

CONVENTIONAL SYMBOLS

- Section Line \_\_\_\_\_
- Quarter Line \_\_\_\_\_
- Sixteenth Line \_\_\_\_\_
- Property Line \_\_\_\_\_
- R/W Boundary *R/W* \_\_\_\_\_
- Existing D.O.T. R/W Line \_\_\_\_\_
- And Other Road R/W's \_\_\_\_\_
- Railroad R/W \_\_\_\_\_
- Private Easement \_\_\_\_\_
- Temporary Easement *T. E.* \_\_\_\_\_
- Building Removal Easement *B. R. E.* \_\_\_\_\_
- R/W Parcel Number *3* \_\_\_\_\_
- Access Control \_\_\_\_\_
- Access Opening \_\_\_\_\_
- Cast Iron Monument or 2"x2" D.O.T. Iron Pipe with Aluminum Cap \_\_\_\_\_
- 3/4" D.O.T. Iron Pin \_\_\_\_\_
- Other Iron Monument \_\_\_\_\_
- Concrete or Stone Monument \_\_\_\_\_
- R/W Boundary Corner \_\_\_\_\_

UTILITY SYMBOLS

- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE AND POWER ON TELEPHONE POLES
- ANCHOR
- STREET LIGHT
- PEDESTAL (TELEPHONE CABLE TERMINAL)
- GAS MAIN
- WATER MAIN
- CONDUIT
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- BURIED TELEPHONE CABLE
- BURIED ELECTRIC CABLE
- AERIAL TELEPHONE CABLE
- SEWER (SANITARY OR STORM)
- SEWER MANHOLE



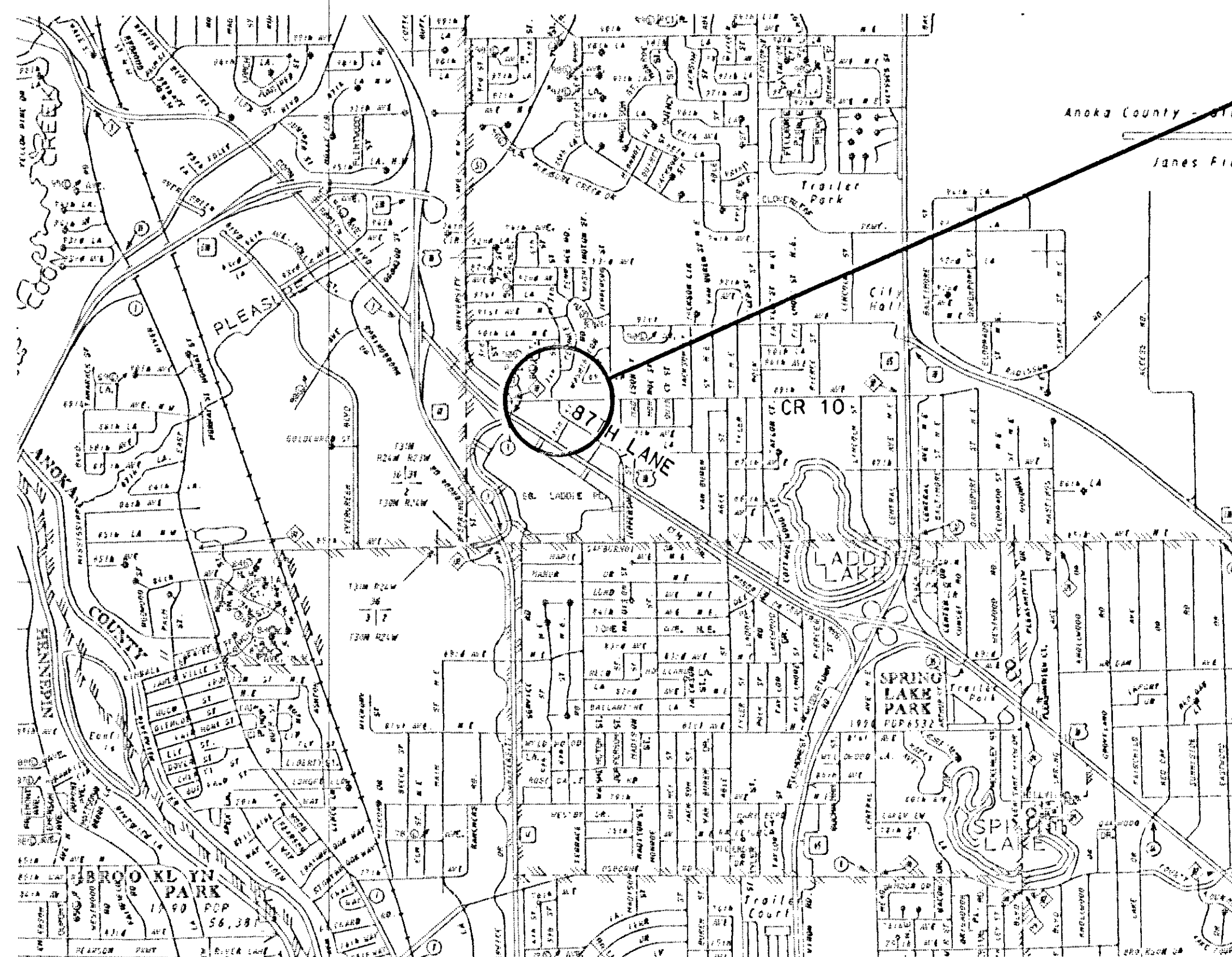
# CONSTRUCTION OF FULL TRAFFIC ACTUATED TRAFFIC CONTROL SIGNAL SYSTEM IN THE CITY OF BLAINE, ANOKA COUNTY, MINNESOTA AT COUNTY ROAD 10 AND 87TH LANE

SYMBOLS

- EGV CONNECTION
- EVP DETECTOR DIRECTION
- LUMINAIRE NO.
- SIGNAL BASE NO.
- SIGNAL FACE NO.
- SPLICE

INDEX

PAGE	DESCRIPTION
1	TITLE SHEET
2	UTILITY LOCATIONS AND SIGNS
3	INTERSECTION LAYOUT
4	WIRING DIAGRAM
5	SERVICE EQUIPMENT PAD AND CONTROLLER PAD DETAILS
6	MISC. DETAILS
7	EVP INSTALLATION - 87TH LANE AT WASHINGTON



PROJECT LOCATION  
COUNTY ROAD 10  
AT 87TH LANE  
C.P. 94-05-10

ANOKA COUNTY  
HIGHWAY DEPARTMENT

SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE JANUARY 2, 1991 SUPPLEMENTAL SPECIFICATION SHALL GOVERN.

