

PLOTTED/REVISED: 6-JAN-2023

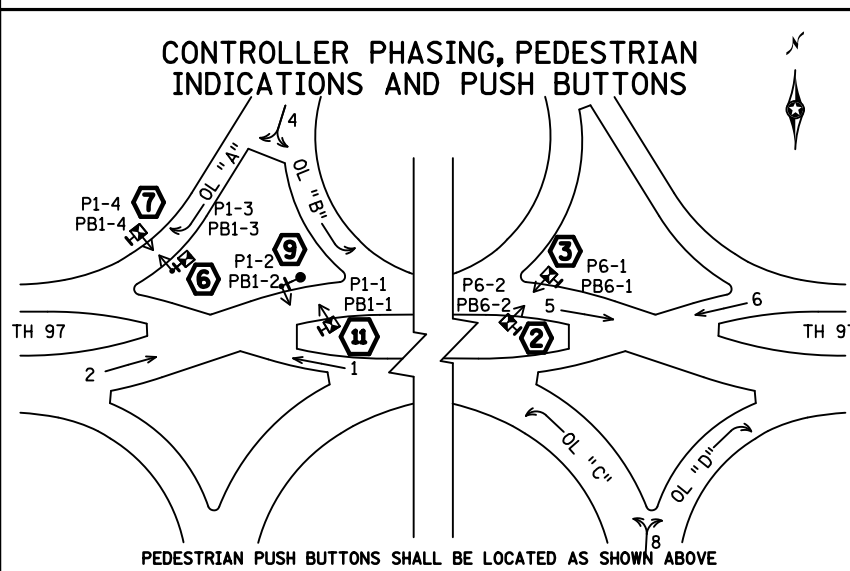
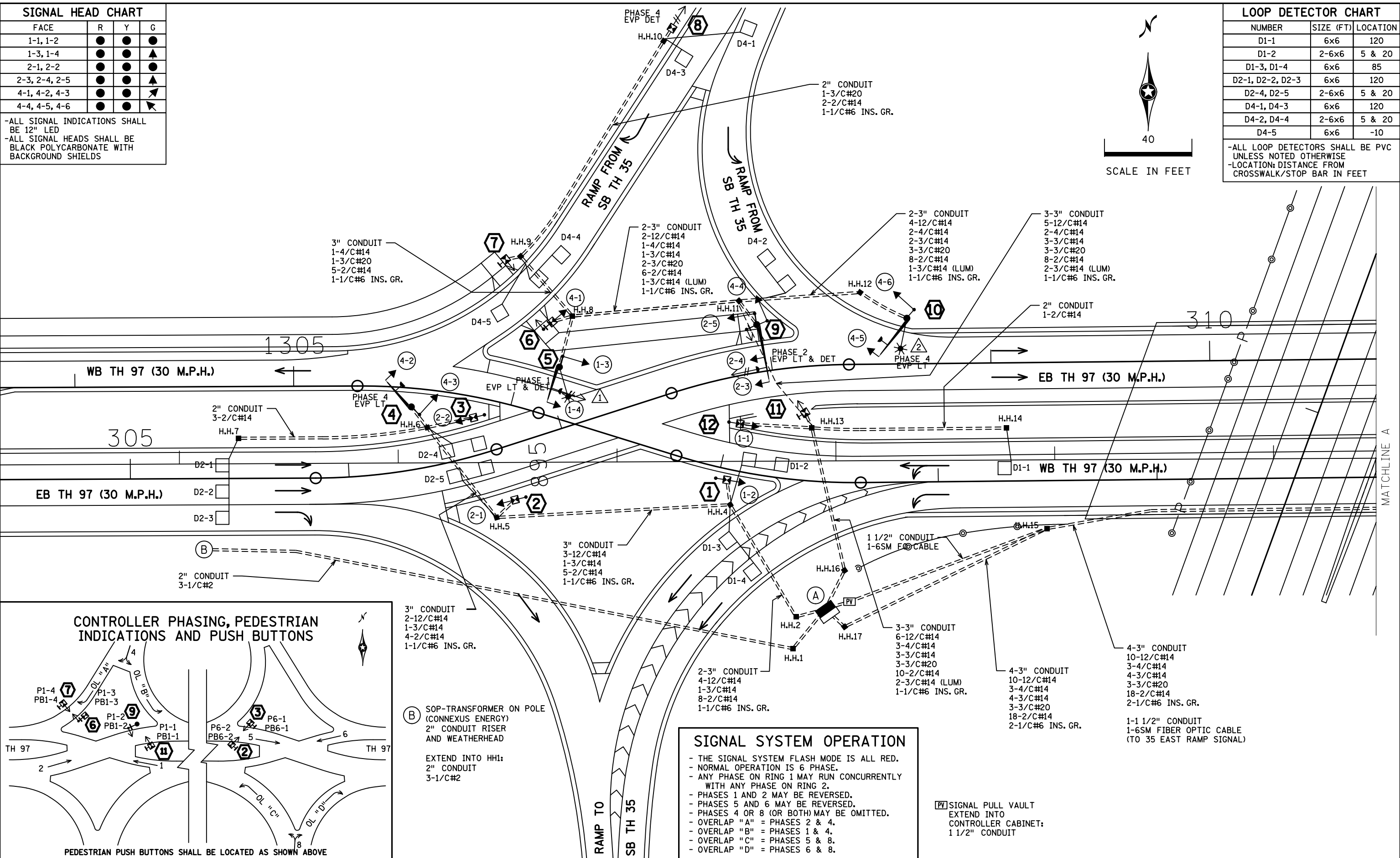
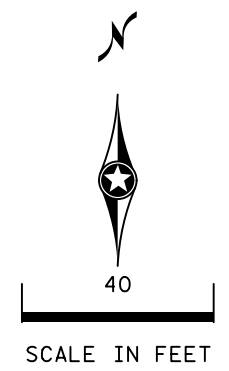
DISTRICT *: Metro
 IPLOT NAME: layout
 FILENAME: Projects\DM_FOS\035\0000\Traffic\Signals\1392_TH35 @ 97 WEST RAMP DDI 2423271_Sgl.dgn

