

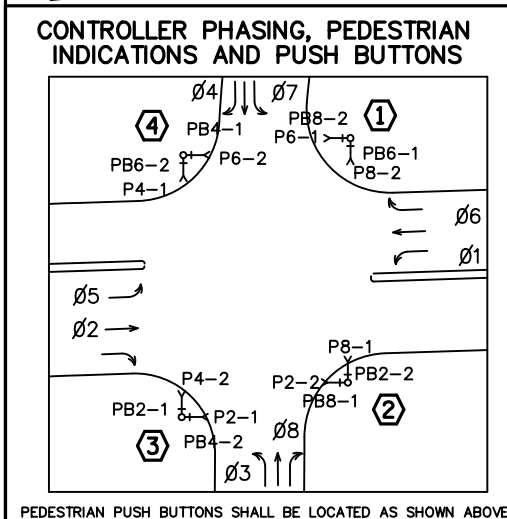
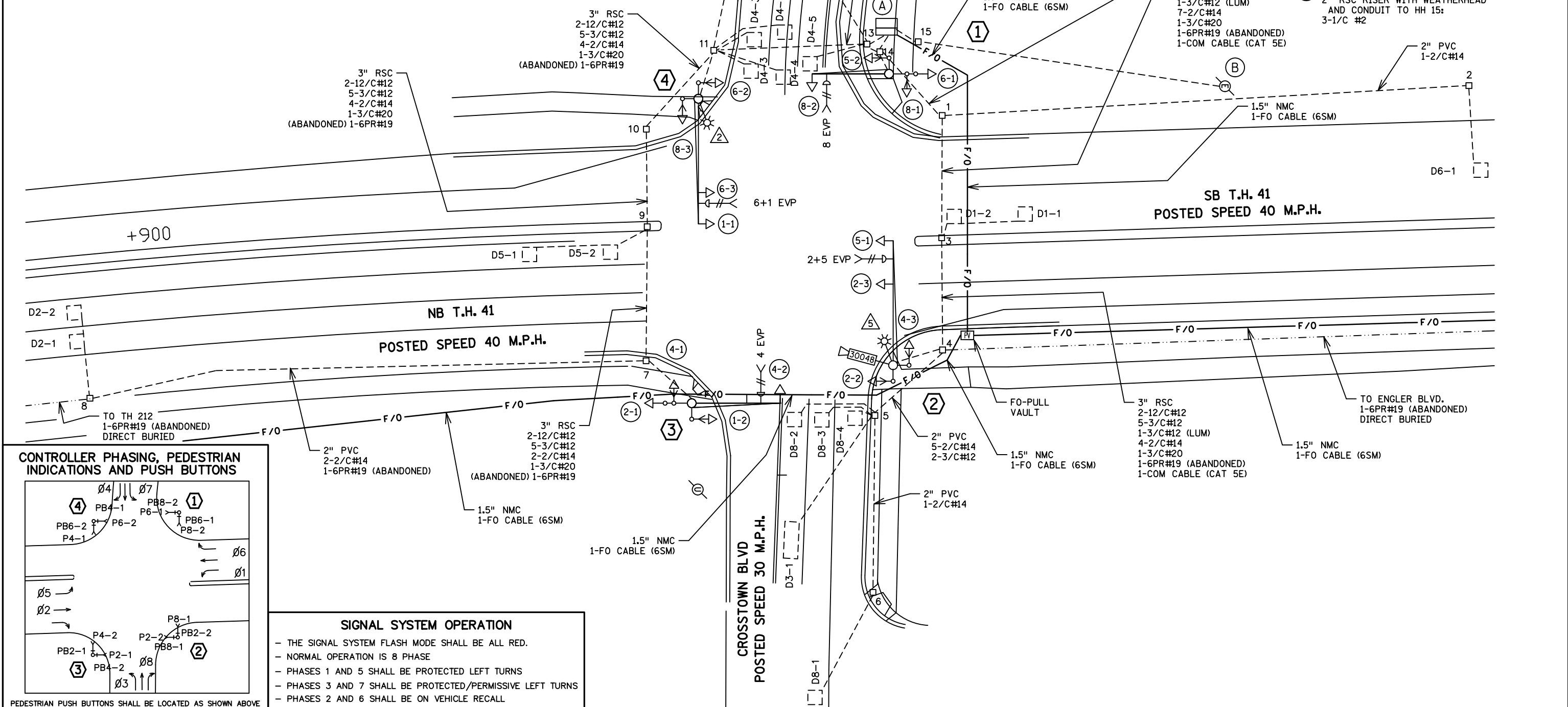
LOOP DETECTORS		
NUMBER	NUMBER OF LOOPS	LOCATION
D1-1,D5-1	6x6	40
D1-2,D5-2	6x6	10
D2-1,D2-2	6x6	250
D3-1,D7-1	6x15	50
D4-2,D8-1	6x6	120
● D4-3	2-6x6	5,20
● D4-4	2-6x6	5,20
● D4-5	6x6	5
D6-1	6x6	250
● D8-2	6x6	5
● D8-3	6x6	5
● D8-4	6x6	5



SIGNAL HEAD PHASING		SIGNAL HEAD CHART					
HEADS	HEADS	FACE	RED	YEL	GRN	YEL	GRN
4-2 & 4-3	8-2 & 8-3	1-1, 1-2	←	←	←		
Ø4	Ø8	2-1, 2-2, 2-3	○	○	○		
		4-1	○	○	○		
		4-2, 4-3	○	○	○	←	←
Ø7	Ø3	5-1, 5-2	←	←	←		
		6-1, 6-2, 6-3	○	○	○		
		8-1	○	○	○		
		8-2, 8-3	○	○	○	←	←

ALL LOOP DETECTORS ARE PVC EXCEPT WHERE SHOWN AS SAWCUT ●
LOCATION - DISTANCE FROM CROSS WALK/STOPLINE TO DETECTOR IN FEET.

- ALL SIGNALS FACES HAVE A BACKGROUND SHIELD.
- ALL SIGNAL INDICATIONS ARE 12" L.E.D.



