

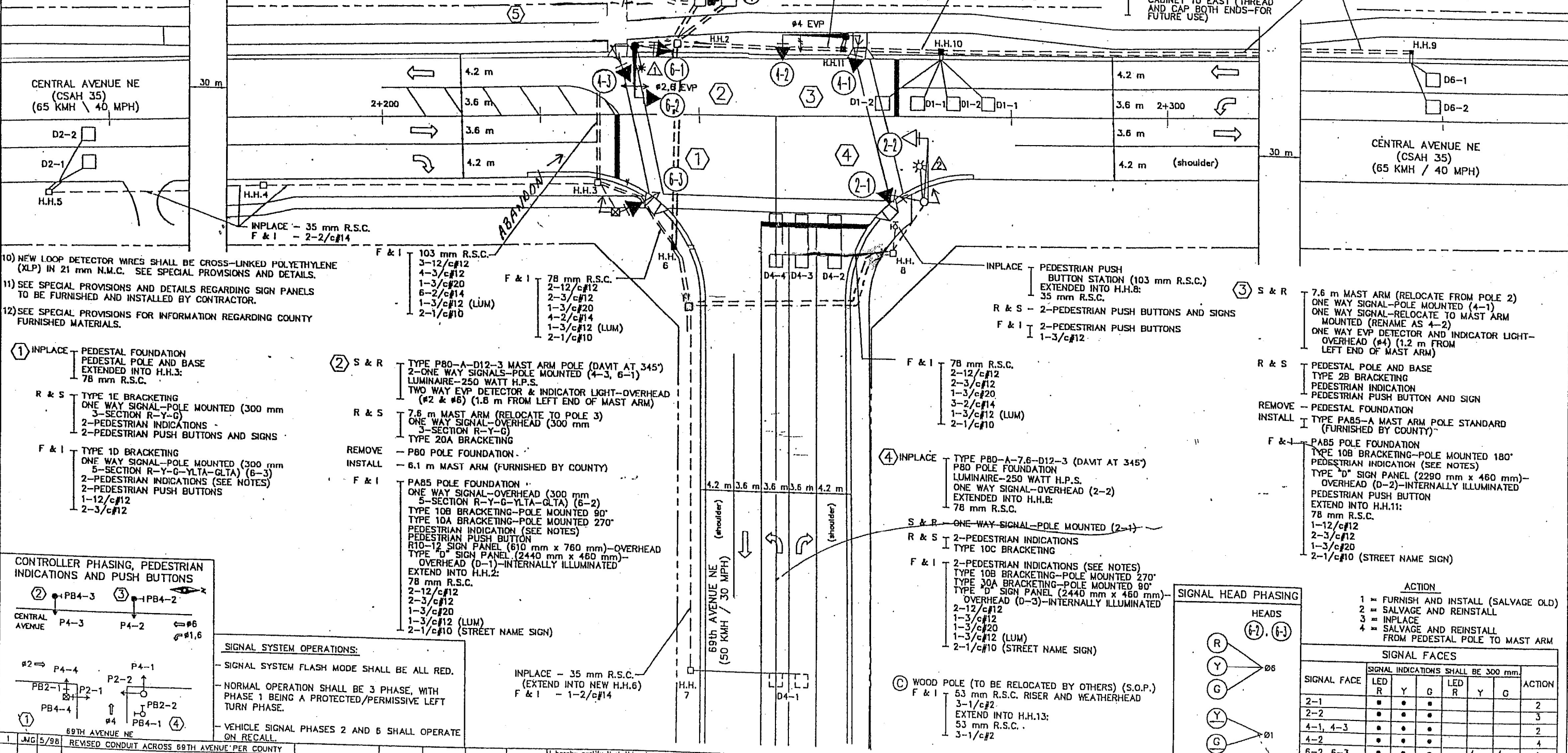
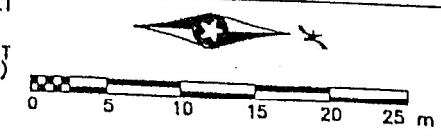
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- NOTES:**
- 1) EACH NEW VEHICLE SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
 - 2) ALL RED INDICATIONS SHALL BE REPLACED WITH 300 mm LED RED INDICATIONS. SEE SPECIAL PROVISIONS.
 - 3) ALL ITEMS OF SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED AS SHOWN, EXCEPT AS NOTED BY R & S (REMOVE AND SALVAGE), S & R (SALVAGE AND REINSTALL), AND F & I (FURNISH AND INSTALL).
 - 4) CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR EACH POLE MOUNTED VEHICLE SIGNAL FACE.
 - 5) CONTRACTOR SHALL PAINT ALL NEW AND INPLACE ITEMS OF SIGNAL SYSTEM. SEE SPECIAL PROVISIONS.
 - 6) LOCATION OF POLES, HANDHOLES, LOOP DETECTORS AND CABINETS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 7) SEE SPECIAL PROVISIONS REGARDING REMOVAL, SALVAGING AND/OR REINSTALLING OF INPLACE MATERIALS.
 - 8) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS PER MN/DOT STANDARD PLATE NO. M8114A.
 - 9) ALL INPLACE PEDESTRIAN INDICATIONS SHALL BE REMOVED AND SALVAGED BY THE CONTRACTOR, AND SHALL BE REPLACED WITH ONE SECTION HAND/WALKING PERSON INDICATIONS (WITH THE HAND INDICATION BEING LED).