Approved Charles Lott DATE 1/3 1995  
CITY OF BLAINE ENGINEER

Approved James S. ... DATE 6/2 1995  
ANOKA COUNTY ENGINEER

Recommended for Approval \_\_\_\_\_ DATE \_\_\_\_\_ 9  
METRO ASSISTANT DIVISION ENGINEER  
STATE AID

Recommended for Approval \_\_\_\_\_ DATE \_\_\_\_\_ 9  
STATE AID PLANS AND SPECS ENGINEER

Approved \_\_\_\_\_ DATE \_\_\_\_\_ 9  
STATE AID ENGINEER

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

DESIGN DESIGNATION	
COUNTY ROAD 10 (89TH AVENUE) C.P. 94-05-10	
R _____ NA _____	EN18 (20) _____ NA _____
ADT (Current Year) = _____	Design Speed <u>35</u> MPH
ADT (Future Year) = _____	Based on <u>NA</u> Sight Distance
DHV (Design Hr. Vol.) = <u>NA</u>	Height of eye <u>NA</u> Height of object <u>NA</u>
D (Directional Distr.) = <u>50/50</u> %	Design Speed not achieved at: <u>NA</u>
T (Heavy Commercial) = <u>NA</u> %	Functional Classification <u>Arterial-High Density</u>
SOIL FACTOR _____ NA _____	No. of Traffic Lanes <u>4</u>
	No. of Parking Lanes <u>0</u>
	Ton Design <u>NA</u>

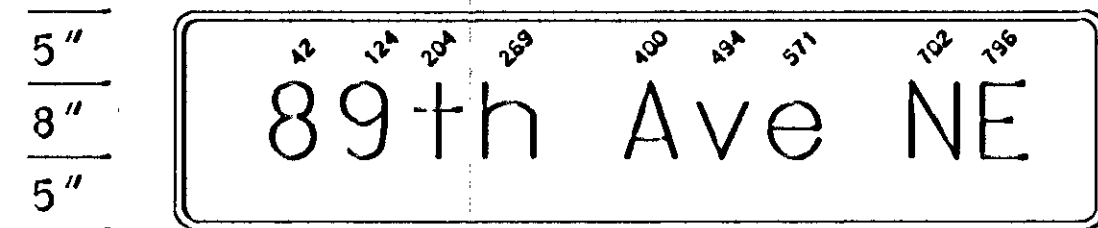
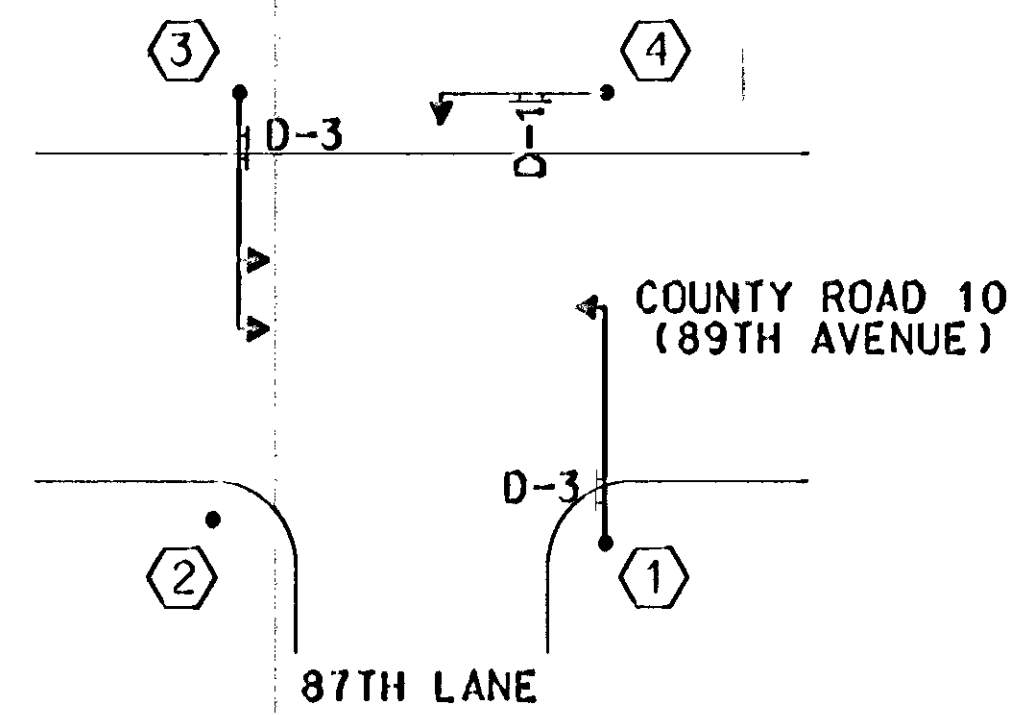
ESTIMATED QUANTITIES			
ITEM NO.		UNIT	TOTAL
2565.511	FULL TRAFFIC ACTUATED TRAFFIC CONTROL SIGNAL SYSTEM	SIGNAL SYSTEM	1 *
0565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM A - CR 10	LUMP SUM	1 **
0565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM B - WASHINGTON ST.	LUMP SUM	1 **

\* - FUNDING SPLIT: 25% C.P. 94-05-10, 75% CITY LOCAL FUNDS  
\*\* - FUNDING SPLIT: 100% CITY LOCAL FUNDS

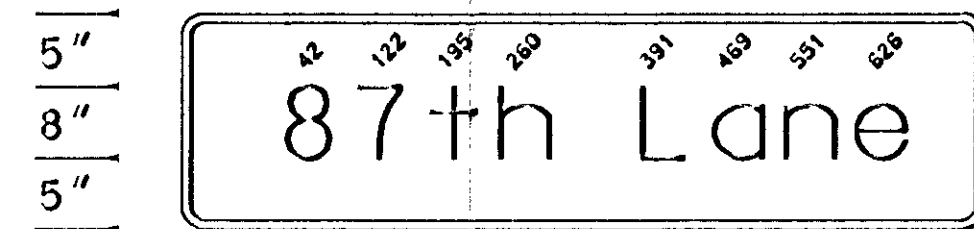
C.P. 94-05-10

REVISION NO. DATE		EXPLANATION					
SCALE:	AS NOTED	DESIGN BY:	CUM	COMM. NO.:	DATE	RECORD COPY BY:	DATE
PLAN BY:	CHK	RBB	511409	RONALD B. BRAY	10/27	05/24/95	10/27
TITLE SHEET COUNTY ROAD 10 (89TH AVE NE) AND 87TH LANE C.P. 94-05-10 BLAINE, MINNESOTA							
Orr Schelen Mayeron & Associates, Inc. Engineers - Architects - Planners - Surveyors 300 Park Place Center # 5725 Lyndale Boulevard Minneapolis, MN 55416-1228 # 612-936-8776							
PLAN NO. <span style="float: right;">1</span>							