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION IS 8 PHASE
- PHASES 1 AND 5 SHALL BE PROTECTED LEFT TURNS
- PHASES 3 AND 7 SHALL BE PROTECTED/PERMISSIVE LEFT TURNS
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL

DISTRICT #: Metro
 IPLOT NAME: Ilayout
 PATH & FILENAME: Projects\DM罗斯04\0000\Traffic\Signals\22382\T22382_sgl.dgn

BY: GDS	DATE: 10-10-18	REVISIONS: AS BUILT OF SP 1008-91 FIBER & CAMERA	SYSTEM ID: 1736243	T.E.	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
			METER ADDRESS: 102 VICTORIA DR.		CERTIFIED BY: _____			LIC. NO. _____ DATE: _____
			OLD SYSTEM ID: 22382		STATE PROJ. NO. (T.H. 41)		SHEET NO. 1 OF 3 SHEETS	

DISTRICT #: Metro
 PLOT NAME: 2 notes
 PATH & FILENAME: Projects\DM罗斯04\000001Traffic\Signals\22382\T22382_sgl.dgn

PLOTTED/REVISED: 10-OCT-2018

4 PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 2 SWING AWAY HINGES
 2-ONE WAY SIGNALS OVERHEAD
 (0 FT, 12 FT FROM THE END OF THE MAST ARM)
 2-TYPE 10B POLE MOUNTED AT 90 AND 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 6+1)
 LUMINAIRE 250 W HPS
 2-PEDESTRIAN PUSHBUTTONS AND R10-4B SIGNS
 SIGN (D-3)
 EXTEND 3" RSC INTO HH 11:
 2-12/C#12
 5-3/C#12
 1-3/C#12 (LUM)
 1-3/C#20

1 PA90 POLE FOUNDATION
 TYPE PA90-A-30-D40-9 (DAVIT AT 350 DEG)
 ONE WAY SIGNAL OVERHEAD
 1-TYPE 10B POLE MOUNTED AT 90 DEG
 1-TYPE 20B POLE MOUNTED AT 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 8)
 2-PEDESTRIAN PUSHBUTTONS AND R10-4B
 SIGNS SIGN (D-2 & R10-12)
 EXTEND 3" RSC INTO HH 14:
 2-12/C#12
 5-3/C#12
 1-3/C#20

A EQUIPMENT PAD
 CONTROLLER AND CONTROLLER CABINET
 SERVICE CABINET 4" RSC TO HH 13:
 4" RSC TO HH 14: 4-12/C#12
 4-12/C#12 10-3/C#12
 10-3/C#12 11-2/C#14
 1-3/C#12 (LUM) 2-3/C#20
 8-2/C#14 1-6PR.#19 (ABANDONED)
 2-3/C#20
 1-6PR.#19 (ABANDONED)
 1-COM CABLE (CAT 5E)

 CONTROLLER CABINET TO PULL VAULT:
 1-1.5" NMC (IN SPARE 3")
 1-PRE TERMINATED ARMORED
 FO PIGTAIL (6SM)
 CONTROLLER CABINET TO SERVICE CABINET:
 2" RSC
 2-1/C#6
 1-1/C#6 INS. GRD.
 SERVICE CABINET TO HH 13:
 2" RSC
 2-3/C#12 (LUM)
 SERVICE CABINET TO 15:
 2" RSC
 2-1/C#2
 1-1/C#2 (INS,GRD)

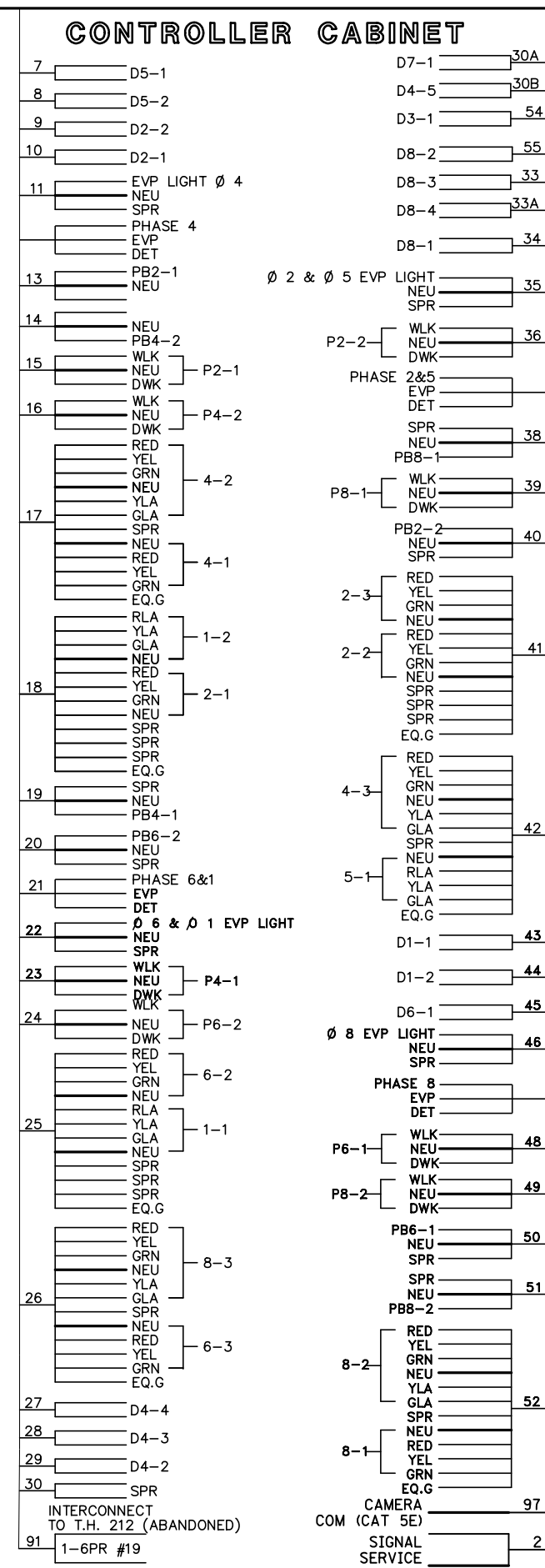
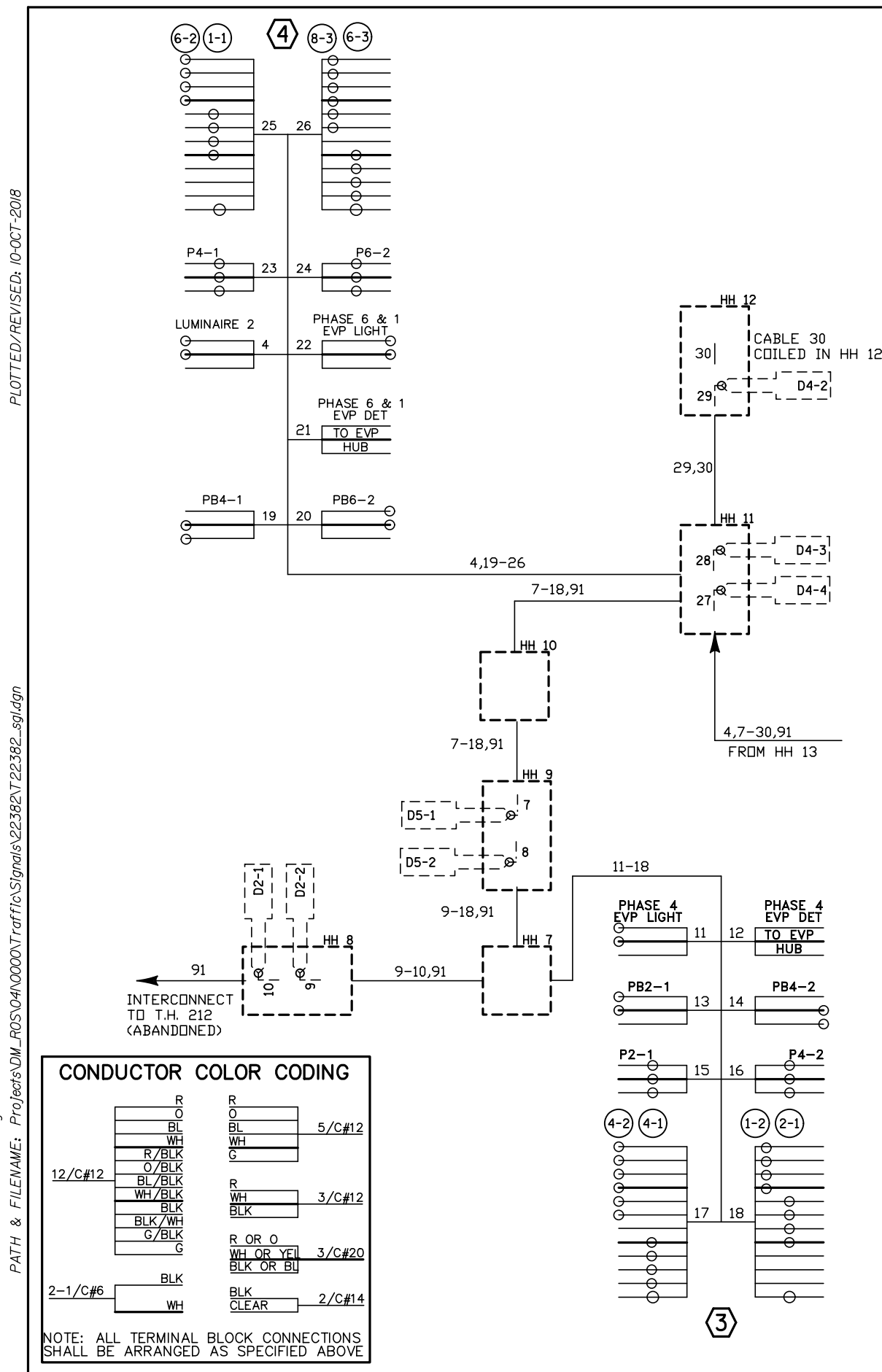
3 PA90 POLE FOUNDATION
 TYPE PA90-A-35
 ONE WAY SIGNAL OVERHEAD
 1-TYPE 10B POLE MOUNTED AT 90 DEG
 1-TYPE 20B POLE MOUNTED AT 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 4)
 2-PEDESTRIAN PUSHBUTTONS AND R10-4B SIGNS
 SIGN (D-2)
 EXTEND INTO HH 7:
 3" IN RSC
 2-12/C#12
 5-3/C#12
 1-3/C#20

