

### LOOP DETECTORS

NUMBER	SIZE (FEET)	FUNCTION	LOCATION
D1-1	2-6 x 6	1	10' & 40'
D2-1	6 x 6	1	475'
D2-2	6 x 6	1	475'
D3-1	2-6 x 6	1	10' & 40'
D4-1	6 x 6	3,8	120'
D4-2	6 x 6, 6 x 10	1	AS SHOWN
D5-1	2-6 x 6	1	10' & 40'
D6-1	6 x 6	1	400'
D6-2	6 x 6	1	400'
D7-1	2-6 x 6	1	10' & 40'
D7-2	2-6 x 6	1	10' & 40'
D8-1	6 x 6	3,8	400'
D8-2	6 x 6, 6 x 10	1	AS SHOWN

**LOOP DETECTORS FUNCTIONS**

1) CALL AND EXTEND  
 3) EXTEND ONLY  
 7) DELAY CALL - IMMEDIATE EXTEND  
 8) CARRY OVER (STRETCH)

**NOTE:**  
 LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR

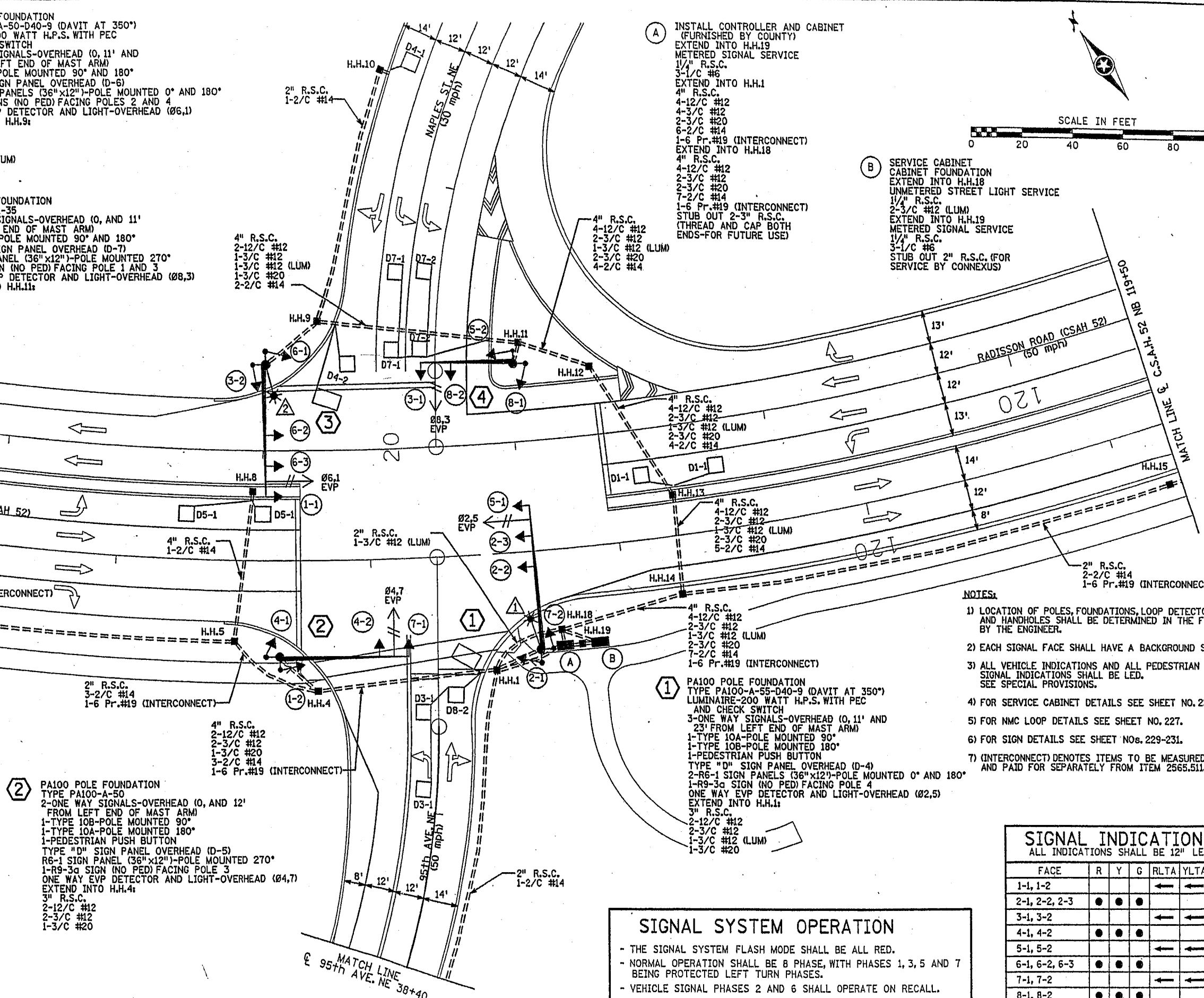
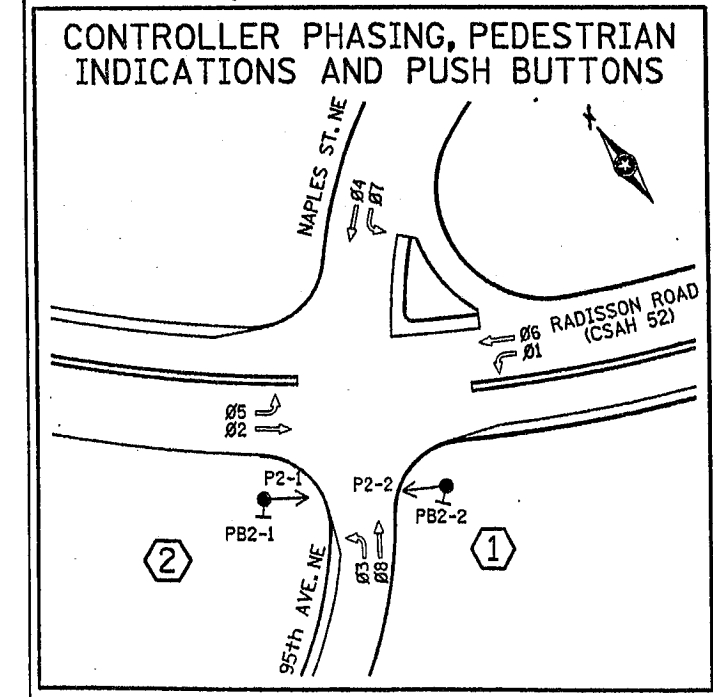
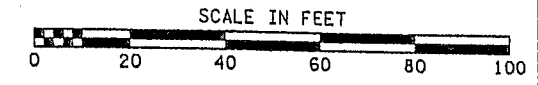
**3** PA100 POLE FOUNDATION  
 TYPE PA100-A-50-D40-9 (DAVIT AT 350")  
 LUMINAIRE-200 WATT H.P.S. WITH PEC AND CHECK SWITCH  
 3-ONE WAY SIGNALS-OVERHEAD (0, 11' AND 23' FROM LEFT END OF MAST ARM)  
 2-TYPE 10A-POLE MOUNTED 90° AND 180°  
 TYPE "D" SIGN PANEL OVERHEAD (D-6)  
 2-R6-1 SIGN PANELS (36"x12")-POLE MOUNTED 0° AND 180°  
 2-R9-3a SIGN (NO PED) FACING POLES 2 AND 4  
 ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø6,1)  
 EXTEND INTO H.H.9:  
 3" R.S.C.  
 2-12/C #12  
 1-3/C #12  
 1-3/C #12 (LUM)  
 1-3/C #20