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

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

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1	6x6	120
D1-2	2-6x6	5 & 20
D1-3, D1-4	6x6	85
D2-1, D2-2, D2-3	6x6	120
D2-4, D2-5	2-6x6	5 & 20
D4-1, D4-3	6x6	120
D4-2, D4-4	2-6x6	5 & 20
D4-5	6x6	-10

-ALL LOOP DETECTORS SHALL BE PVC UNLESS NOTED OTHERWISE
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



(B) SOP-TURNER ON POLE (CONNEXUS ENERGY)
 2" CONDUIT RISER AND WEATHERHEAD
 EXTEND INTO HH1:
 2" CONDUIT
 3-1/C#2

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE.
- ANY PHASE ON RING 1 MAY RUN CONCURRENTLY WITH ANY PHASE ON RING 2.
- PHASES 1 AND 2 MAY BE REVERSED.
- PHASES 5 AND 6 MAY BE REVERSED.
- PHASES 4 OR 8 (OR BOTH) MAY BE OMITTED.
- OVERLAP "A" = PHASES 2 & 4.
- OVERLAP "B" = PHASES 1 & 4.
- OVERLAP "C" = PHASES 5 & 8.
- OVERLAP "D" = PHASES 6 & 8.

(PV) SIGNAL PULL VAULT
 EXTEND INTO CONTROLLER CABINET:
 1 1/2" CONDUIT

BY	DATE	REVISIONS	SYSTEM ID: 2423271	T.E.	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
SJK	1/6/23	AS-BUILT PLAN SP 8280-47	METER ADDRESS: HWY 97 @ 35		CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
			OLD SYSTEM ID:		STATE PROJ.NO. 8280-47 (T.H.35) SHEET NO. 1 OF 4 SHEETS			

PLOTTED/REVISED: 6-JAN-2023

DISTRICT *: Metro
PLOT NAME: pole notes
FILENAME: Projects\DM_PROS\035\0000\Traffic\Signals\13.92_TH35 @ 97 WEST RAMP DDI 2423271\Sgldgn

① PEDESTAL FOUNDATION
13' SIGNAL POLE PLUS PEDESTAL BASE
1-STRAIGHT MOUNT SIGNAL AT 90 DEG
EXTEND INTO HH 4:
3" CONDUIT
1-12/C#14
1-1/C#6 INS. GR.

② PEDESTAL FOUNDATION
13' SIGNAL POLE PLUS PEDESTAL BASE
1-STRAIGHT MOUNT SIGNAL AT 90 DEG
EXTEND INTO HH 5:
3" CONDUIT
1-12/C#14
1-1/C#6 INS. GR.

③ PEDESTAL FOUNDATION
13' SIGNAL POLE PLUS PEDESTAL BASE
1-STRAIGHT MOUNT SIGNAL AT 90 DEG
EXTEND INTO HH 6:
3" CONDUIT
1-12/C#14
1-1/C#6 INS. GR.