2 PA90 POLE FOUNDATION
 TYPE PA90-A-50-X6-350/CAM 400 EXTENSION
 (MOUNTED AT 350 DEG, LIGHTNING ROD,
 7/16" GROUND BRAID AND GROUND ROD)
 1-VIDEO CAMERA WITH MOUNT
 2 SWING AWAY HINGES
 2-ONE WAY SIGNALS OVERHEAD
 (1 FT AND 18 FT FROM THE END OF THE MAST ARM)
 2-TYPE 10B POLE MOUNTED AT 90 AND 180 DEG
 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 2+5)
 LUMINAIRE 250 W HPS
 2-PEDESTRIAN PUSHBUTTONS AND R10-4B SIGNS
 SIGN (D-4)
 EXTEND 3" RSC INTO HH 4:
 2-12/C#12
 5-3/C#12
 1-3/C#12 (LUM)
 1-3/C#20
 1-7/16" GROUND BRAID
 TO GROUND ROD
 1-COM CABLE (CAT 5E)

BY	DATE	REVISIONS	SYSTEM ID: 1736243	T.E.	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
GDS	10-10-18	AS BUILT OF SP 1008-91 FIBER & CAMERA	METER ADDRESS: 102 VICTORIA DR.		CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
			OLD SYSTEM ID: 22382		STATE PROJ. NO. (T.H. 41)		SHEET NO. 2 OF 3 SHEETS	

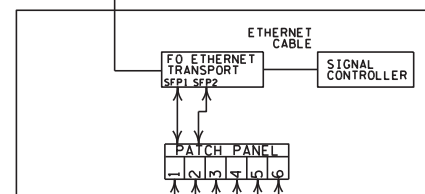
INTERSECTION LAYOUT NOTES
TRAFFIC CONTROL SIGNAL SYSTEM
TH 41 AT VICTORIA DR./CROSSTOWN BLVD.
IN CHASKA, CARVER COUNTY

DISTRICT #: Metro
 PLOT NAME: 3 wiring
 PATH & FILENAME: Projects\DM_ROMS\04\00000\Traffic\Signals\22382\T22382_sgl.dgn



CAMERA ID # C30048

**T.H. 41 AT
 CROSSTOWN BLVD**
 SIGNAL CONTROL
 CABINET 1736243

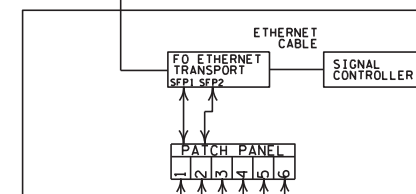


PRE-TERMINATED
 CABLE END

SIG 1736243 6-SM

CAMERA ID # C30049

**T.H. 41 AT
 ENGLER BLVD**
 SIGNAL CONTROL
 CABINET 1735308



PRE-TERMINATED
 CABLE END

SIG 1735308 6-SM

41-19

- 1
- 2
- 3
- 4
- 5
- 6

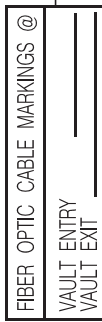
41-20

- 1
- 2
- 3
- 4
- 5
- 6

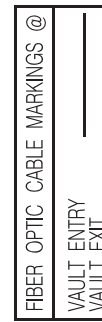
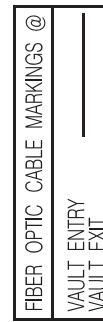
41-21