LOOP DETECTORS				
NUMBER	SIZE (m)	LOCATION	FUNCTION	STATUS
D1-1	2-1.7x1.7	1.5 m & 10.5 m	11,12	F & I
D1-2	2-1.7x1.7	1.5 m & 6 m	11,12	F & I
D2-1	1.7x1.7	91 m	1	F & I
D2-2	1.7x1.7	91 m	1	F & I
D4-1	2-1.7x1.7	60 m	8	INPLACE
D4-2	2-1.7x1.7	0 m & 3 m	7	F & I
D4-3	2-1.7x1.7	0 m & 3 m	7	F & I
D4-4	2-1.7x1.7	0 m & 3 m	1	F & I
D6-1	1.7x1.7	91 m	1	F & I
D6-2	1.7x1.7	91 m	1	F & I

- LOOP DETECTORS FUNCTIONS:**
- 1) CALL AND EXTEND
 - 2) CALL ONLY
 - 3) EXTEND ONLY
 - 4) CALL ONLY DENSITY
 - 5) DELAYED CALL ONLY
 - 6) DELAYED CALL ONLY DENSITY
 - 7) DELAYED CALL- IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)
 - 9) ADVISORY DETECTOR
 - 10) SAMPLING DETECTOR
 - 11) CALL DURING #4 ONLY
 - 12) EXTEND DURING #1 AND #6 ONLY

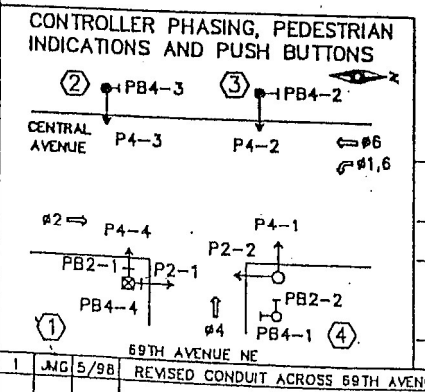
- (B) R & S - SERVICE CABINET REMOVE - CABINET FOUNDATION**
- F & I** CABINET FOUNDATION SERVICE CABINET EXTEND INTO H.H.13: 53 mm R.S.C. 3-1/c#2 EXTEND INTO H.H.12: 35 mm R.S.C. METERED SIGNAL SERVICE 3-1/c#5 EXTEND INTO H.H.1: 53 mm R.S.C. UNMETERED STREET LIGHT/SIGN SERVICE 2-3/c#12 (LUM) 6-1/c#10 (STREET NAME SIGNS)
- (A) R & S - CONTROLLER AND CABINET REMOVE - CABINET FOUNDATION**
- F & I** CONTROLLER AND CABINET (FURNISHED BY COUNTY)
- F & I** CABINET FOUNDATION EXTEND INTO H.H.12: 35 mm R.S.C. METERED SIGNAL SERVICE 3-1/c#5 EXTEND INTO H.H.1: 103 mm R.S.C. 3-12/c#12 4-3/c#12 1-3/c#20 6-2/c#14 EXTEND INTO H.H.2: 103 mm R.S.C. 3-12/c#12 4-3/c#12 2-3/c#20 4-2/c#14 STUB OUT 1-53 mm R.S.C. AND 1-78 mm R.S.C. FROM CABINET TO EAST (THREAD AND CAP BOTH ENDS-FOR FUTURE USE)
- (5) R & S** PEDESTAL POLE AND BASE TYPE 4A PEDESTRIAN PUSH BUTTON AND SIGN REMOVE - PEDESTAL FOUNDATION