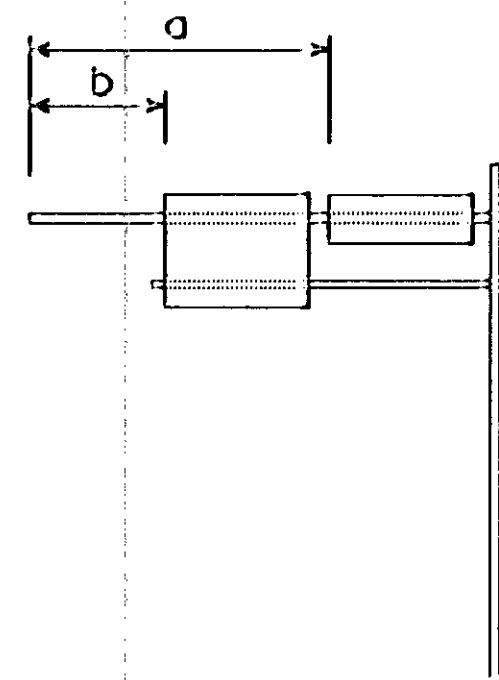
SIGN PANEL LAYOUT



92" X 18", 3" R, 1.0" B, D-1  
LINE 1 81.60 : 8'-6" E MOD



72" X 18", 3" R, 1.0" B, D-2  
LINE 1 63.52 : 8'-6" E MOD

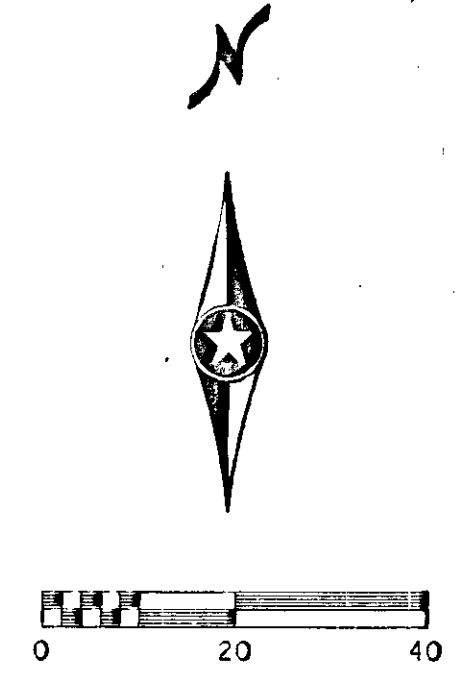
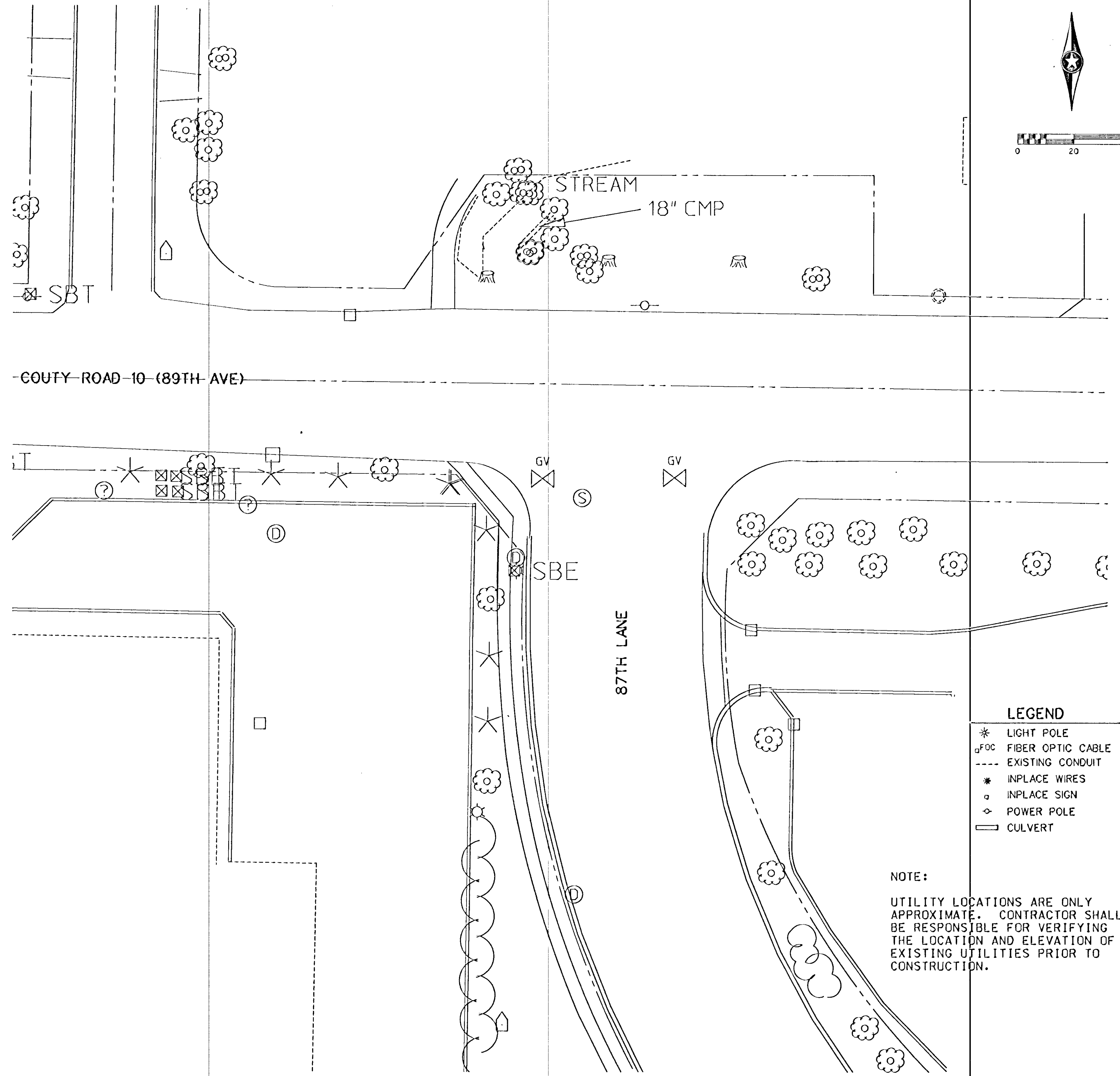


TYPE D SIGNS

Sign Panel	Size	No. Req.	No. Posts per Sign	Post Spacing	Sq. Ft. per Sign	Pole No.	Location on Mastarm ①	
							a	b
D-1	90"x18"	1	3	45"	11.25	4	4.5	
D-2	72"x18"	2	3	45"	9.00	1 3	16.0	16.0

GENERAL NOTES

1. Color - White legend and border on green background, fully reflectorized.
2. Corners extending beyond the border shall not be trimmed.
3. See Standard Signs Manual for arrow and overlay details.
4. For structural details, Type D Signs, see Standard Signs Manual, page 105A & B.
5. For type D Stringer and panel - Joint Detail, see Standard Signs Manual.