**4** PA90 POLE FOUNDATION  
 TYPE PA90-A-35  
 2-ONE WAY SIGNALS-OVERHEAD (0, AND 11' FROM LEFT END OF MAST ARM)  
 2-TYPE 10A-POLE MOUNTED 90° AND 180°  
 TYPE "D" SIGN PANEL OVERHEAD (D-7)  
 R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 270°  
 2-R9-3a SIGN (NO PED) FACING POLE 1 AND 3  
 ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø8,3)  
 EXTEND INTO H.H.11:  
 3" R.S.C.  
 2-12/C #12  
 1-3/C #12  
 1-3/C #20

**2** PA100 POLE FOUNDATION  
 TYPE PA100-A-50  
 2-ONE WAY SIGNALS-OVERHEAD (0, AND 12' FROM LEFT END OF MAST ARM)  
 1-TYPE 10B-POLE MOUNTED 90°  
 1-TYPE 10A-POLE MOUNTED 180°  
 1-PEDESTRIAN PUSH BUTTON  
 TYPE "D" SIGN PANEL OVERHEAD (D-5)  
 R6-1 SIGN PANEL (36"x12")-POLE MOUNTED 270°  
 1-R9-3a SIGN (NO PED) FACING POLE 3  
 ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (Ø4,7)  
 EXTEND INTO H.H.4:  
 3" R.S.C.  
 2-12/C #12  
 2-3/C #12  
 1-3/C #20