- 1
- 2
- 3
- 4
- 5
- 6

PULL VAULT



PULL VAULT



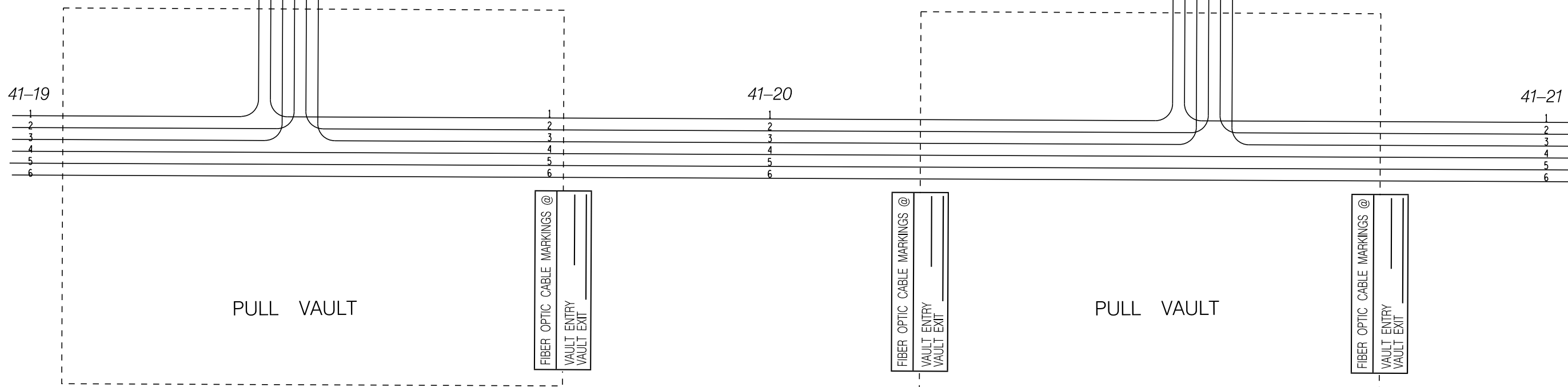
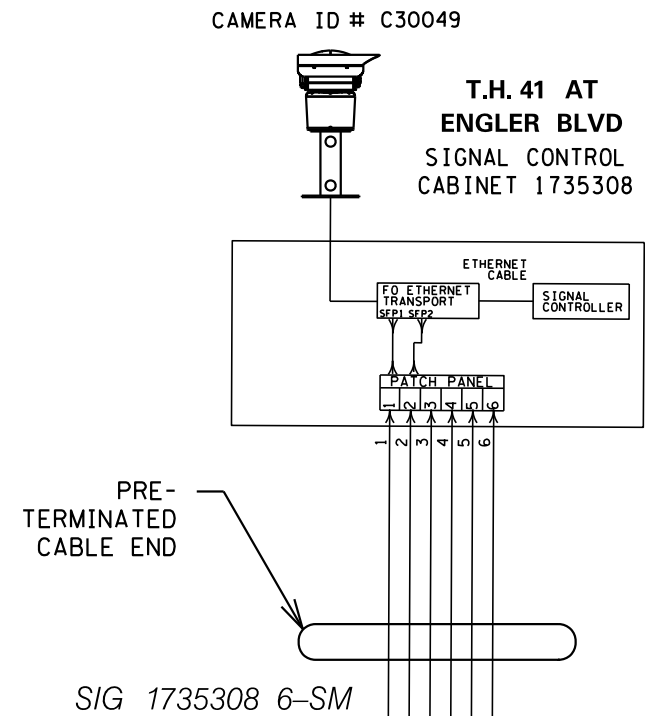
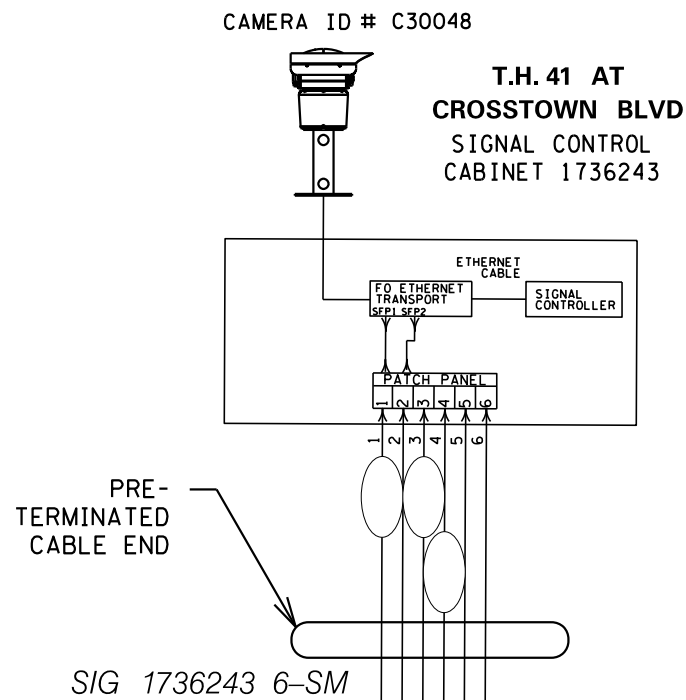
REV. NO.	DATE: / /
REV. NO.	DATE: / /