LEGEND

- \* LIGHT POLE
- FOC FIBER OPTIC CABLE
- EXISTING CONDUIT
- \* INPLACE WIRES
- INPLACE SIGN
- ◇ POWER POLE
- ▭ CULVERT

NOTE:  
UTILITY LOCATIONS ARE ONLY APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

**CSM** Ort Schelen Mayeron & Associates, Inc.  
 Engineers - Architects - Planners - Surveyors  
 300 Park Place Center - 5775 Wayzata Boulevard  
 Minneapolis, MN 55416-1228 - 612-594-5775

**SIGNING AND UTILITIES SHEET**  
**COUNTY ROAD 10 (89TH AVE NE)**  
**AND 87TH LANE**  
 C.P. 94-05-10  
 BLAINE, MINNESOTA

REVISION NO.	DATE	EXPLANATION

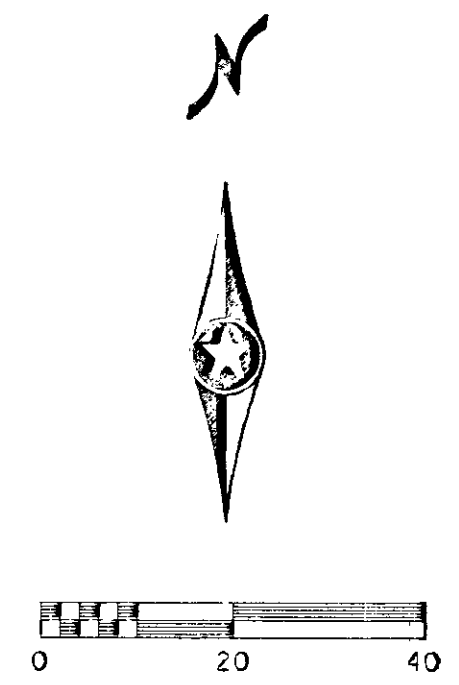
SCALE: AS NOTED  
 PLAN BY: CJM  
 CHECKED BY: RBK  
 DESIGN BY: CJM  
 COMD. NO.: 511405  
 RBB  
 RECORD COPY BY: DATE  
 RONALD B. GRAY  
 05/24/95  
 18327



LOOP DETECTORS			
NUMBER	SIZE	FUNCTION	LOCATION
D1-1	2-6' X 6'	1/10	20' & 50'
D1-2	2-6' X 6'	1/10	5' & 35'
D2-1	6' X 6'	1	260'
D2-2	6' X 6'	4	5'
D2-3	6' X 6'	6	5'
D6-1	6' X 6'	1	260'
D6-2	6' X 6'	4	5'
D8-1	6' X 6'	3/8	220'
D8-2	6' X 6'	3/8	220'
D8-3	2-6' X 6'	1	5' & 20'
D8-4	2-6' X 6'	7	5' & 20'

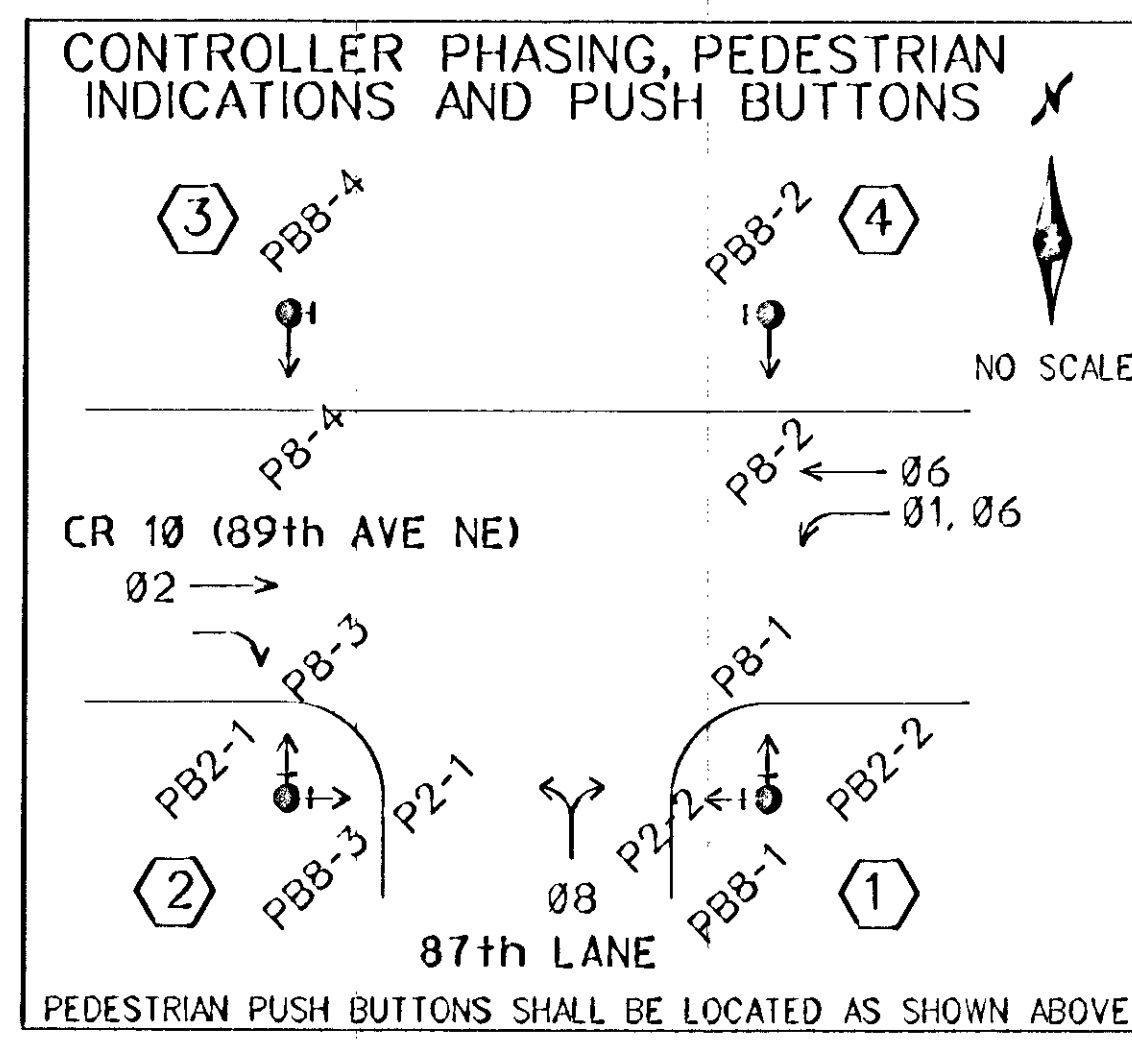
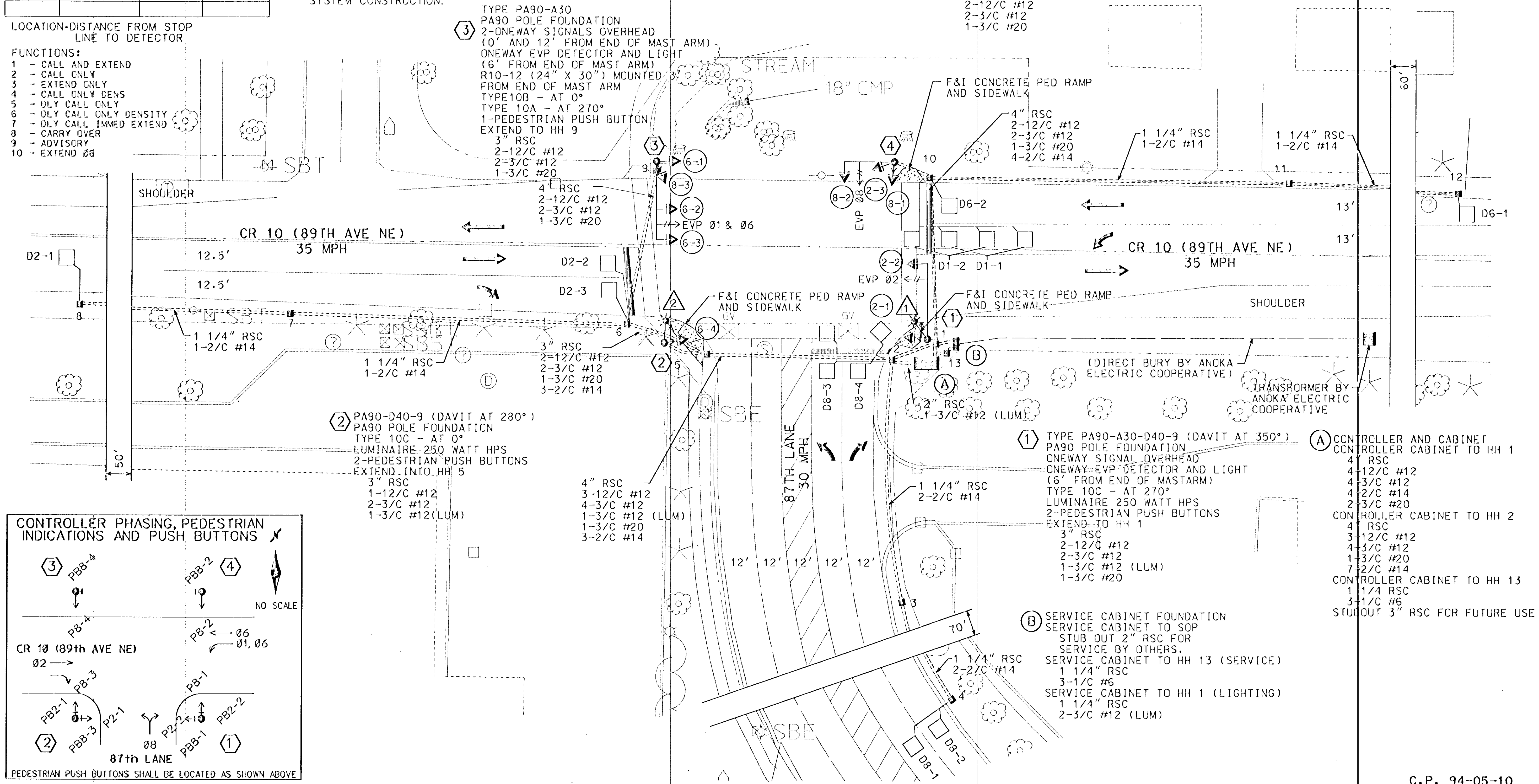
- NOTES:
- SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
  - EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
  - EACH LUMINAIRE SHALL HAVE A PEC AND CHECK SWITCH.
  - SEE SHEET NO. 5 AND SPECIAL PROVISIONS FOR SERVICE CABINET DETAILS.
  - DIRECTIONAL SIGNS (TYPE D) TO BE FURNISHED AND INSTALLED ON MAST ARMS AT POLES 1, 3 AND 4 AND SHALL BE CONSIDERED INCIDENTAL.
  - SEE SPECIAL PROVISIONS FOR HANDHOLE TYPE.
  - SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR LOCATION OF UTILITIES.
  - ALL PEDESTRIAN INDICATIONS SHALL BE 12" X 12".
  - ALL SIGNAL FACES SHALL BE 12 INCH 3 SECTION R-Y-G, EXCEPT FACES (6-3) (6-4) WHICH SHALL BE 12 INCH 5 SECTION R-Y-G-YLTA-GLTA.
  - ALL VEHICLE SIGNAL INDICATIONS AND PEDESTRIAN INDICATIONS SHALL USE GLASS LENSES.
  - CONCRETE PED RAMPS AND SIDEWALKS SHALL BE CONSIDERED AT LOCATIONS SHOWN ON PLAN AND SHALL BE CONSIDERED INCIDENTAL TO THE SIGNAL SYSTEM CONSTRUCTION.