**A** INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)  
 EXTEND INTO H.H.19  
 METERED SIGNAL SERVICE  
 1/4" R.S.C.  
 3-1/C #6  
 EXTEND INTO H.H.1  
 4" R.S.C.  
 4-12/C #12  
 4-3/C #12  
 2-3/C #20  
 6-2/C #14  
 1-6 Pr.#19 (INTERCONNECT)  
 EXTEND INTO H.H.18  
 4" R.S.C.  
 4-12/C #12  
 2-3/C #12  
 2-3/C #20  
 7-2/C #14  
 1-6 Pr.#19 (INTERCONNECT)  
 STUB OUT 2-3" R.S.C. (THREAD AND CAP BOTH ENDS-FOR FUTURE USE)

**B** SERVICE CABINET  
 CABINET FOUNDATION  
 EXTEND INTO H.H.18  
 UNMETERED STREET LIGHT SERVICE  
 1/4" R.S.C.  
 2-3/C #12 (LUM)  
 EXTEND INTO H.H.19  
 METERED SIGNAL SERVICE  
 1/4" R.S.C.  
 3-1/C #6  
 STUB OUT 2" R.S.C. (FOR SERVICE BY CONNEXUS)



- NOTES:**
- 1) LOCATION OF POLES, FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - 2) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
  - 3) ALL VEHICLE INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
  - 4) FOR SERVICE CABINET DETAILS SEE SHEET NO. 228
  - 5) FOR NMC LOOP DETAILS SEE SHEET NO. 227.
  - 6) FOR SIGN DETAILS SEE SHEET NOs. 229-231.
  - 7) (INTERCONNECT) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY FROM ITEM 2565.511.

### SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1, 3, 5 AND 7 BEING PROTECTED LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

### SIGNAL INDICATIONS

ALL INDICATIONS SHALL BE 12" LED

FACE	R	Y	G	RLTA	YLTA	GLTA
1-1, 1-2				←	←	←
2-1, 2-2, 2-3	●	●	●			
3-1, 3-2				←	←	←
4-1, 4-2	●	●	●			
5-1, 5-2				←	←	←
6-1, 6-2, 6-3	●	●	●			
7-1, 7-2				←	←	←
8-1, 8-2	●	●	●			

NO	DATE	BY	CHKD	APPR	REVISION

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.