CERTIFIED BY

Michael P. Manly
 LICENSED PROFESSIONAL ENGINEER

LIC. NO. 43957 SEPT 15 2022

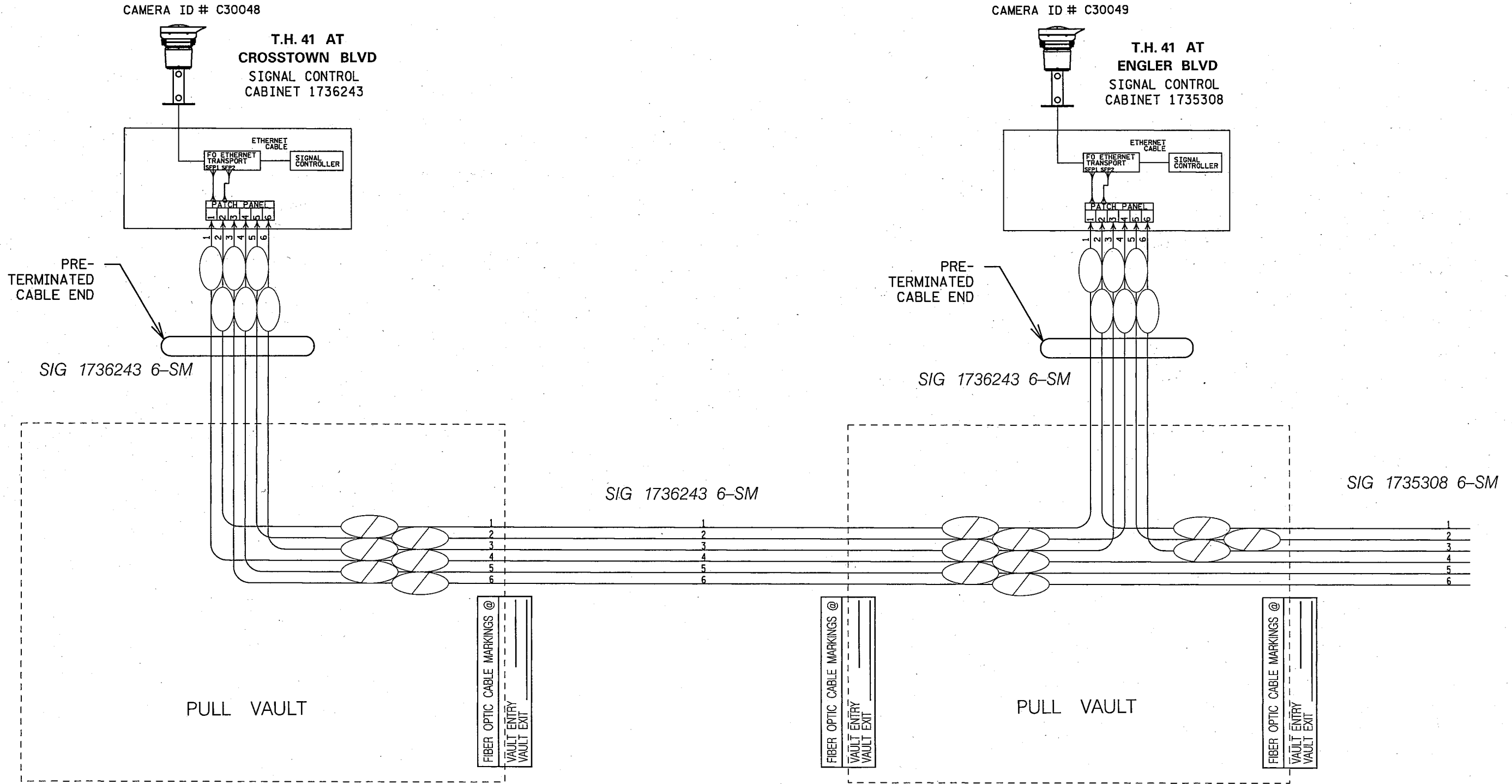
STATE PROJ. NO. 7005-130 (TH 169) SHEET NO. 69 OF 72 SHEETS



S.P. 196-010-017, S.P. 196-010-018, S.P. 196-020-014, S.P. 010-661-008

PLOTTED/REVISED: 16-JAN-2018

I/PLOT NAME: 020-fiber 1 of 4
 PATH & FILENAME: Projects\DM_R05\04\N008\09\NTraffic\Signalis\sp\008-91.dgn



BY	DATE	REVISIONS

SYSTEM ID: _____ T.E.
 METER ADDRESS: _____
 MASTER ID: _____ T.E.

FIBER OPTIC SCHEMATIC
 T.H. 41
 CROSSTOWN BLVD TO HAZELTINE BLVD
 SHEET 1 OF 4

S.A.P. NO. _____
 DRAWN BY: SJK CKD BY: GAK DATE: 01/16/18
 CERTIFIED BY: *Michael P. Lubinsky* LIC. NO. 19863 DATE: 01/16/18
 LICENSED PROFESSIONAL ENGINEER
 STATE PROJ. NO. 1008-91 (T.H. 41) SHEET NO. 20 OF 52 SHEETS

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

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

LOOP DETECTORS		
NUMBER	NUMBER OF LOOPS	LOCATION
D1-1,D5-1	6x6	40
D1-2,D5-2	6x6	10
D2-1,D2-2	6x6	250
D3-1,D7-1	6x15	50
D4-2,D8-1	6x6	120
● D4-3	2-6x6	5,20
● D4-4	2-6x6	5,20
● D4-5	6x6	5
D6-1	6x6	250
● D8-2	6x6	5
● D8-3	6x6	5
● D8-4	6x6	5

④ PA100 POLE FOUNDATION
TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
2 SWING AWAY HINGES
2-ONE WAY SIGNALS OVERHEAD
(0 FT, 12 FT FROM THE END OF THE MAST ARM)
2-TYPE 10B POLE MOUNTED AT 90 AND 180 DEG
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT
(PHASES 6+1)
LUMINAIRE 250 W HPS
2-PEDESTRIAN PUSHBUTTONS AND R10-4B SIGNS
SIGN (D-3)
EXTEND 3" RSC INTO HH 11
2-12/C#12
5-3/C#12
1-2/C#12 (LUM)
1-3/C#20

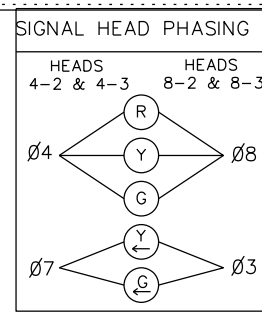
ALL LOOP DETECTORS ARE PVC EXCEPT WHERE SHOWN AS SAWCUT ●
LOCATION - DISTANCE FROM CROSS WALK/STOPLINE TO DETECTOR IN FEET.