- 10) NEW LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 21 mm N.M.C. SEE SPECIAL PROVISIONS AND DETAILS.
- 11) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGN PANELS TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
- 12) SEE SPECIAL PROVISIONS FOR INFORMATION REGARDING COUNTY FURNISHED MATERIALS.

- (1) INPLACE** PEDESTAL FOUNDATION PEDESTAL POLE AND BASE EXTENDED INTO H.H.3: 78 mm R.S.C.
- R & S** TYPE 1E BRACKETING ONE WAY SIGNAL-POLE MOUNTED (300 mm 3-SECTION R-Y-G) 2-PEDESTRIAN INDICATIONS 2-PEDESTRIAN PUSH BUTTONS AND SIGNS
- F & I** TYPE 1D BRACKETING ONE WAY SIGNAL-POLE MOUNTED (300 mm 5-SECTION R-Y-G-YLTA-GLTA) (6-3) 2-PEDESTRIAN INDICATIONS (SEE NOTES) 2-PEDESTRIAN PUSH BUTTONS 1-12/c#12 2-3/c#12

- (2) S & R** TYPE P80-A-D12-3 MAST ARM POLE (DAVT AT 345°) 2-ONE WAY SIGNALS-POLE MOUNTED (4-3, 6-1) LUMINAIRE-250 WATT H.P.S. TWO WAY EVP DETECTOR & INDICATOR LIGHT-OVERHEAD (#2 & #6) (1.8 m FROM LEFT END OF MAST ARM)
- R & S** 7.6 m MAST ARM (RELOCATE TO POLE 3) ONE WAY SIGNAL-OVERHEAD (300 mm 3-SECTION R-Y-G) TYPE 20A BRACKETING
- REMOVE** - P80 POLE FOUNDATION
- INSTALL** - 6.1 m MAST ARM (FURNISHED BY COUNTY)
- F & I** PAB5 POLE FOUNDATION ONE WAY SIGNAL-OVERHEAD (300 mm 5-SECTION R-Y-G-YLTA-GLTA) (6-2) TYPE 10B BRACKETING-POLE MOUNTED 90° TYPE 10A BRACKETING-POLE MOUNTED 270° PEDESTRIAN INDICATION (SEE NOTES) PEDESTRIAN PUSH BUTTON TYPE "D" SIGN PANEL (610 mm x 760 mm)-OVERHEAD TYPE "D" SIGN PANEL (2440 mm x 460 mm)-OVERHEAD (D-1)-INTERNALLY ILLUMINATED EXTEND INTO H.H.2: 78 mm R.S.C. 2-12/c#12 2-3/c#12 1-3/c#20 1-3/c#12 (LUM) 2-1/c#10 (STREET NAME SIGN)

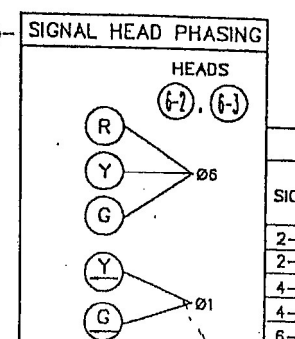


SIGNAL SYSTEM OPERATIONS:

