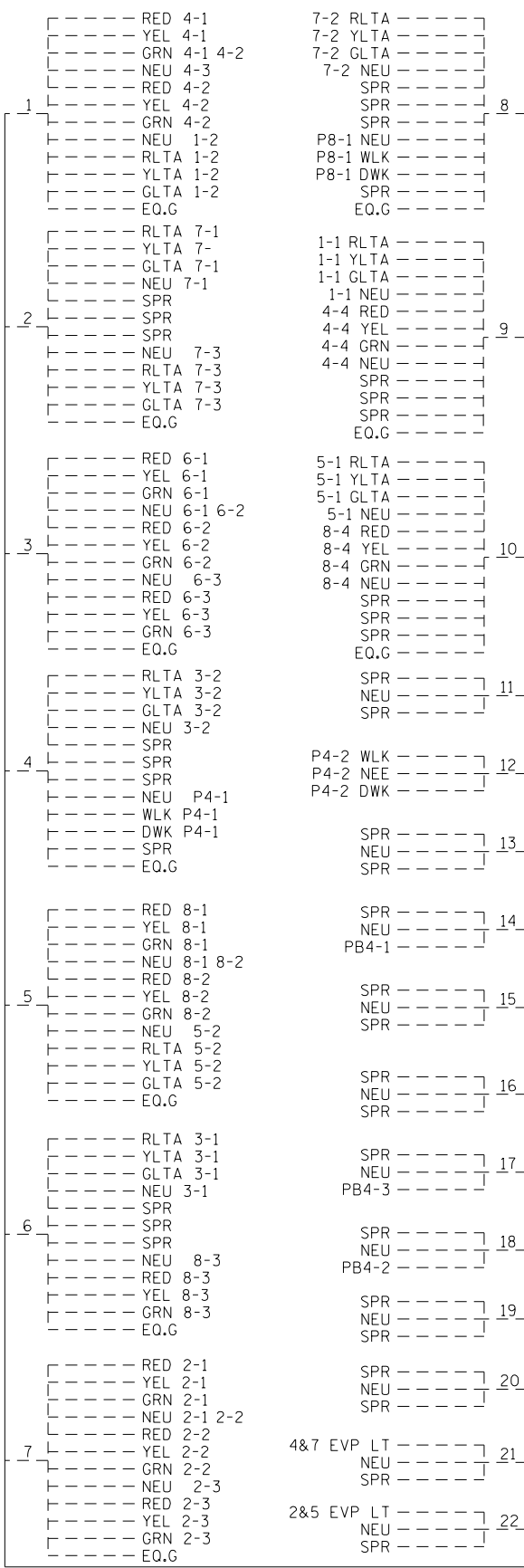
DISTRICT #: Metro
 PLOT NAME: matchline
 PATH & FILENAME: Projects\DM罗斯\0300000\Traffic\Signals\21918 (TH 55)\21918A_sgl.dgn
 PLOTTED/REVISED: 4-0CT-2018