- LEGEND
- \* LIGHT POLE
  - HANDHOLE IN PLACE
  - FOC FIBER OPTIC CABLE
  - PROPOSED HANDHOLE
  - EXISTING CONDUIT
  - \* INPLACE WIRES
  - INPLACE SIGN
  - POWER POLE
  - CONCRETE PED RAMPS AND SIDEWALK



LOCATION-DISTANCE FROM STOP LINE TO DETECTOR

- FUNCTIONS:
- CALL AND EXTEND
  - CALL ONLY
  - EXTEND ONLY
  - CALL ONLY DENS
  - DLY CALL ONLY
  - DLY CALL ONLY DENSITY
  - DLY CALL IMMED EXTEND
  - CARRY OVER
  - ADVISORY
  - EXTEND Ø6



INTERSECTION LAYOUT COUNTY ROAD 10 (89TH AVE NE) AND 87TH LANE C.P. 94-05-10 BLAINE, MINNESOTA

ORR Schelen & Mayeron Associates, Inc. Engineers - Architects - Planners - Surveyors 300 Park Place Center - 5725 W. Lytle Boulevard - Minneapolis, MN 55416-1228 - 612-596-5776

REVISION NO. DATE EXPLANATION

SCALE: AS NOTED PLAN BY: CMK CHECKED BY: COMANDI: RBK 511408 RECORD COPY BY: DATE