④ P85 POLE FOUNDATION
TYPE PA85-A-15
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
1-ANGLE MOUNT SIGNAL AT 180 DEG
1-EVP CONFIRMATORY LIGHT (PHASE 4)
1-R3-5R SIGN MOUNTED ADJACENT TO SIGNAL HEAD 4-2
EXTEND INTO HH 6:
3" CONDUIT
1-12/C#14
1-3/C#14
1-1/C#6 INS. GR.

⑤ P85 POLE FOUNDATION
TYPE PA85-A-15-D40-9
LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT) AT 325 DEG
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
1-ANGLE MOUNT SIGNAL AT 180 DEG
1-EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 1)
1-R3-5A SIGN MOUNTED ADJACENT TO SIGNAL HEAD 1-4
EXTEND INTO HH 8:
3" CONDUIT
1-12/C#14
1-3/C#14
1-3/C#20
1-3/C#14 (LUM)
1-1/C#6 INS. GR.

⑨ P85 POLE FOUNDATION
TYPE PA85-A-25
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 12'
2-ANGLE MOUNT SIGNALS AT 180 DEG AND 270 DEG
1-ANGLE MOUNT CD PED IND AT 90 DEG
1-APS PB AND SIGN (RT ARROW) (PB1-2)
1-APS PUSHBUTTON POLE MOUNT ADAPTER
1-EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 2)
2-R3-5A SIGNS MOUNTED ADJACENT TO SIGNAL HEADS 2-3, 2-4
EXTEND INTO HH 11:
3" CONDUIT
2-12/C#14
1-4/C#14
1-3/C#14
1-3/C#20
1-2/C#14
1-1/C#6 INS. GR.

⑥ PEDESTAL FOUNDATION
13' SIGNAL POLE PLUS PEDESTAL BASE
1-STRAIGHT MOUNT SIGNAL AT 90 DEG
1-STRAIGHT MOUNT CD PED IND AT 270 DEG
1-APS PB AND SIGN (LT ARROW) (PB1-3)
WITH APS PUSH BUTTON MOUNTING SPACERS
EXTEND INTO HH 8:
3" CONDUIT
1-12/C#14
1-2/C#14
1-1/C#6 INS. GR.

⑦ PEDESTAL FOUNDATION
8' SIGNAL POLE PLUS PEDESTAL BASE
1-STRAIGHT MOUNT CD PED IND AT 180 DEG
1-APS PB AND SIGN (RT ARROW) (PB1-4)
WITH APS PUSH BUTTON MOUNTING SPACERS
EXTEND INTO HH 9:
3" CONDUIT
1-4/C#14
1-2/C#14
1-1/C#6 INS. GR.

⑧ PEDESTAL FOUNDATION
10' SIGNAL POLE PLUS PEDESTAL BASE
1-EVP DETECTOR (PHASE 4)
MOUNTED ON TOP OF PEDESTAL POLE
EXTEND INTO HH 10:
2" CONDUIT
1-3/C#20
1-1/C#6 INS. GR.

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

CONTROLLER CABINET TO SIGNAL PULL VAULT:
1 1/2" CONDUIT
1-6SM FIBER OPTIC CABLE

CONTROLLER CABINET TO HH2:
3" CONDUIT
3-12/C#14
1-3/C#14
5-2/C#14

3" CONDUIT
1-12/C#14
3-2/C#14
1-1/C#6 INS. GR.

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

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

CONTROLLER CABINET TO HH16:
3" CONDUIT
2-12/C#14
1-4/C#14
1-3/C#14
2-2/C#14
1-1/C#6 INS. GR.

3" CONDUIT
2-12/C#14
1-4/C#14
1-3/C#14
1-3/C#20
2-2/C#14

3" CONDUIT STUBBED OUT FROM
CONTROLLER CABINET (CAPPED BOTH ENDS)

2" CONDUIT STUBBED OUT FROM
CONTROLLER CABINET (CAPPED BOTH ENDS)

SERVICE CABINET TO HH1:
2" CONDUIT
3-1/C#2

SERVICE CABINET TO HH16:
2" CONDUIT
2-3/C#14 (LUM)

SERVICE CABINET TO GROUND (8FT MIN FROM CABINET)
1" CONDUIT
1-1/C#6 INS. GR.