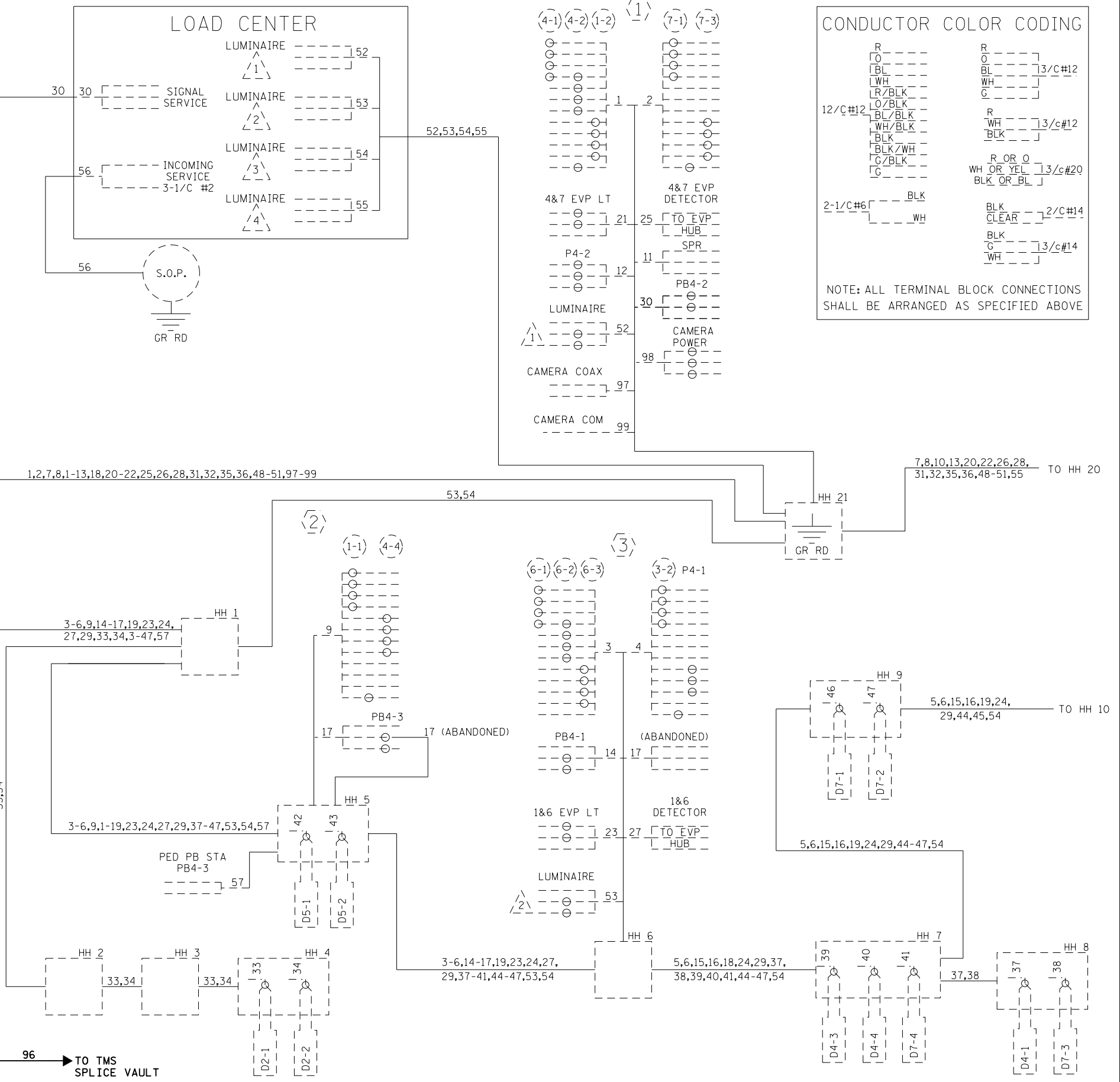
BY	DATE	REVISIONS	SYSTEM ID: 1735966 T.E.	INTERSECTION NOTES & MATCHLINES TRAFFIC CONTROLE SIGNAL SYSTEM T.H.13 AT T.H.55 IN MENDOTA HEIGHTS, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
EJA	07-24-15	AS-BUILT OF SP 8825-388 FIBER & CAMERA	METER ADDRESS: 2325 HWY 55	STATE PROJ.NO. (T.H.13) SHEET NO. 2 OF 4 SHEETS	CERTIFIED BY _____ LIC. NO. _____ DATE: _____			
JBA	10-08-18	AS BUILT CHANGE LANE PHASE 8, REMOVE D8-1	OLD SYSTEM ID: 21918 T.E.					

DISTRICT #: Metro
 IPLOT NAME: wiring diagram 1 of 2
 PATH & FILENAME: Projects\DM_ROS\03\00000\Traffic\Signals\21918 (TH 55\N21918A_sgl.dgn
 PLOTTED/REVISED: 4-0CT-2018