① EQUIPMENT PAD
CONTROLLER AND CONTROLLER CABINET
SERVICE CABINET
CONTROLLER CABINET TO HH14
4" RSC
4-12/C#12
10-3/C#12
1-3/C#12 (LUM)
8-2/C#14
2-3/C#20
1-6PR#19 (INTERCONNECT)

CONTROLLER CABINET TO SERVICE CABINET
2" RSC
2-1/C#6
1-1/C#6 INS. GRD.
SERVICE CABINET TO HH 13
2" RSC
2-3/C#12 (LUM)
SERVICE CABINET TO 15
2" RSC
2-1/C#2
1-1/C#2(INS,GRD)

3" RSC
2-12/C#12
5-3/C#12
4-2/C#14
1-3/C#20
1-6PR#19 (INTERCONNECT)

CONTROLLER CABINET TO HH13
4" RSC
4-12/C#12
10-3/C#12
11-2/C#14
2-3/C#20
1-6PR#19 (INTERCONNECT)

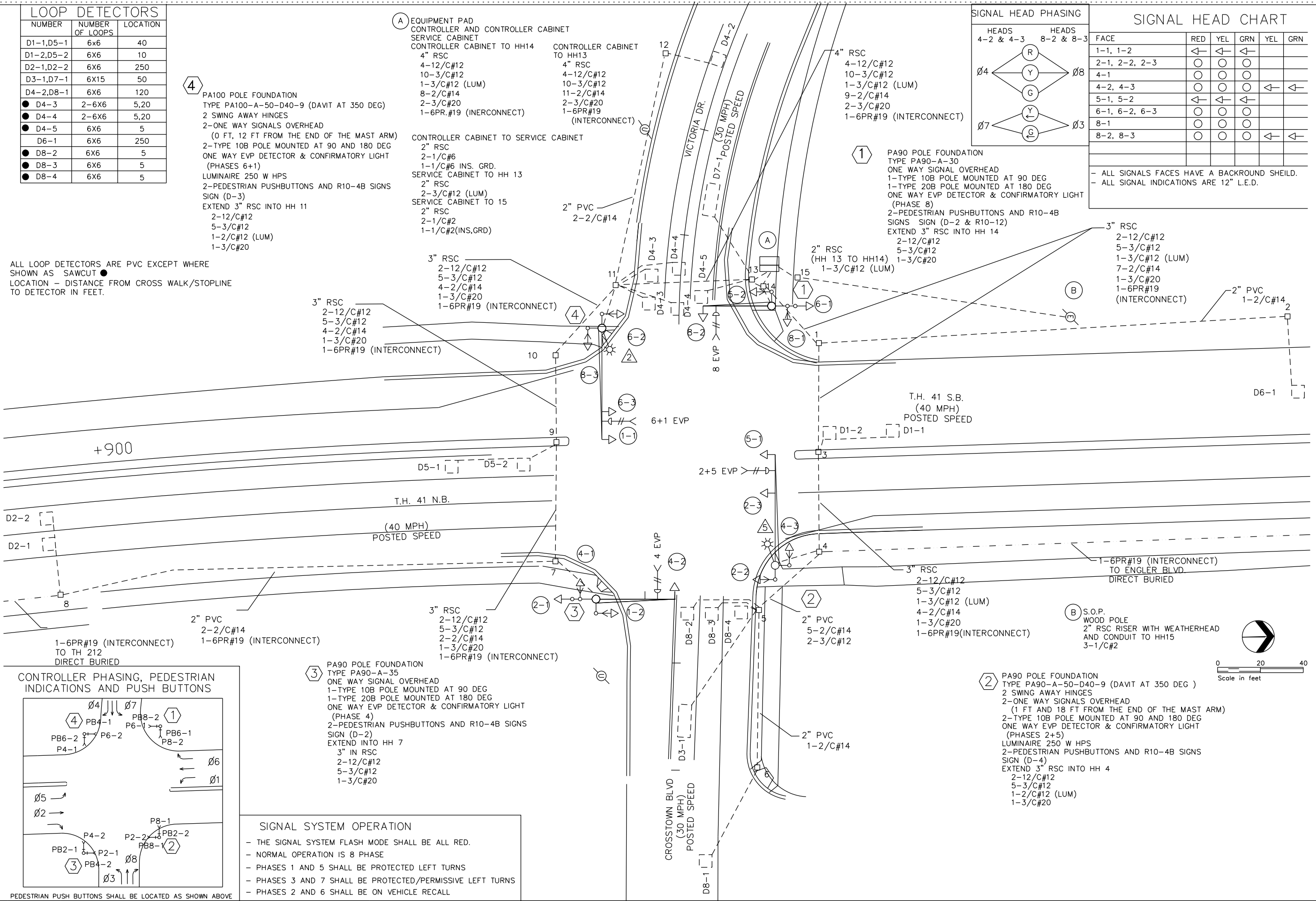


SIGNAL HEAD CHART					
FACE	RED	YEL	GRN	YEL	GRN
1-1, 1-2	←	←	←		
2-1, 2-2, 2-3	○	○	○		
4-1	○	○	○		
4-2, 4-3	○	○	○	←	←
5-1, 5-2	←	←	←		
6-1, 6-2, 6-3	○	○	○		
8-1	○	○	○		
8-2, 8-3	○	○	○	←	←

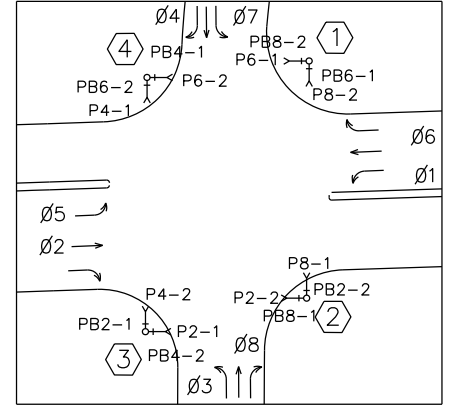
- ALL SIGNALS FACES HAVE A BACKGROUND SHIELD.
- ALL SIGNAL INDICATIONS ARE 12" L.E.D.