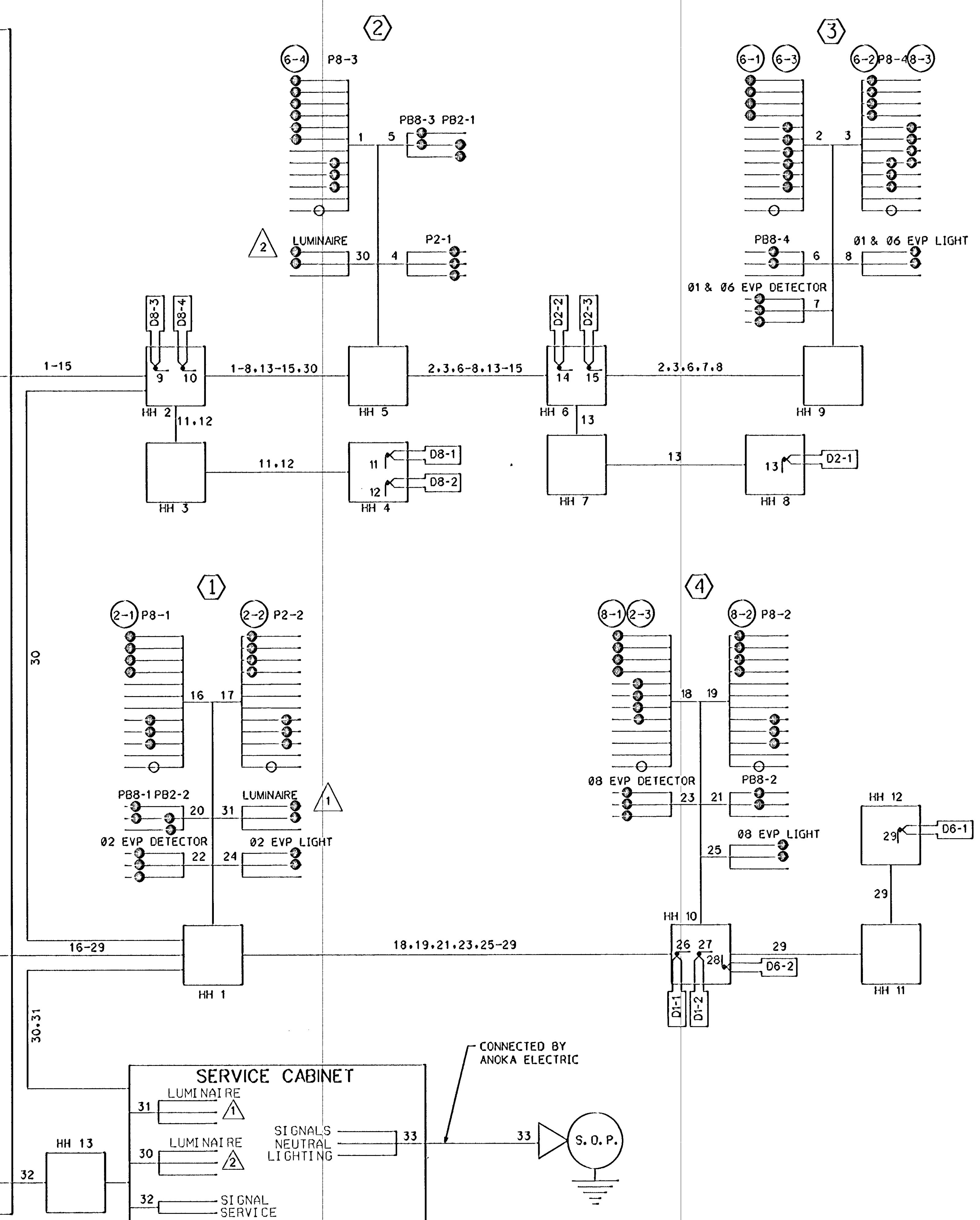
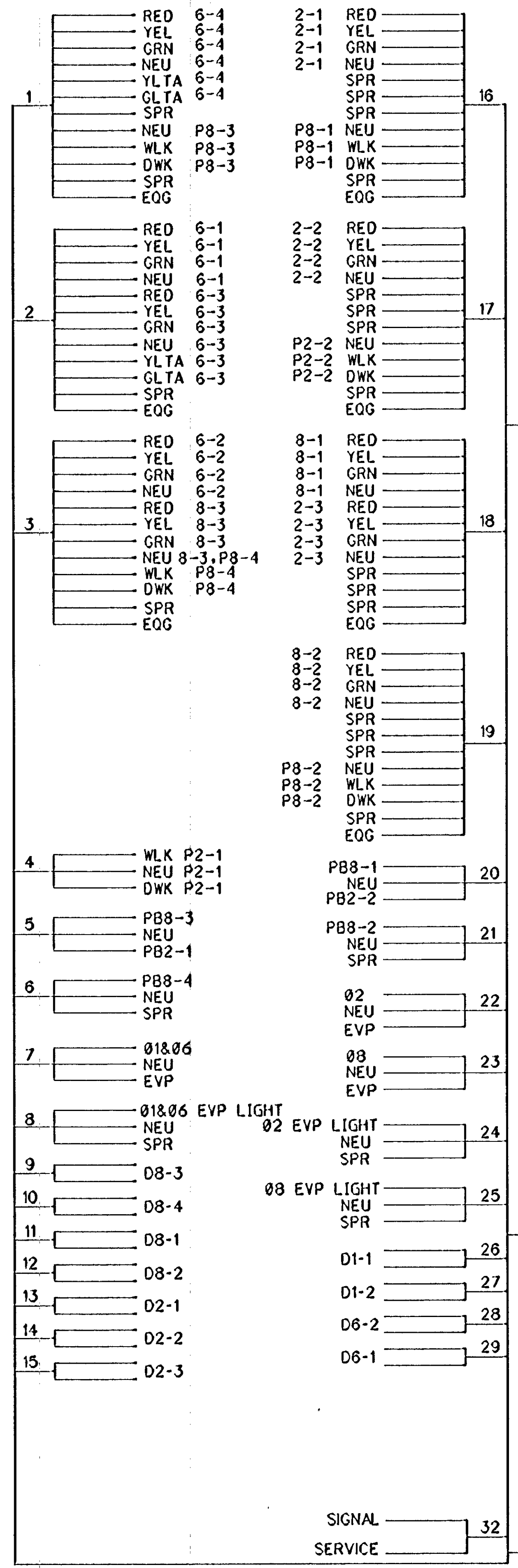
DESIGN BY: C.J.M. DATE: 05/24/95 REC. NO.: 18327

LIBERTY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. RONALD G. BRANT

PLAN NO. 3

C.P. 94-05-10

# CONTROLLER CABINET



### CONDUCTOR COLOR CODING

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

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

REVISION NO. DATE

AS NOTED

SCALE: AS NOTED

DESIGN BY: [Signature]

PLAT BY: [Signature]

CHECKED BY: [Signature]

COM. NO.: 511408

RECORD COPY BY: [Signature]

DATE: 05/24/95

18327

WIRING DIAGRAM 10 (89TH AVE NE) AND 87TH LANE

C.P. 94-05-10

BLAINE, MINNESOTA

Ort Schelen & Mayeron & Associates, Inc.

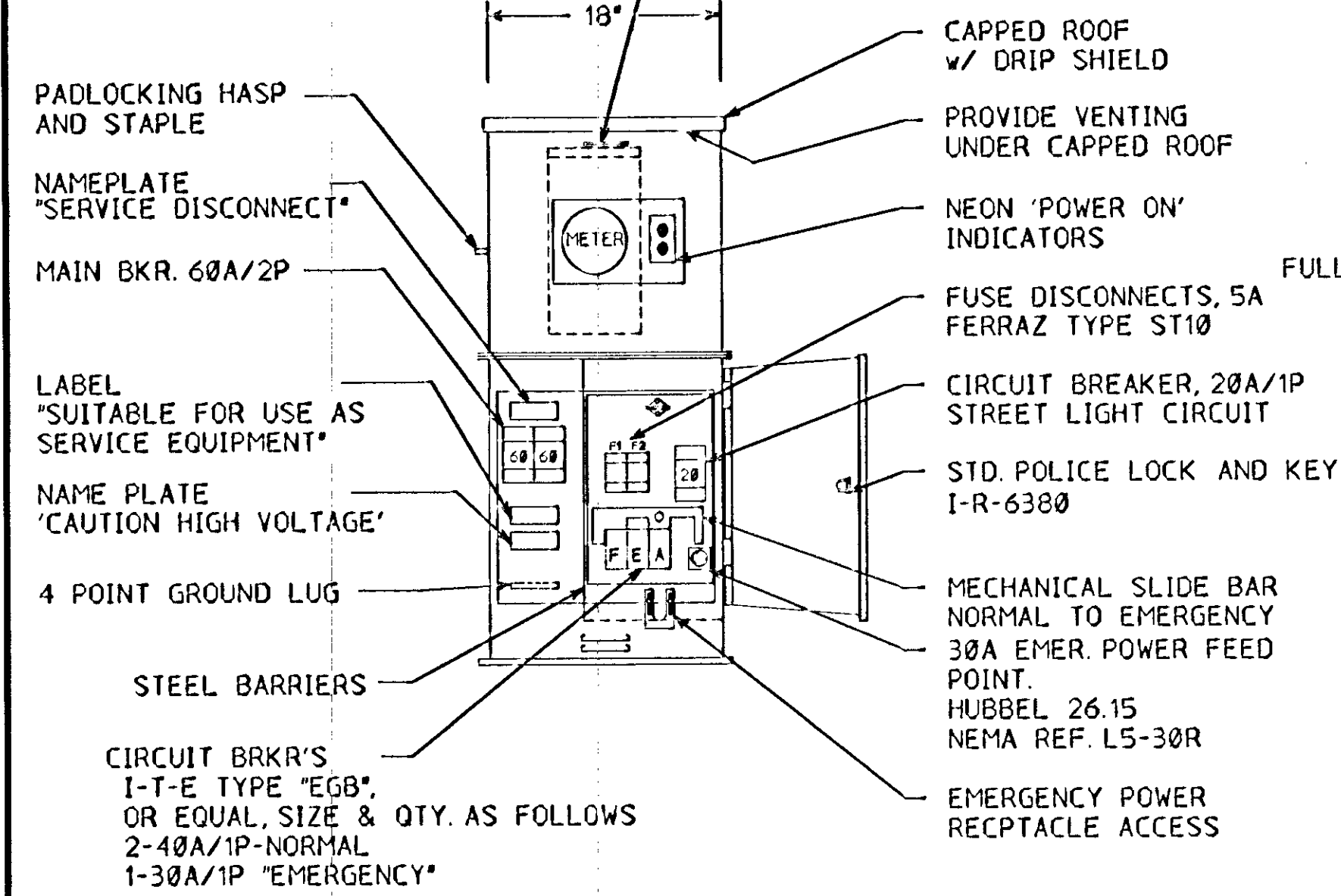
Engineers - Architects - Planners - Surveyors