2" CONDUIT STUBBED OUT FROM
SERVICE CABINET (CAPPED BOTH ENDS)

3" CONDUIT
2-12/C#14
1-4/C#14
1-3/C#14
2-3/C#20
6-2/C#20

CONTROLLER CABINET TO HH17:
3" CONDUIT
2-12/C#14
8-2/C#14
1-1/C#6 INS. GR.

3" CONDUIT
3-12/C#14
1-4/C#14
1-3/C#14
2-2/C#14
1-1/C#6 INS. GR.

3" CONDUIT
3-12/C#14
1-4/C#14
2-3/C#14
1-3/C#20
2-2/C#14

3" CONDUIT
2-12/C#14
1-4/C#14
1-3/C#14
2-3/C#20
6-2/C#14

⑩ PA85 POLE FOUNDATION
TYPE PA-85-A-20-D40-9
LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT) AT 335 DEG
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
1-ANGLE MOUNT SIGNAL AT 180 DEG
1-EVP CONFIRMATORY LIGHT (PHASE 4)
1-R3-5L SIGN MOUNTED ADJACENT TO SIGNAL HEAD 4-5
EXTEND INTO HH 12:
3" CONDUIT
1-12/C#14
1-3/C#14
1-3/C#14 (LUM)
1-1/C#6 INS. GR.

⑪ PEDESTAL FOUNDATION
8' SIGNAL POLE PLUS PEDESTAL BASE
1-STRAIGHT MOUNT CD PED IND AT 0 DEG
1-APS PB AND SIGN (LT ARROW) (PB1-1)
WITH APS PUSH BUTTON MOUNTING SPACERS
EXTEND INTO HH 13:
3" CONDUIT
1-4/C#14
1-2/C#14
1-1/C#6 INS. GR.

⑫ PEDESTAL FOUNDATION
13' SIGNAL POLE PLUS PEDESTAL BASE
1-STRAIGHT MOUNT SIGNAL AT 90 DEG
EXTEND INTO HH 13:
3" CONDUIT
1-12/C#14
1-1/C#6 INS. GR.

BY	DATE	REVISIONS
SJK	1/6/23	AS-BUILT PLAN SP 8280-47

SYSTEM ID: 2423271	T.E.
METER ADDRESS: HWY 97 @ 35	
OLD SYSTEM ID:	

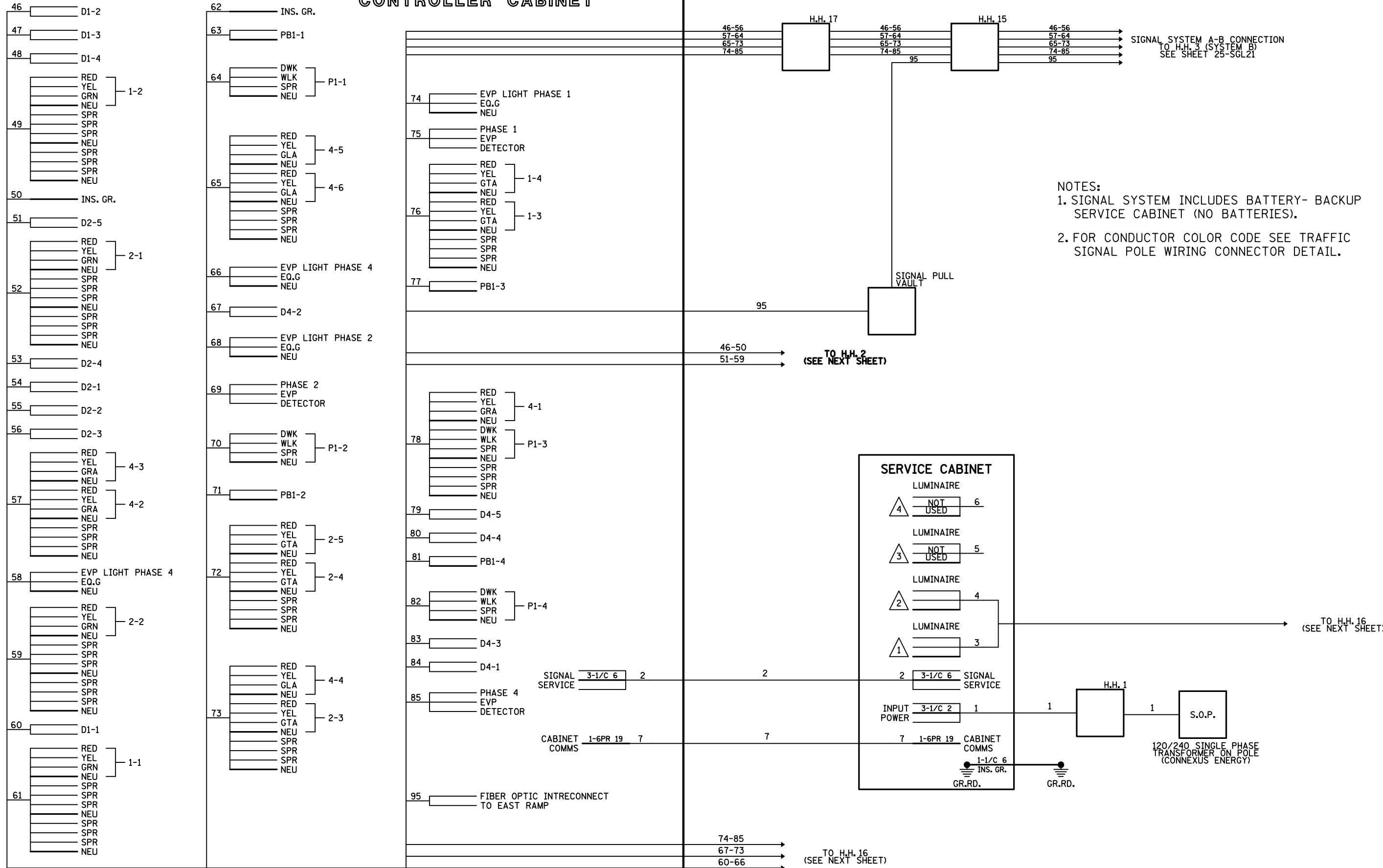
POLE NOTES
TH 35 AT TH 97 WEST DDI
IN COLUMBUS TWP. ANOKA COUNTY