① PA90 POLE FOUNDATION
TYPE PA90-A-30
ONE WAY SIGNAL OVERHEAD
1-TYPE 10B POLE MOUNTED AT 90 DEG
1-TYPE 20B POLE MOUNTED AT 180 DEG
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT
(PHASE 8)
2-PEDESTRIAN PUSHBUTTONS AND R10-4B
SIGNS SIGN (D-2 & R10-12)
EXTEND 3" RSC INTO HH 14
2-12/C#12
5-3/C#12
1-3/C#20

3" RSC
2-12/C#12
5-3/C#12
1-3/C#12 (LUM)
7-2/C#14
1-3/C#20
1-6PR#19 (INTERCONNECT)

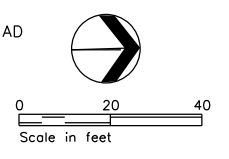


CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



③ PA90 POLE FOUNDATION
TYPE PA90-A-35
ONE WAY SIGNAL OVERHEAD
1-TYPE 10B POLE MOUNTED AT 90 DEG
1-TYPE 20B POLE MOUNTED AT 180 DEG
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT
(PHASE 4)
2-PEDESTRIAN PUSHBUTTONS AND R10-4B SIGNS
SIGN (D-2)
EXTEND INTO HH 7
3" IN RSC
2-12/C#12
5-3/C#12
1-3/C#20

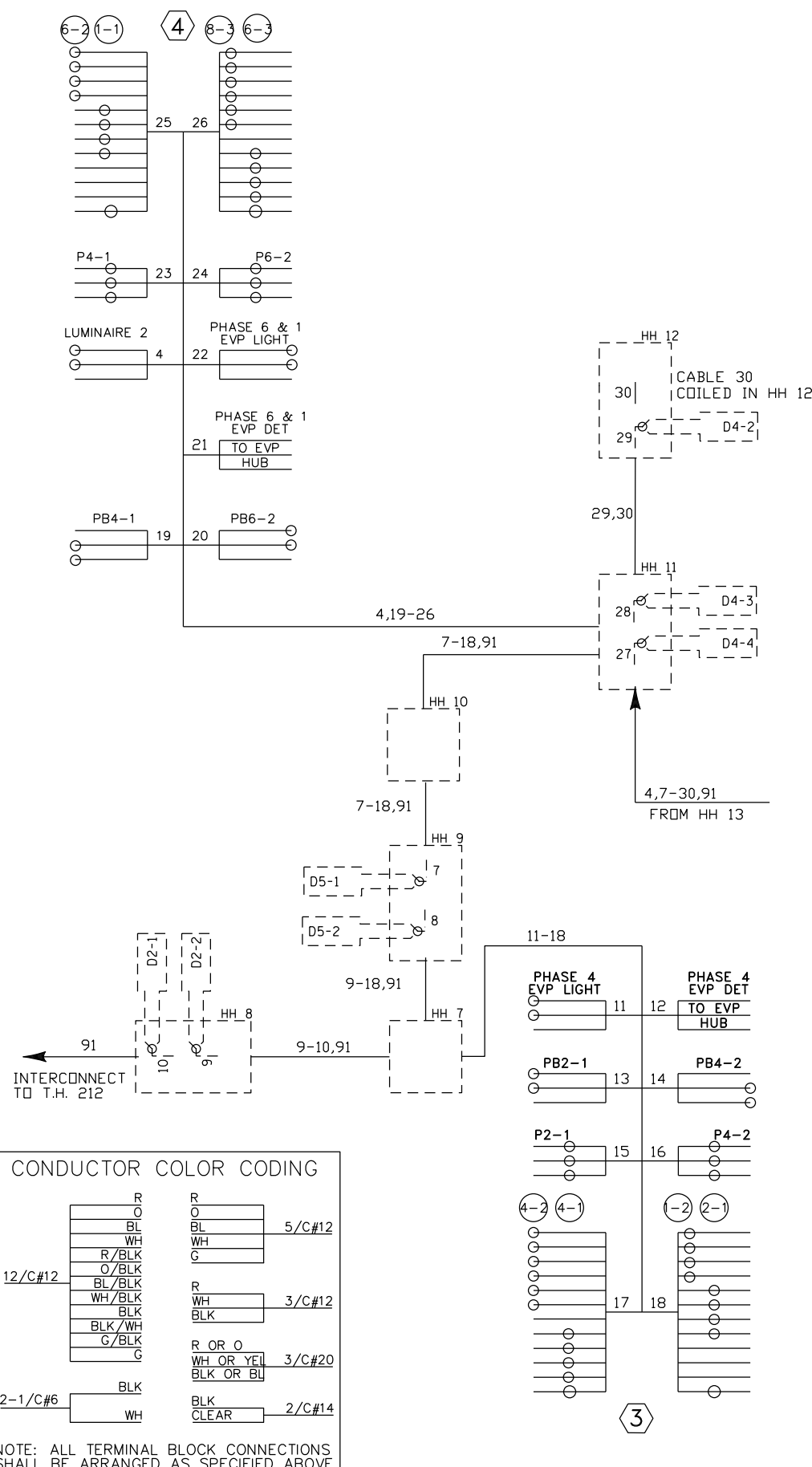
SIGNAL SYSTEM OPERATION
- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION IS 8 PHASE
- PHASES 1 AND 5 SHALL BE PROTECTED LEFT TURNS
- PHASES 3 AND 7 SHALL BE PROTECTED/PERMISSIVE LEFT TURNS
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL



BY	DATE	REVISIONS	SYSTEM ID: 22382	T.E.	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
SJK	7-21-05	SP 8825-190	METER ADDRESS: 102 Victoria Drive		CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
EJA	01-07-15	AS-BUILT OF SP 106-101-02	MASTER ID:	T.E.	STATE PROJ. NO.	(T.H. 41)	SHEET NO.	1 OF 2 SHEETS