CONTROLLER CABINET



LOAD CENTER



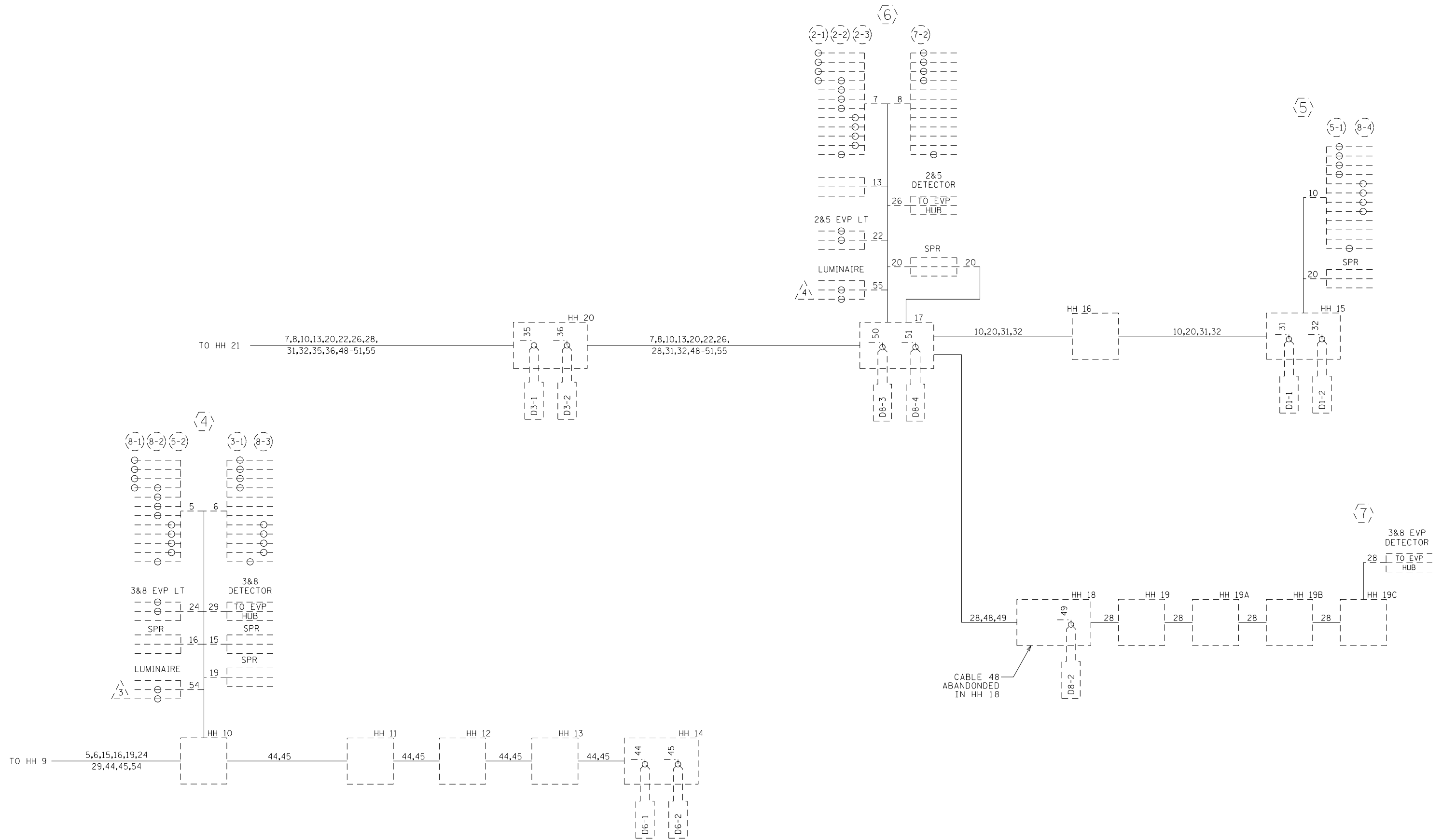
CONDUCTOR COLOR CODING

R	---	R	---	
O	---	BL	13/c#12	
BL	---	WH	---	
WH	---	G	---	
R/BLK	---	R	---	
O/BLK	---	WH	13/c#12	
BL/BLK	---	BLK	---	
WH/BLK	---	R_OR O	---	
BLK/WH	---	WH OR YEL	13/c#20	
G/BLK	---	BLK OR BL	---	
G	---			
		2-1/C#6	BLK	
		---	WH	
			BLK CLEAR	2/C#14
			BLK	---
			G	13/c#14
			WH	---

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

BY	DATE	REVISIONS	SYSTEM ID: 1735966 T.E.	FIELD WIRING DIAGRAM (1 OF 2)	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
EJA	07-24-15	AS-BUILT OF SP 8825-388 FIBER & CAMERA	METER ADDRESS: 2325 HWY 55	TRAFFIC CONTROLE SIGNAL SYSTEM	CERTIFIED BY _____			
JBA	10-04-18	AS BUILT CHANGE LANE PHASE 8, REMOVE D8-1	OLD SYSTEM ID: 21918 T.E.	T.H. 13 AT T.H. 55	LICENSED PROFESSIONAL ENGINEER	LIC. NO. _____		DATE: _____
				IN MENDOTA HEIGHTS, DAKOTA COUNTY	STATE PROJ. NO. 8825-388 (T.H. 13)	SHEET NO. 3 OF 4 SHEETS		

DISTRICT #: Metro
 PLOT NAME: wiring diagram 2 of 2
 PATH & FILENAME: Projects\DM_ROS\03\00000\Traffic\Signals\21918 (TH 55)\21918A_sgl.dgn
 PLOTTED/REVISED: 4-OCT-2018



BY	DATE	REVISIONS	SYSTEM ID: 1735966 T.E.	FIELD WIRING DIAGRAM (2 OF 2) TRAFFIC CONTROL SIGNAL SYSTEM T.H.13 AT T.H. 55 IN MENDOTA HEIGHTS, DAKOTA COUNTY	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
EJA	07-24-15	AS-BUILT OF SP 8825-388 FIBER & CAMERA	METER ADDRESS: 2325 HWY 55		CERTIFIED BY _____			
JBA	10-04-18	AS BUILT CHANGE LANE PHASE 8, REMOVE D8-1	OLD SYSTEM ID: 21918 T.E.		LICENSED PROFESSIONAL ENGINEER	LIC. NO. _____		DATE: _____
					STATE PROJ.NO. (T.H.13)	SHEET NO. 4 OF 4 SHEETS		