300 Park Place Center - 5775 Wayzata Boulevard

Minneapolis, MN 55416-1228 - 612-596-9776

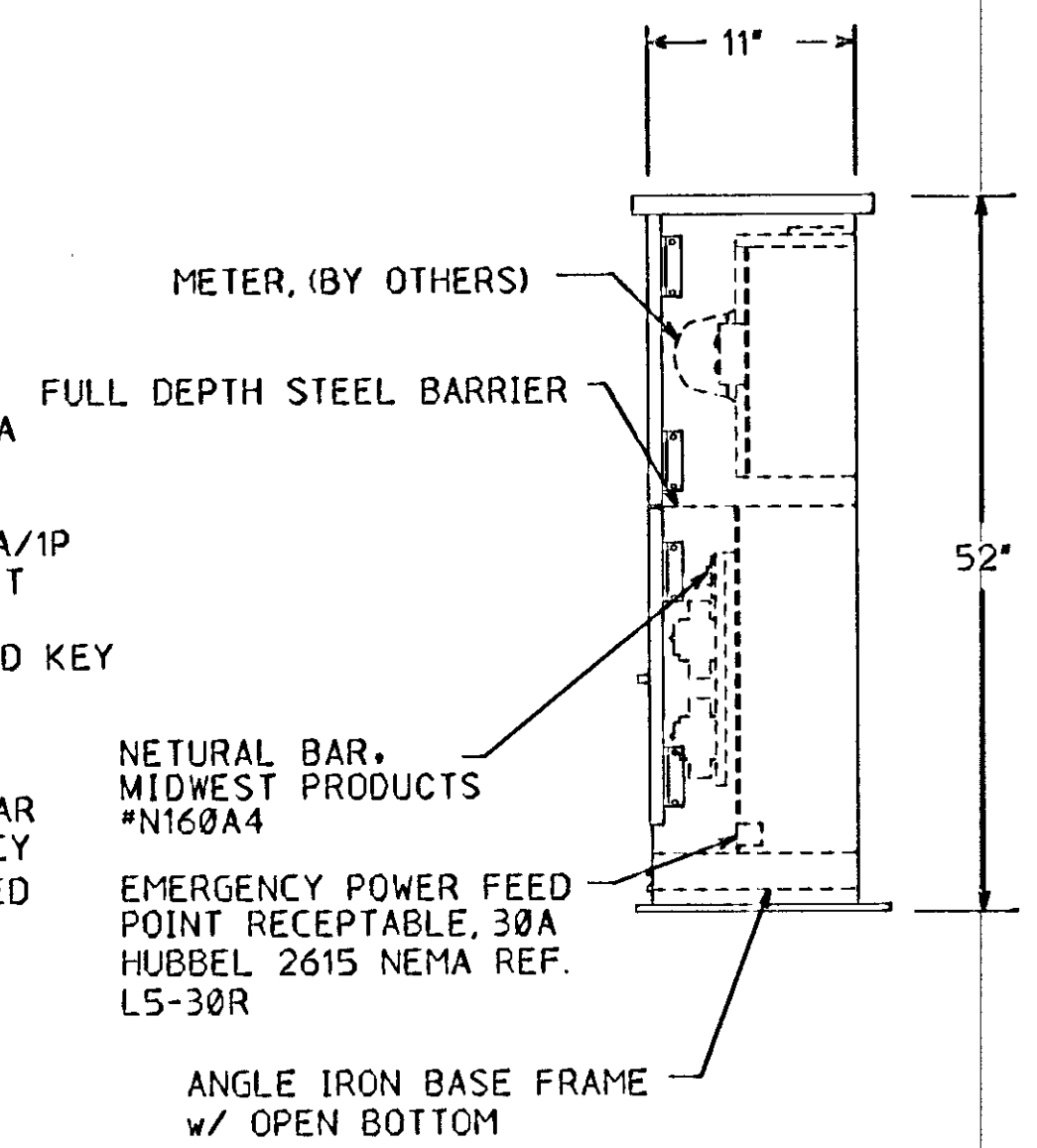
PLAN NO. 4

N.S.P. METER SOCKET, 5-TERMINAL  
w/ POSITIVE BY-PASS MECHANISM  
MILBANK CAT. No. U-2272-RL.