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO. 8280-47 (T.H.35)		SHEET NO. 2 OF	4 SHEETS

PLOTTED/REVISED: 6-JAN-2023

DISTRICT *: Metro
PLOT NAME: field wiring diagram 1 of 2
FILENAME: Projects\DM_FOS\035\0000\Traffic\Signals\1392_TH35 @ 97 WEST RAMP DDI 2423271\2423271_Sgl.dgn

CONTROLLER CABINET

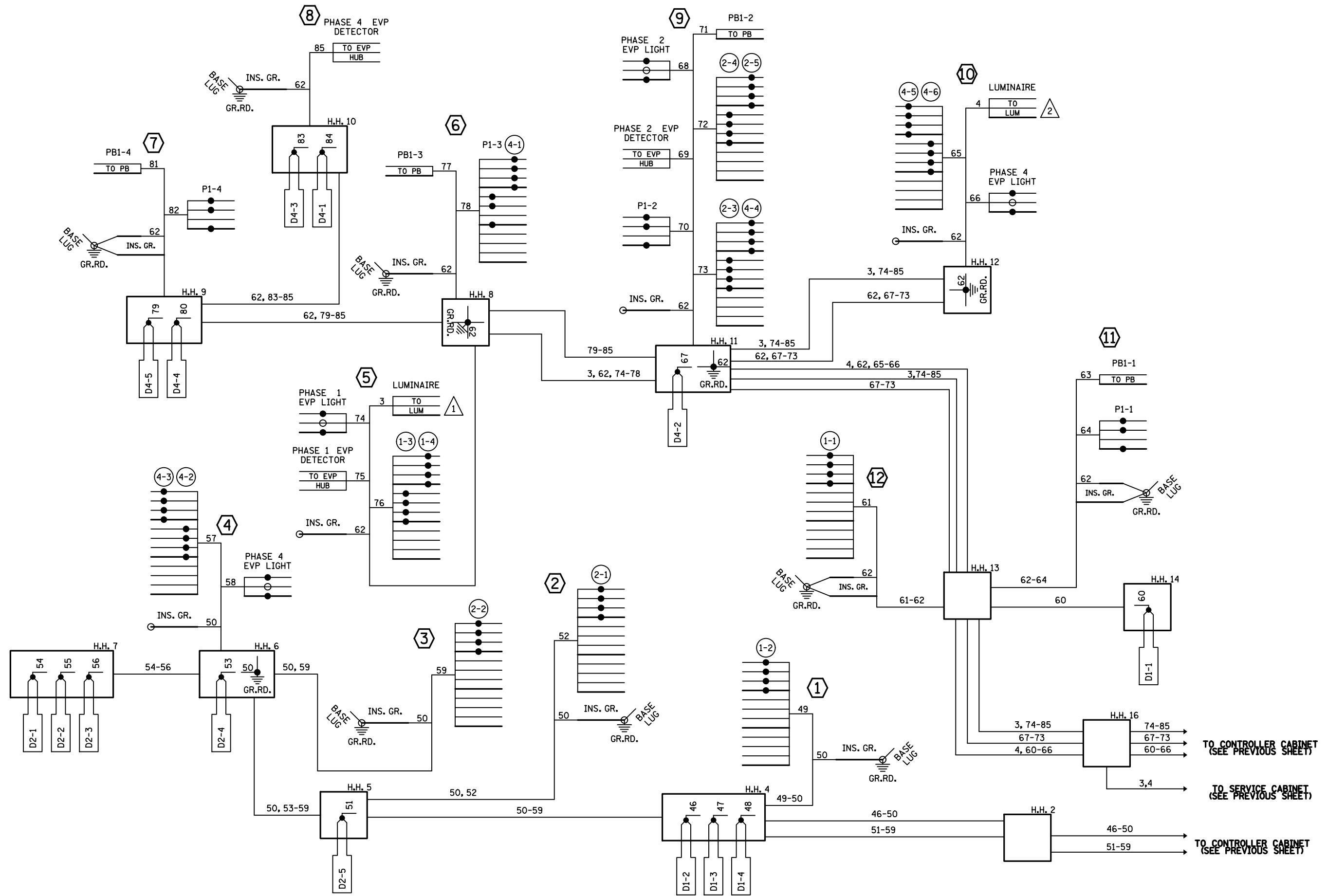


- NOTES:
 1. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET (NO BATTERIES).
 2. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.

BY	DATE	REVISIONS	SYSTEM ID: 2423271	T.E.	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
SJK	1/6/23	AS-BUILT PLAN SP 8280-47	METER ADDRESS: HWY 97 @ 35					
			OLD SYSTEM ID:		CERTIFIED BY _____ LIC. NO. _____ DATE: _____			
FIELD WIRING DIAGRAM 1 OF 2 TH 35 AT TH 97 WEST DDI IN COLUMBUS TWP. ANOKA COUNTY					STATE PROJ. NO. 8280-47 (T.H.35) SHEET NO. 3 OF 4 SHEETS			

PLOTTED/REVISED: 6-JAN-2023

DISTRICT *: Metro
 PLOT NAME: field wiring diagram 2 of 2
 FILENAME: Projects\DM_FOS\035\0000\Traffic\Signals\1392_TH35 @ 97 WEST RAMP DDI 2423271\2423271_Sgl.dgn



TO CONTROLLER CABINET
(SEE PREVIOUS SHEET)

TO SERVICE CABINET
(SEE PREVIOUS SHEET)