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

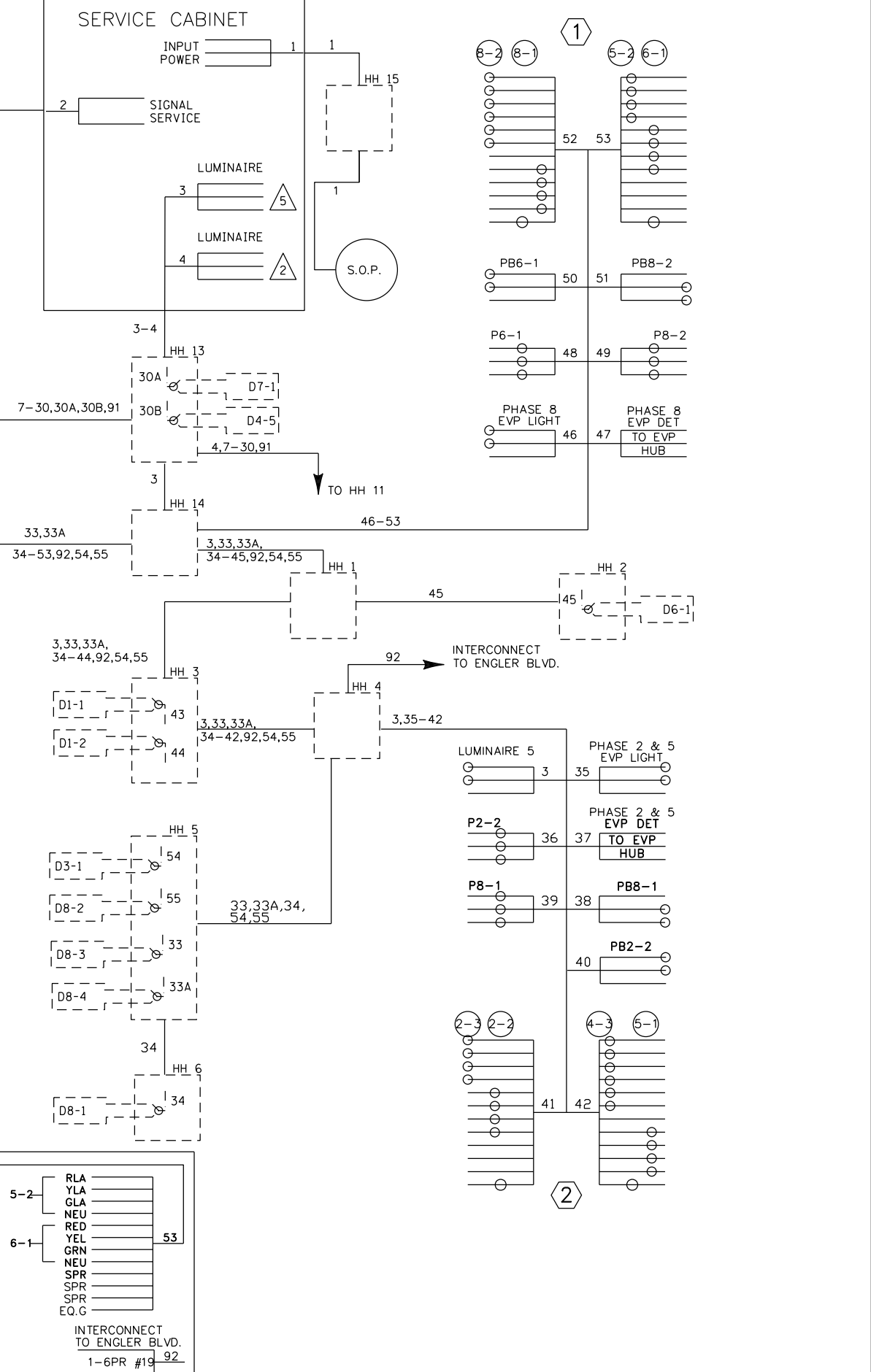
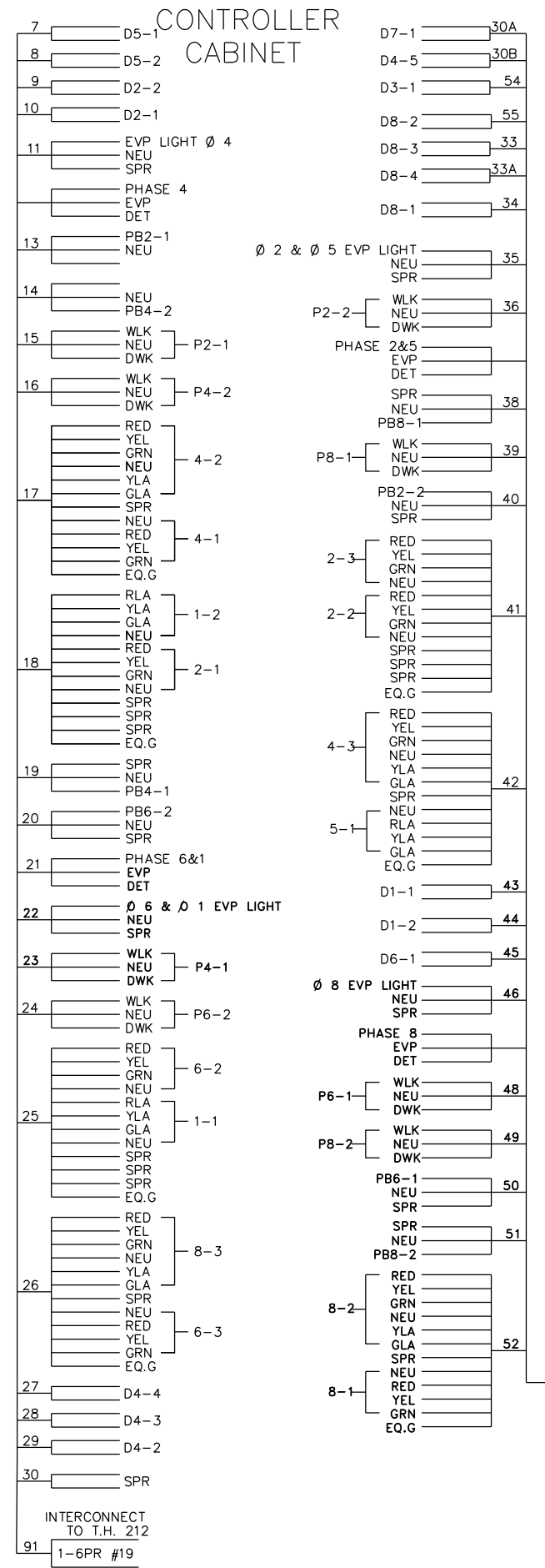
DISTRICT #: \$\$\$@DISTRICT@\$\$
PLOT NAME: \$\$\$@PLOT\$NAME@\$\$
PATH & FILENAME: \$\$\$@PATH\$FILENAME@\$\$\$



CONDUCTOR COLOR CODING

R	O	5/C#12
BL	BL	
WH	WH	
R/BLK	G	
O/BLK		
BL/BLK	R	3/C#12
WH/BLK	WH	
BLK	BLK	
BLK/WH		
G/BLK	R OR O	3/C#20
G	WH OR YEL	
	BLK OR BL	
2-1/C#6	BLK	2/C#14
	WH	
	BLK CLEAR	

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



BY	DATE	REVISIONS	SYSTEM ID: 22382	T.E.	S.A.P. NO.	DRAWN BY:	CKD BY:	DATE:
SJK	07-21-05	SP 8825-190	METER ADDRESS: 102 Victoria Drive		CERTIFIED BY _____	LIC. NO. _____	DATE: _____	
EJA	01-07-15	AS-BUILT OF SP 106-101-02	MASTER ID:	T.E.	STATE PROJ. NO.	(T.H. 41)	SHEET NO. 2 OF 2 SHEETS	

FIELD WIRING DIAGRAM
TH 41 AT VICTORIA DRIVE/CROSTOWN BLVD
IN CHASKA, CARVER COUNTY

LICENSED PROFESSIONAL ENGINEER