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

INPLACE - 35 mm R.S.C. (EXTEND INTO NEW H.H.6) F & I - 1-2/c#14

- (C) WOOD POLE (TO BE RELOCATED BY OTHERS) (S.O.P.)**
- F & I** 53 mm R.S.C. RISER AND WEATHERHEAD 3-1/c#2 EXTEND INTO H.H.13: 53 mm R.S.C. 3-1/c#2



ACTION

- 1 = FURNISH AND INSTALL (SALVAGE OLD)
- 2 = SALVAGE AND REINSTALL
- 3 = INPLACE
- 4 = SALVAGE AND REINSTALL FROM PEDESTAL POLE TO MAST ARM

SIGNAL FACES

SIGNAL FACE	SIGNAL INDICATIONS SHALL BE 300 mm			ACTION
	LED R	Y	G	
2-1	•	•	•	2
2-2	•	•	•	3
4-1, 4-3	•	•	•	2
4-2	•	•	•	4
6-2, 6-3	•	•	•	1
6-1	•	•	•	2

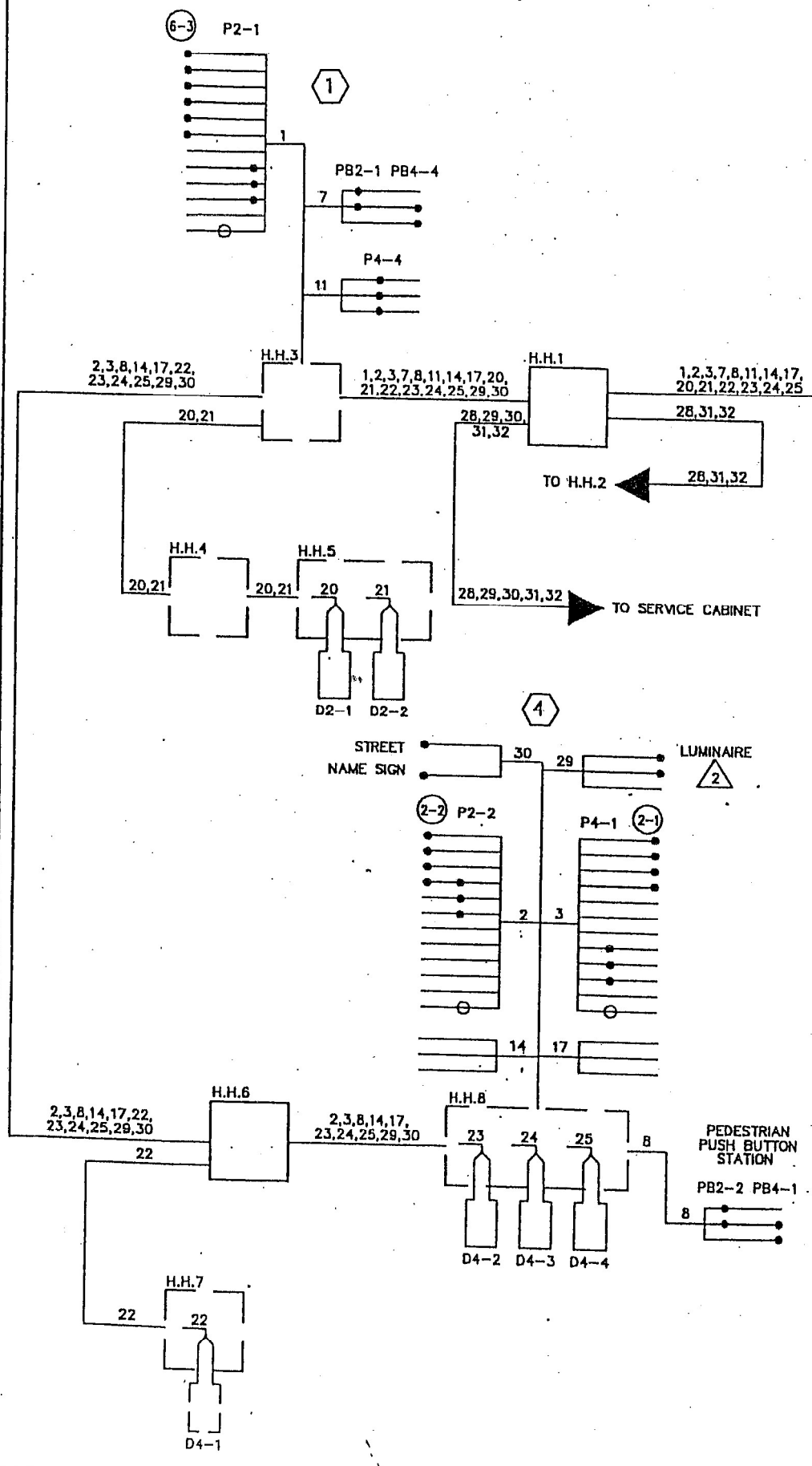
CONTROLLER CABINET

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CONDUCTOR COLOR CODING

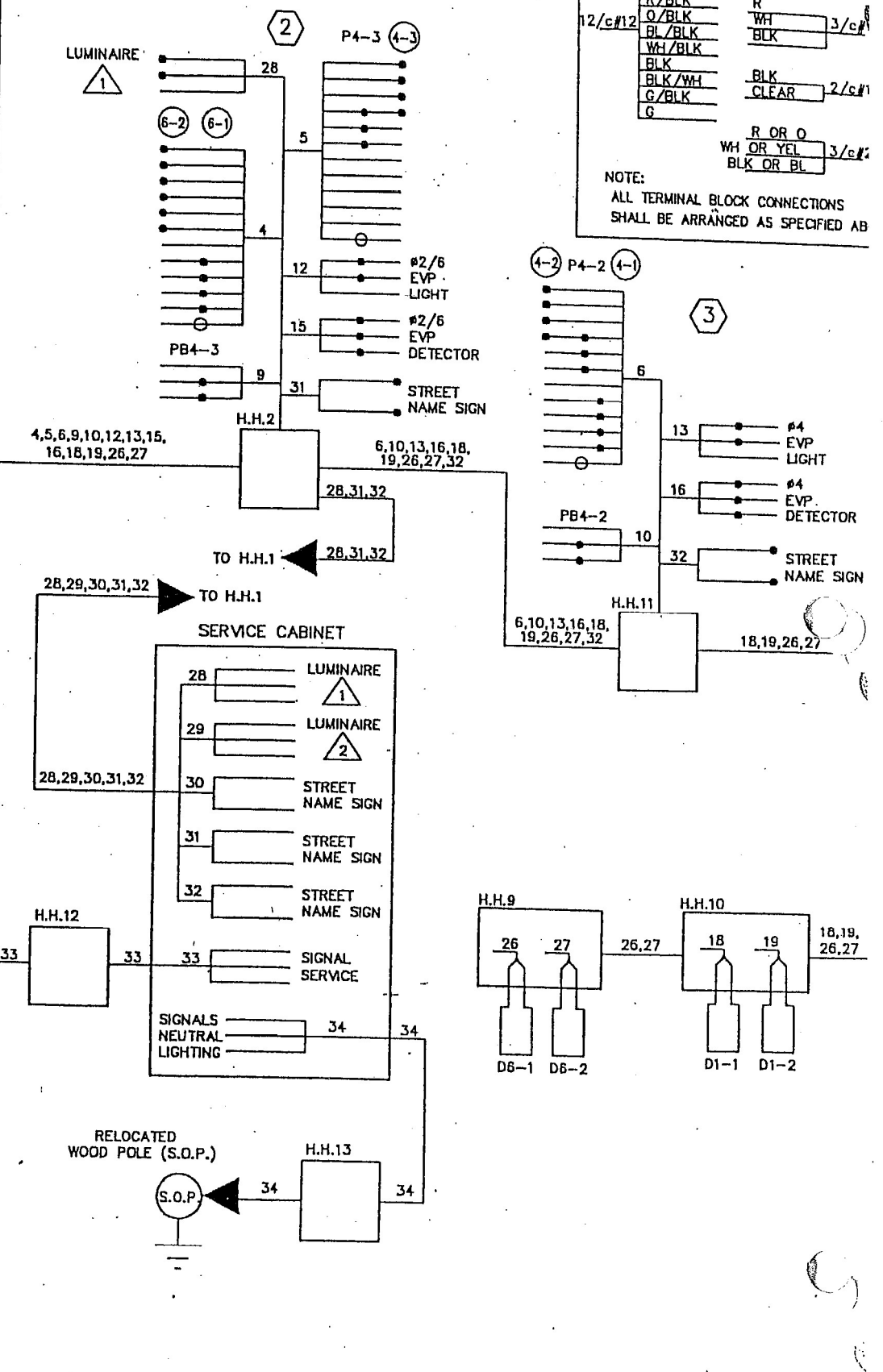
R	BLK
O	WH
BL	WH
WH	
R/BLK	R
O/BLK	WH
BL/BLK	BLK
WH/BLK	BLK
BLK	BLK
BLK/WH	BLK
G/BLK	CLEAR
G	
R OR O	
WH OR YEL	
BLK OR BL	