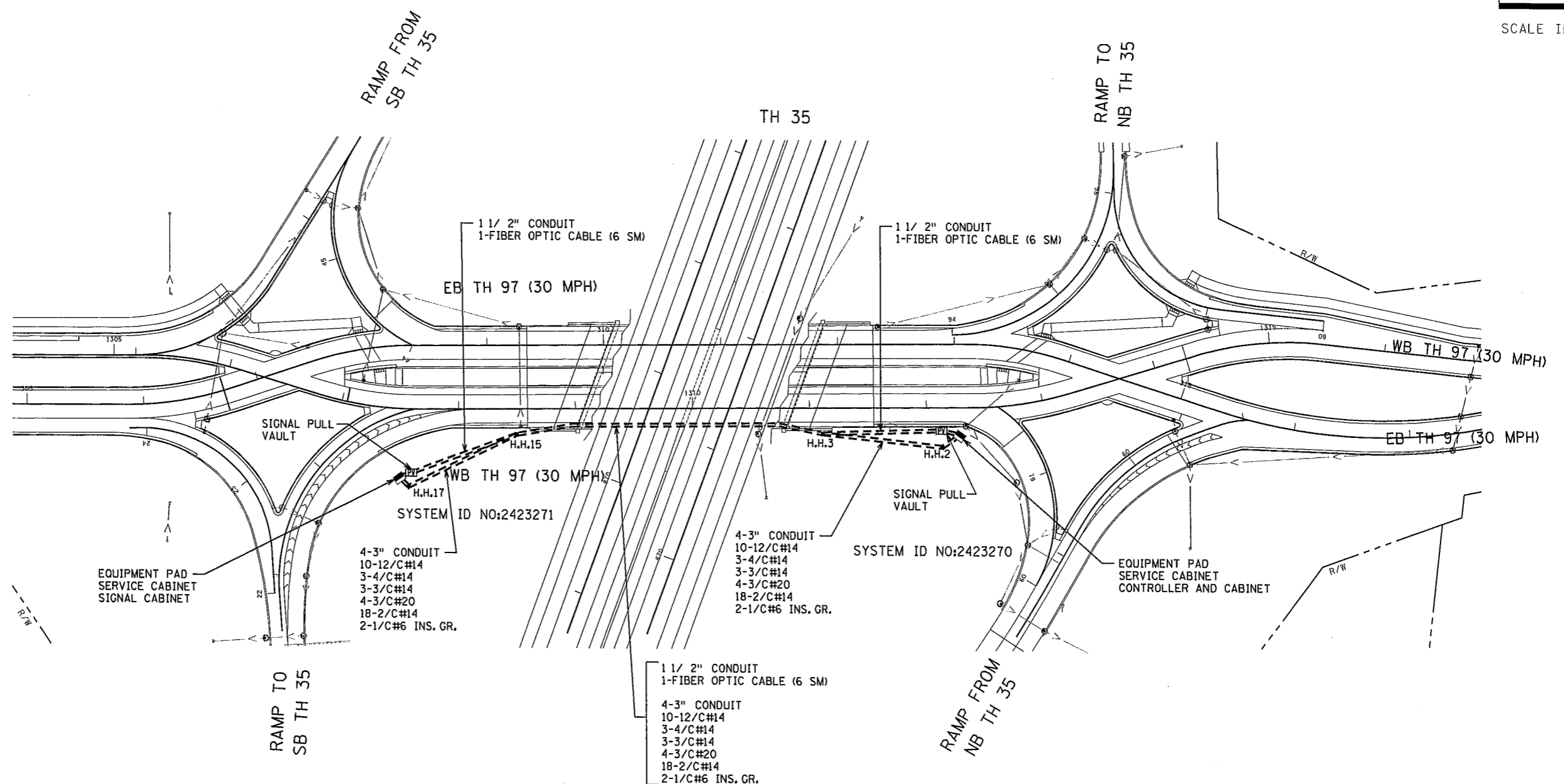
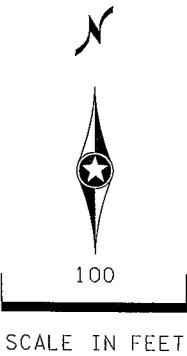
TO CONTROLLER CABINET
(SEE PREVIOUS SHEET)

BY	DATE	REVISIONS
SJK	1/6/23	AS-BUILT PLAN SP 8280-47

SYSTEM ID: 2423271 T.E.
 METER ADDRESS: HWY 97 @ 35
 OLD SYSTEM ID:

FIELD WIRING DIAGRAM 2 OF 2
TH 35 AT TH 97 WEST DDI
IN COLUMBUS TWP. ANOKA COUNTY

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ. NO. 8280-47 (T.H.35)		SHEET NO. 4 OF	4 SHEETS