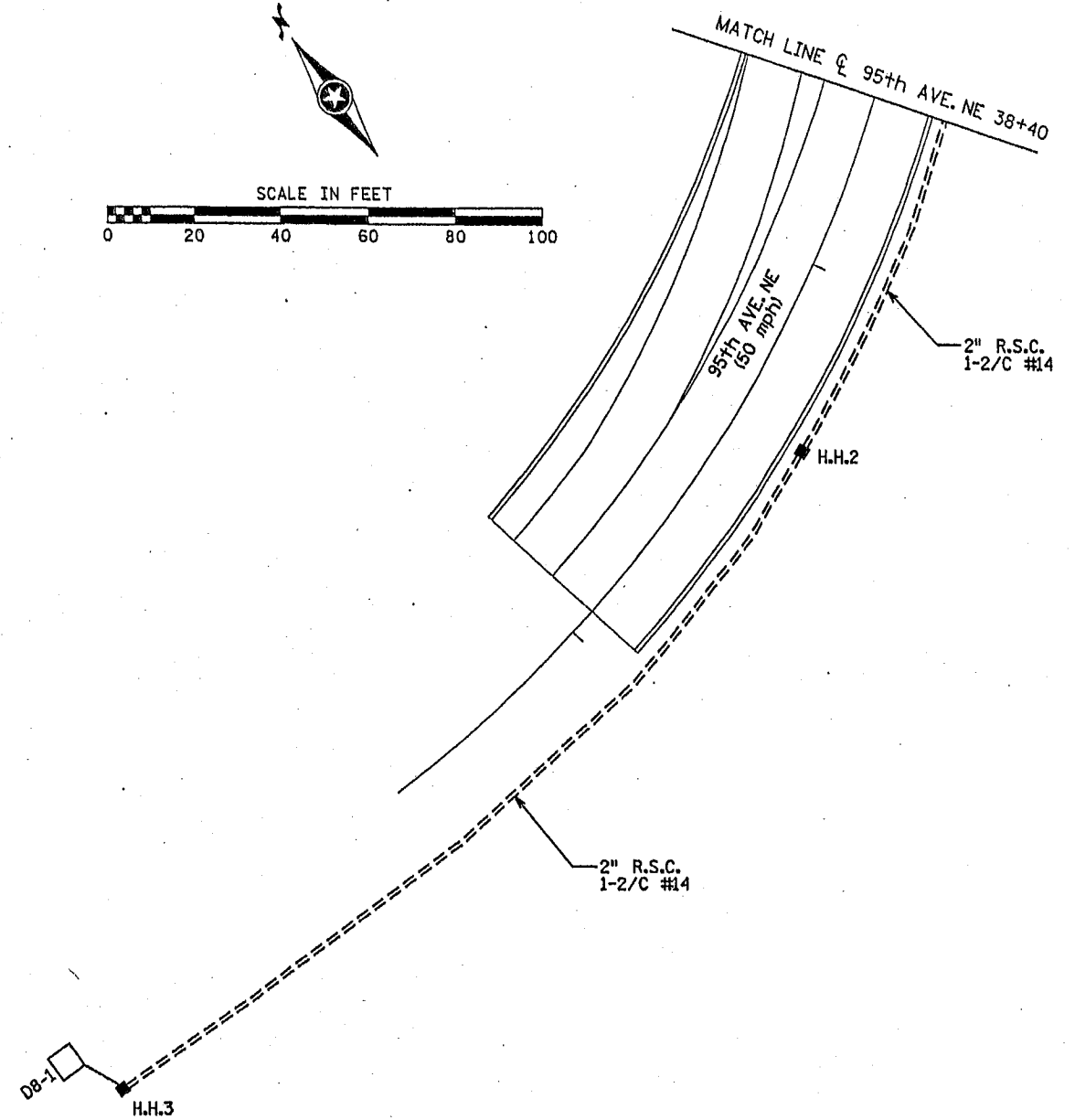
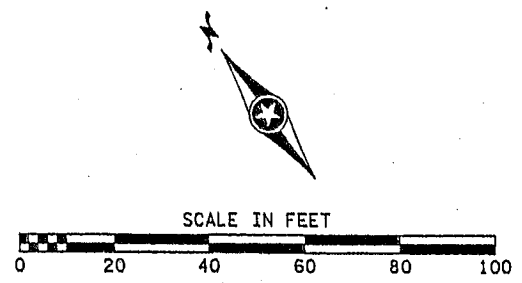