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



- RED 6-3
 - YEL 6-3
 - GRN 6-3
 - NEU 6-3
 - YLTA 6-3
 - GLTA 6-3
 - SPR
 - NEU P2-1
 - WLK P2-1
 - DWK P2-1
 - SPR
 - EQG
-
- RED 2-2
 - YEL 2-2
 - GRN 2-2
 - NEU 2-2, P2-2
 - WLK P2-2
 - DWK P2-2
 - SPR
 - NEU
 - SPR
 - SPR
 - SPR
 - EQG
-
- RED 2-1
 - YEL 2-1
 - GRN 2-1
 - NEU 2-1
 - SPR
 - SPR
 - SPR
 - NEU P4-1
 - WLK P4-1
 - DWK P4-1
 - SPR
 - EQG
-
- RED 6-2
 - YEL 6-2
 - GRN 6-2
 - NEU 6-2
 - YLTA 6-2
 - GLTA 6-2
 - SPR
 - NEU 6-1
 - RED 6-1
 - YEL 6-1
 - GRN 6-1
 - EQG
-
- RED 4-3
 - YEL 4-3
 - GRN 4-3
 - NEU 4-3, P4-3
 - WLK P4-3
 - DWK P4-3
 - SPR
 - NEU
 - SPR
 - SPR
 - SPR
 - EQG
-
- RED 4-2
 - YEL 4-2
 - GRN 4-2
 - NEU 4-2, P4-2
 - WLK P4-2
 - DWK P4-2
 - SPR
 - NEU 4-1
 - RED 4-1
 - YEL 4-1
 - GRN 4-1
 - EQG

- PB2-1
- NEU
- PB4-4
- PB2-2
- NEU
- PB4-1
- SPR
- NEU
- PB4-3
- SPR
- NEU
- PB4-2
- P4-4 WLK
- P4-4 NEU
- P4-4 DWK
- #2/6
- EVP
- LIGHT
- #4
- EVP
- LIGHT
- FUTURE
- EVP
- LIGHT
- #2/6
- EVP
- DETECTOR
- #4
- EVP
- FUTURE
- D1-1
- D1-2
- D2-1
- D2-2
- D4-1
- D4-2
- D4-3
- D4-4
- D6-1
- D6-2
- SIGNAL
- SERVICE



1 JWG 5/98 REVISED CONDUIT ACROSS 69TH AVENUE PER COUNTY

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.



ANOKA COUNTY, MINNESOTA
CITY OF EDEN

REVISE SIGNAL SYSTEM

FILE NO.
DRAWING NO.