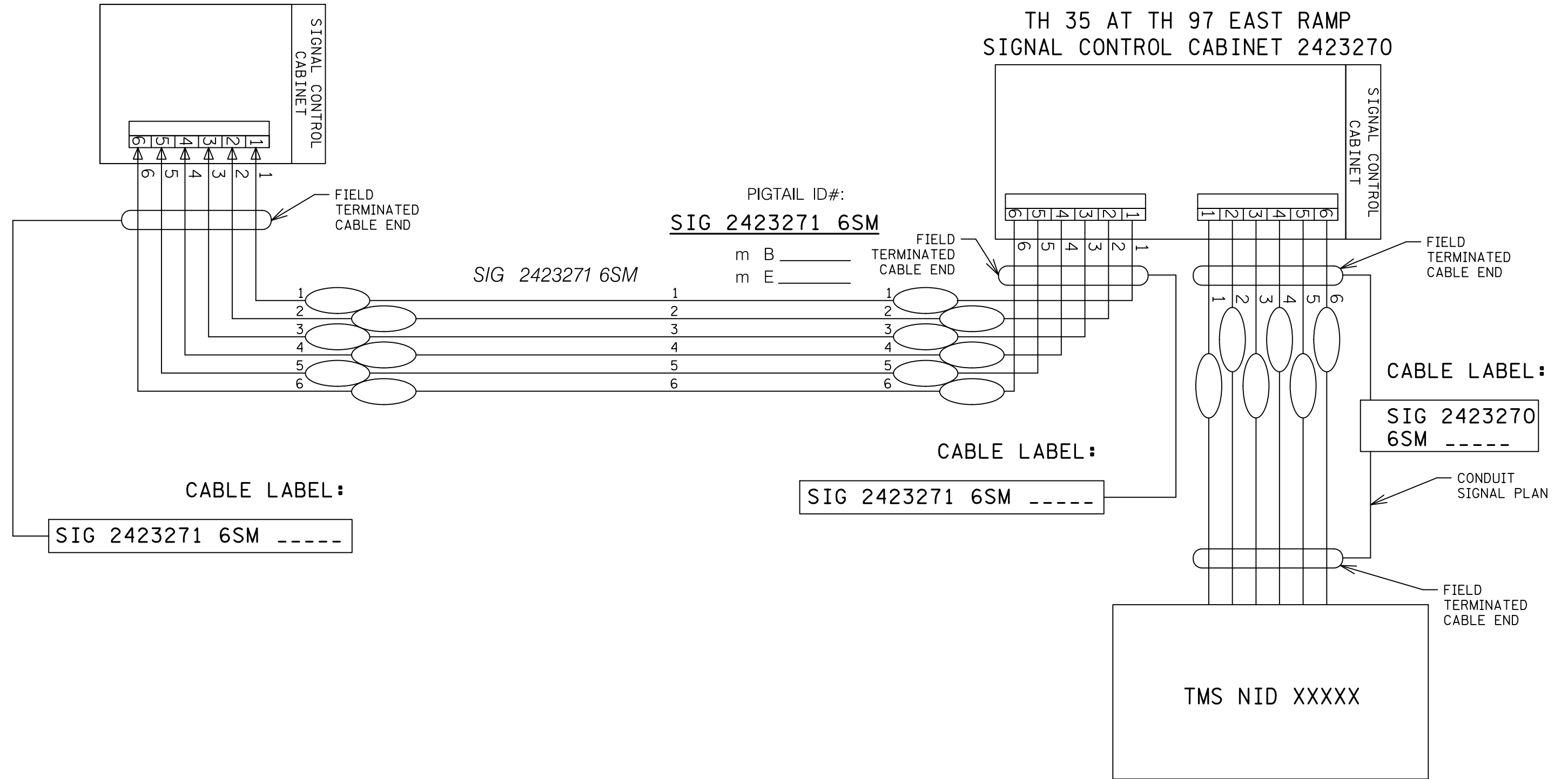
DATE: 11/30/2018
 FILENAME: P:\TKDAN-35 DDI - Forest Lake\CADD\Sheets\Plan\cf828047_sgl13.dgn

			DR: MTR	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.	MNDOT ACCEPTANCE				
			DES: MTR	SIGNATURE:					
			CHK: JL	PRINTED NAME: JING LI	SIGNATURE			I-35 FOREST LAKE UBOL AND BRIDGES DESIGN BUILD PROJECT	
NO.	DATE	BY	DESCRIPTION OF REVISIONS	DATE: 11/30/2018 LIC. NO. 25992	DATE: 12/12/18			INTERCONNECT LAYOUT TH 35 AT TH 97 IN COLUMBUS TWP, ANOKA COUNTY	
								STATE PROJECT NO. 8280-47 (TH 35)	Sheet No. 25-SGL13 OF 25-SGL23

FIBER OPTIC SCHEMATIC
(FOR SIGNAL COMMUNICATIONS)

TH 35 AT TH 97 WEST RAMP
SIGNAL CONTROL CABINET 2423271

TH 35 AT TH 97 EAST RAMP
SIGNAL CONTROL CABINET 2423270



PLOTTED/REVISED: 6-JAN-2023

DISTRICT *: Metro
PLOT NAME: Fiber
FILENAME: Projects\DM_FROSO35\0000\Traffic\Signal\1392 TH35 @ 97 WEST RAMP DDI 2423271\Sgldgn

BY	DATE	REVISIONS
SJK	1/6/23	AS-BUILT PLAN SP 8280-47

SYSTEM ID:	T.E.
METER ADDRESS:	
OLD SYSTEM ID:	

FIBER OPTIC SCHEMATIC
TH 35 AT TH 97 DDI
IN COLUMBUS TWP. ANOKA COUNTY

S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
STATE PROJ.NO. 8280-47 (T.H.35)		SHEET NO. 1 OF	1 SHEETS