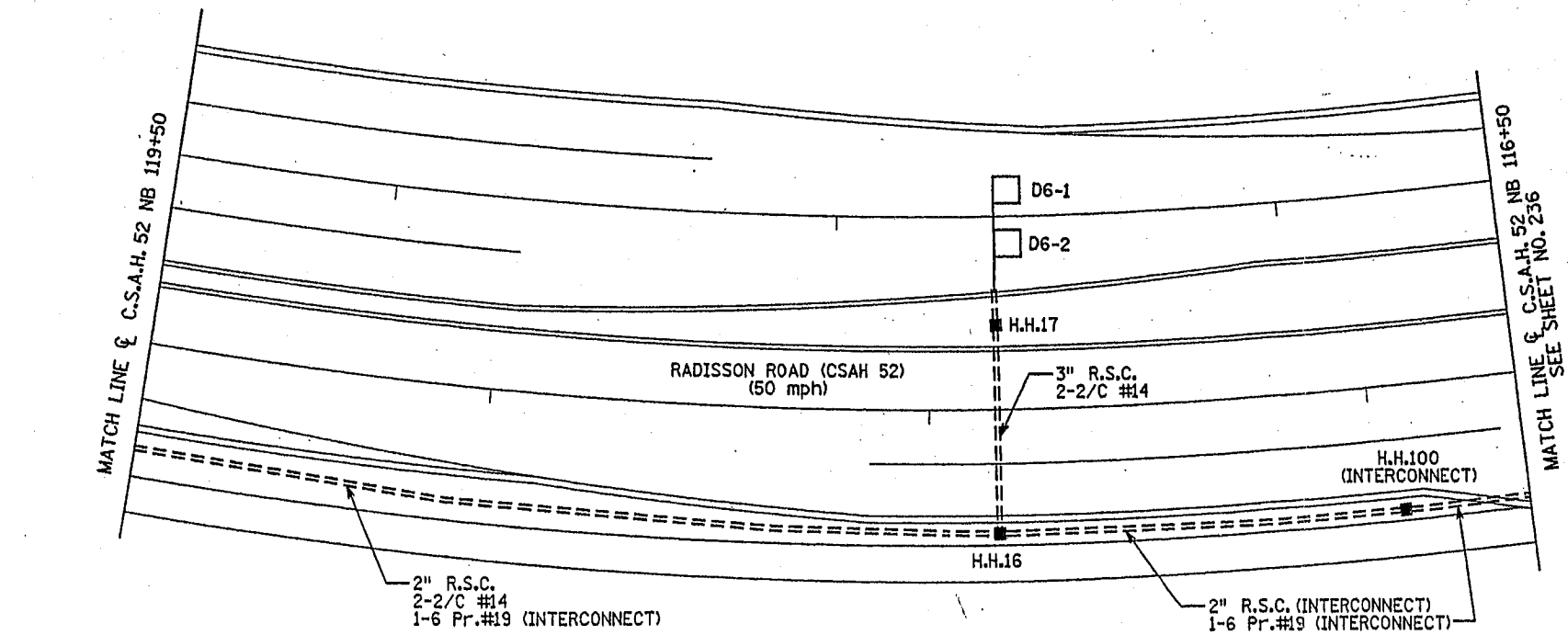
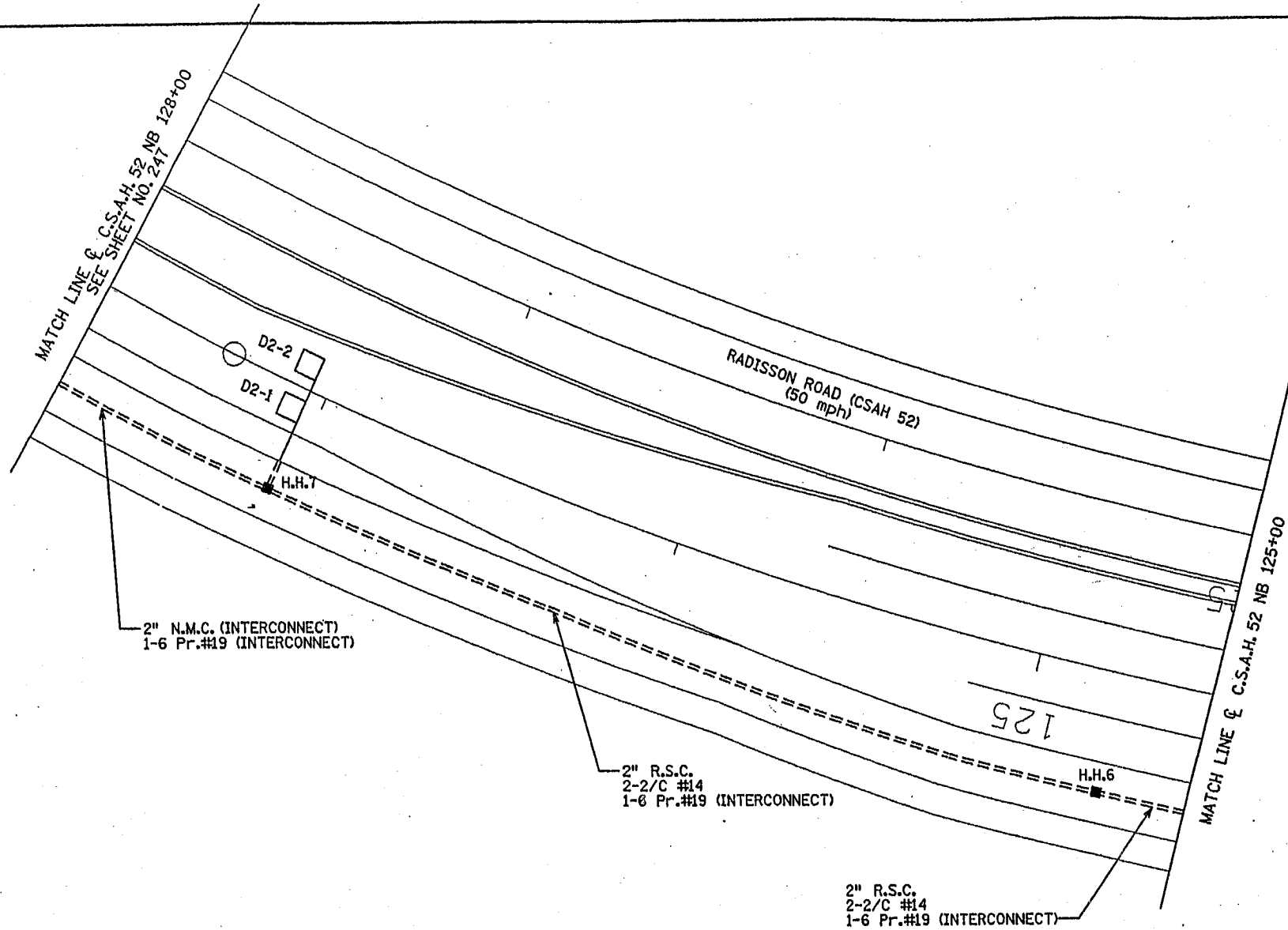
*Brent O. Paulson*

DRAWN BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DESIGN BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

S.P. 0280-50 (TH 35W)  
 S.P. 90-080-11  
 S.A.P. 02-652-02  
 S.A.P. 02-652-03  
 S.A.P. 02-652-04

**TKDA**  
 ENGINEERS • ARCHITECTS • PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INCORPORATED  
 SAINT PAUL, MINNESOTA



NOTE:  
(INTERCONNECT) DENOTES ITEMS TO BE MEASURED  
AND PAID FOR SEPARATELY FROM ITEM 2565.511.

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*Grant O. Paulsen*

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DESIGN BY \_\_\_\_\_ DATE \_\_\_\_\_  
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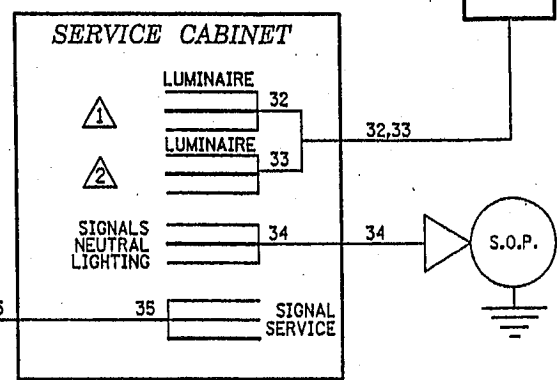
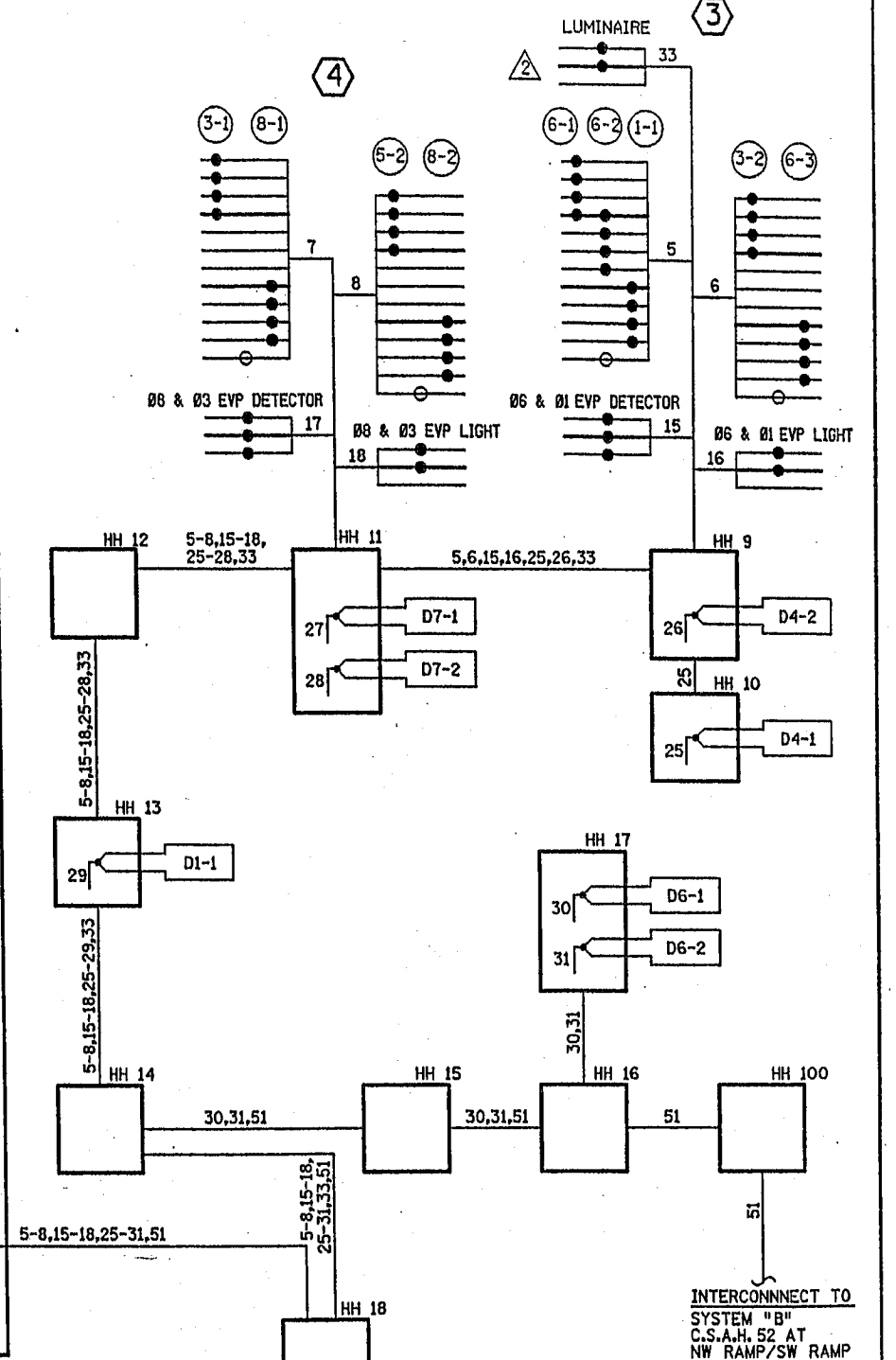
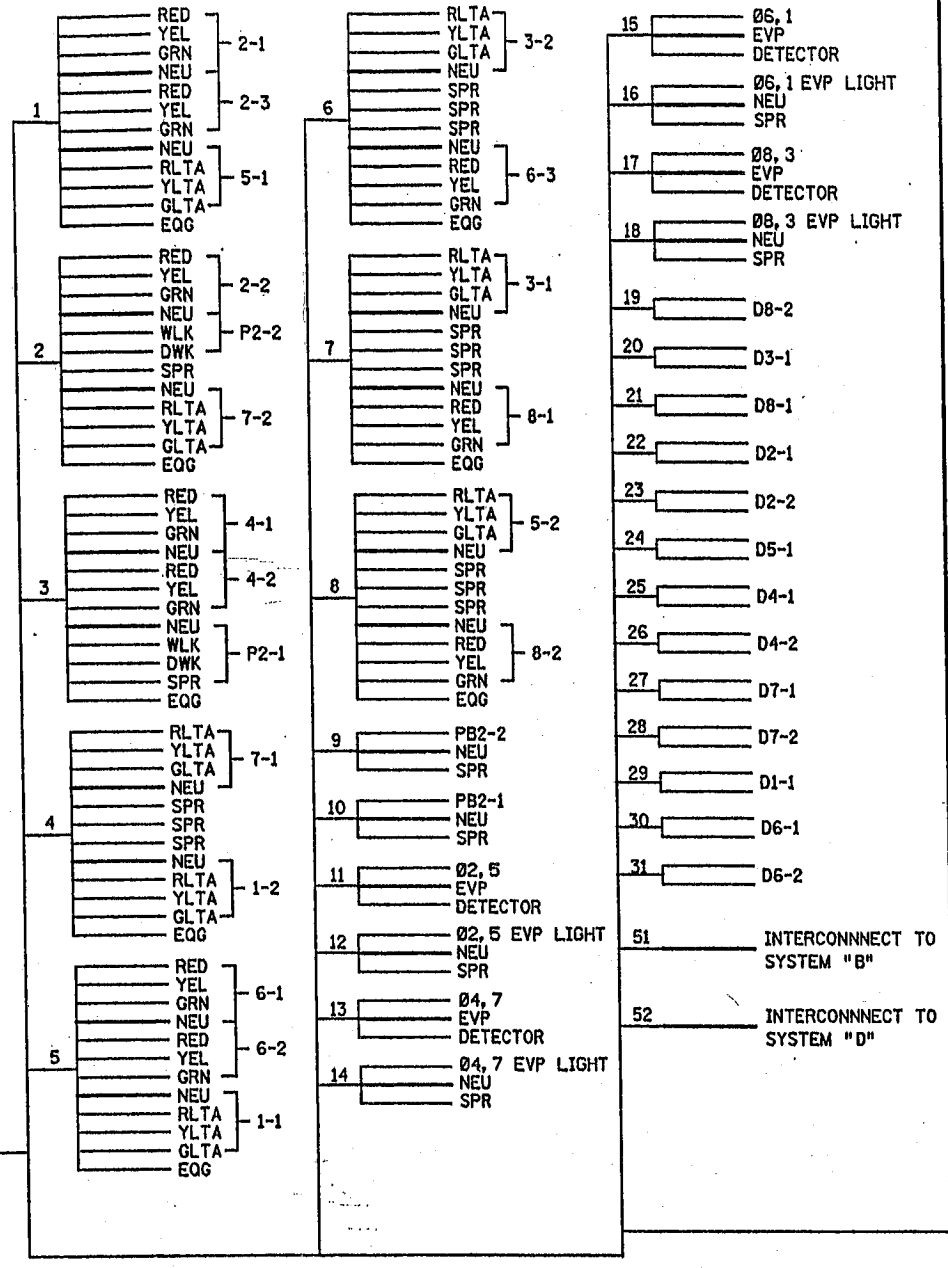
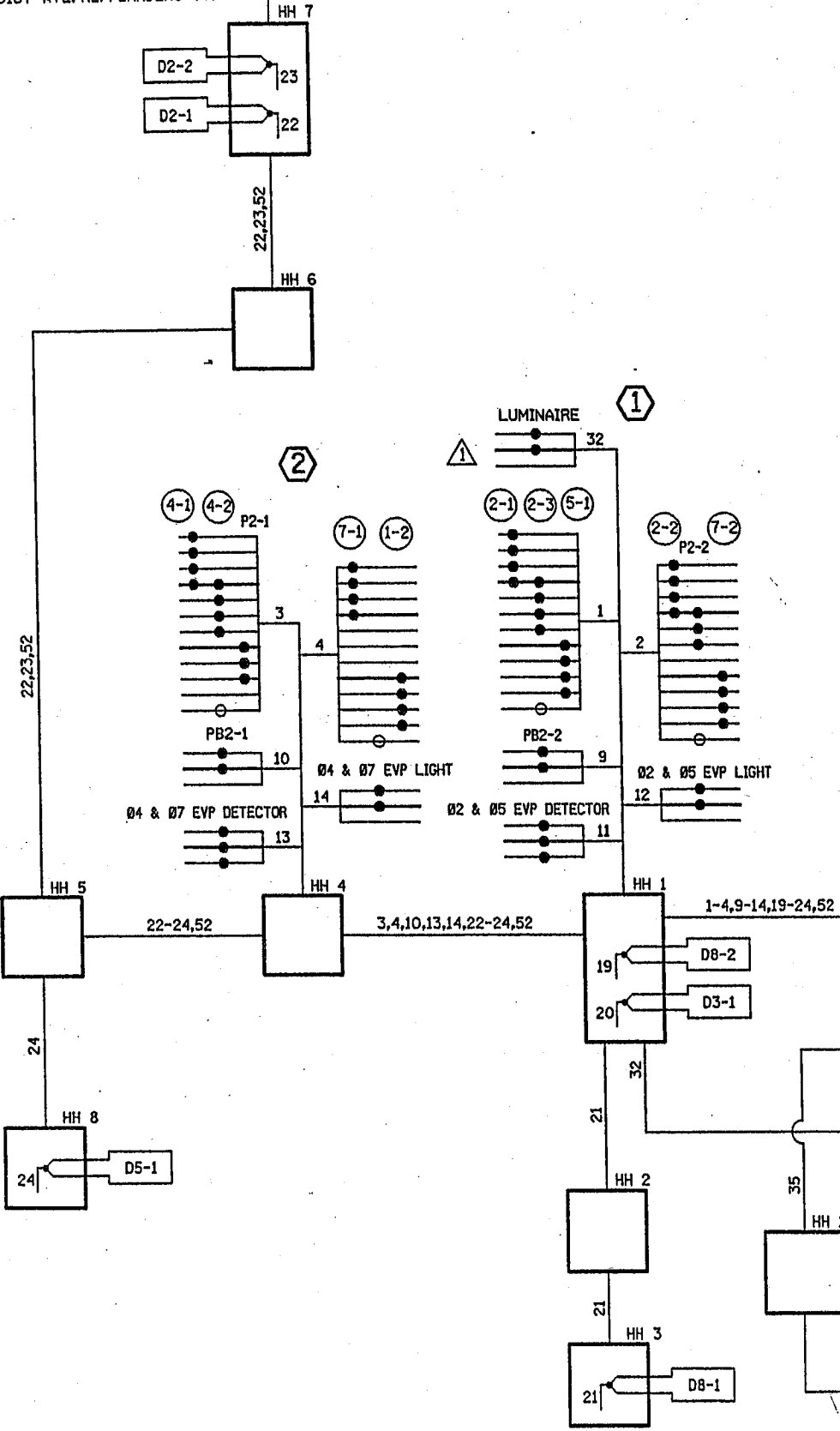
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ENGINEERS • ARCHITECTS • PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY  
MATCH LINES - SYSTEM "C"  
C.S.A.H. 52 RECONSTRUCTION

SHEET  
268  
OF  
559

# CONTROLLER CABINET

INTERCONNECT TO SYSTEM "D" C.S.A.H. 52 AT 101st AVE. NE/FLANDERS CT.



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

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

NO.	DATE	BY	CHK	APPR	REVISION

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*Grant O. Paulsen*

DRAWN BY SFH DATE 11-8-00  
 DESIGN BY BDP DATE 11-8-00  
 CHECKED BY TAC DATE 11-8-00

S.P. 0280-50 (TH 35W)  
 S.P. 90-080-11  
 S.A.P. 02-652-02  
 S.A.P. 02-652-03  
 S.A.P. 02-652-04

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