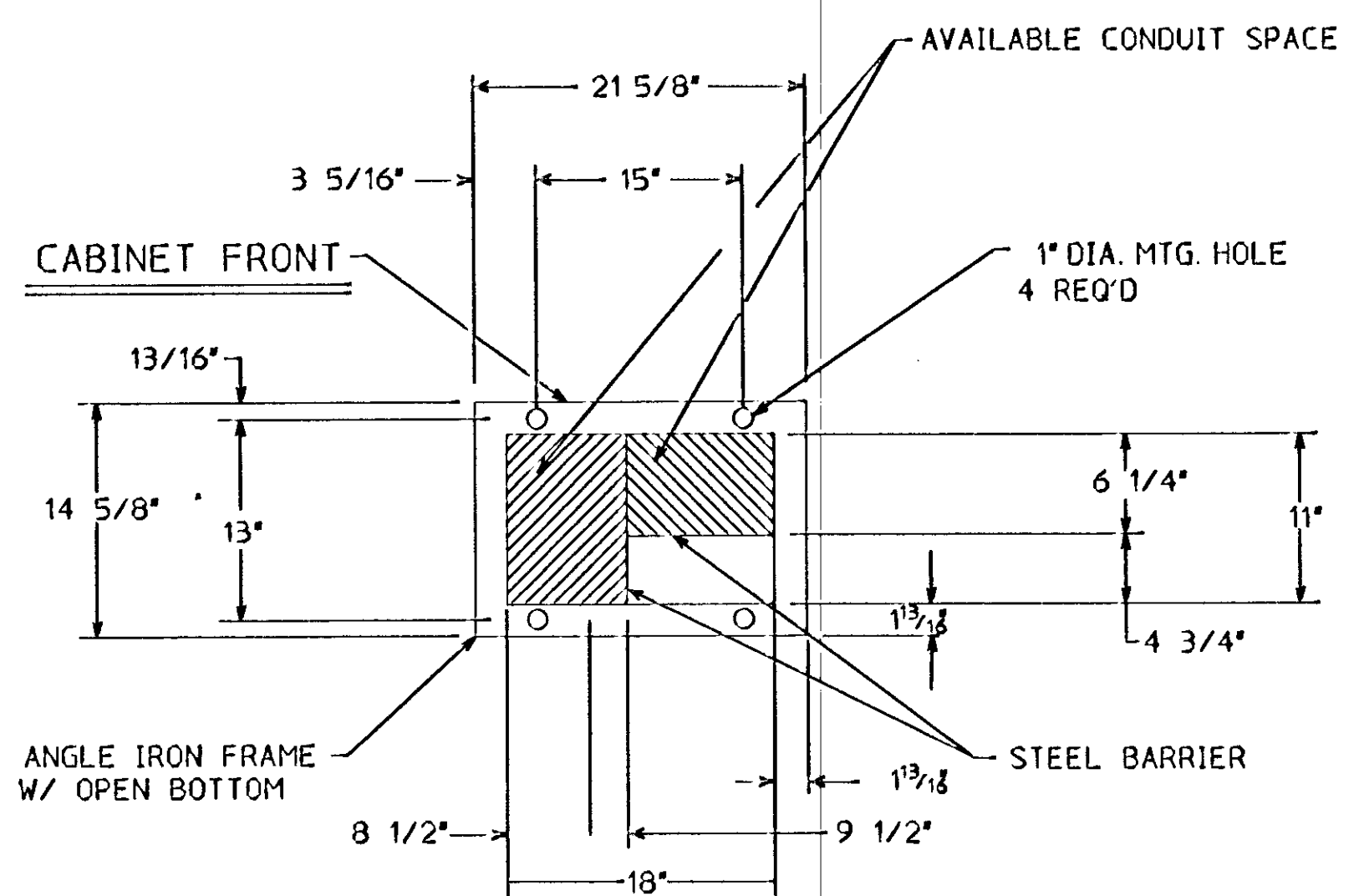


FRONT ELEV.

SIGNAL SERVICE CABINET



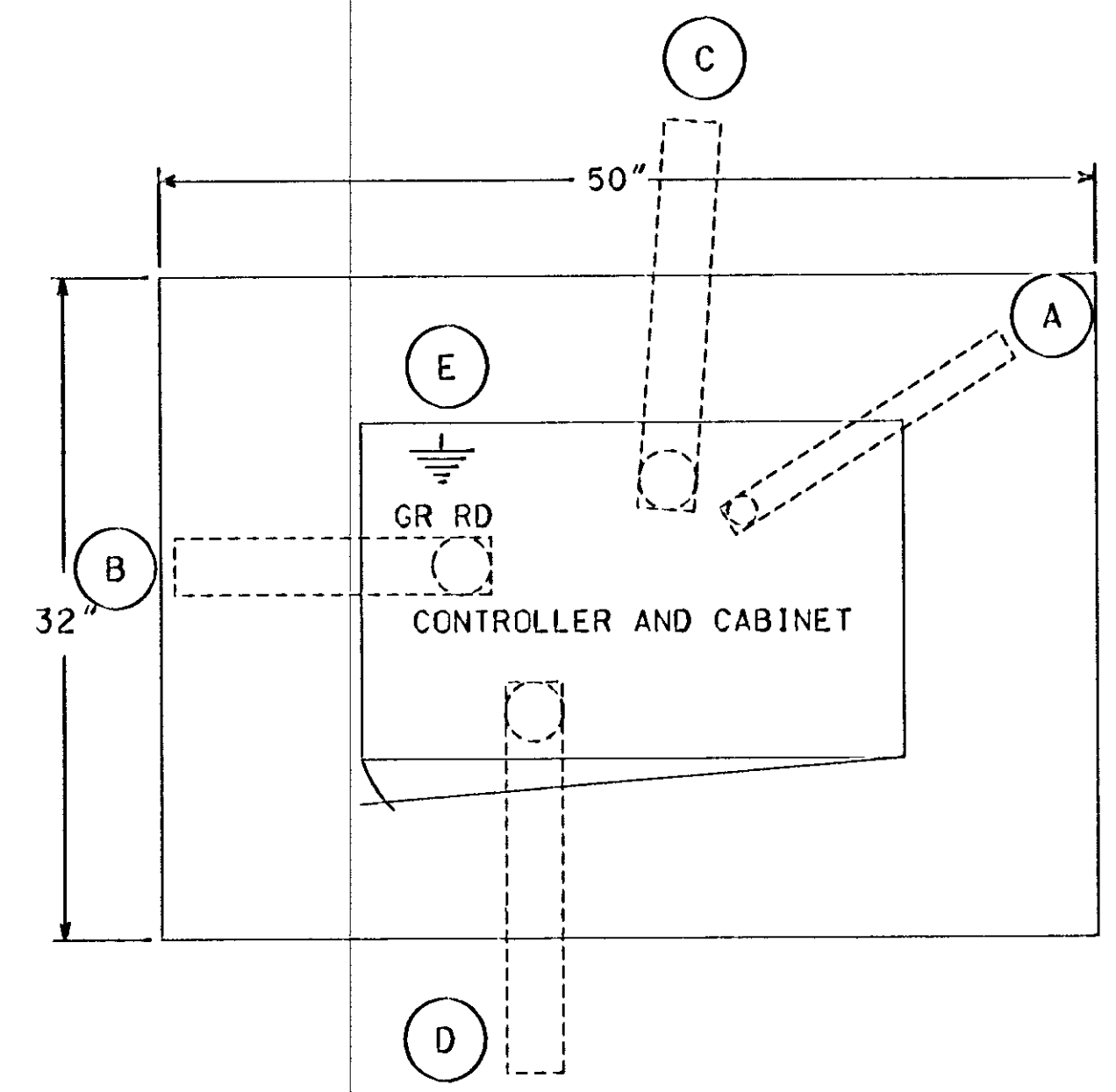
RIGHT SIDE ELEV.



BASE VIEW

CONSTRUCTION NOTES

ENCLOSURE SHALL BE FABRICATED FROM #12 GA. ALL WELDED COLD ROLLED STEEL FOR OUTDOOR WEATHER PROOF SERVICE. DOORS TO BE GASKETED, ALL HINGES, PINS AND LOCKS TO BE OF NON CORRODING CONSTRUCTION. CABINET TO BE PRIMED INSIDE AND OUT WITH RUST INHIBITTING PRIMER. FINISH PER MN/DOT #3527



CONTROLLER CABINET PAD LAYOUT

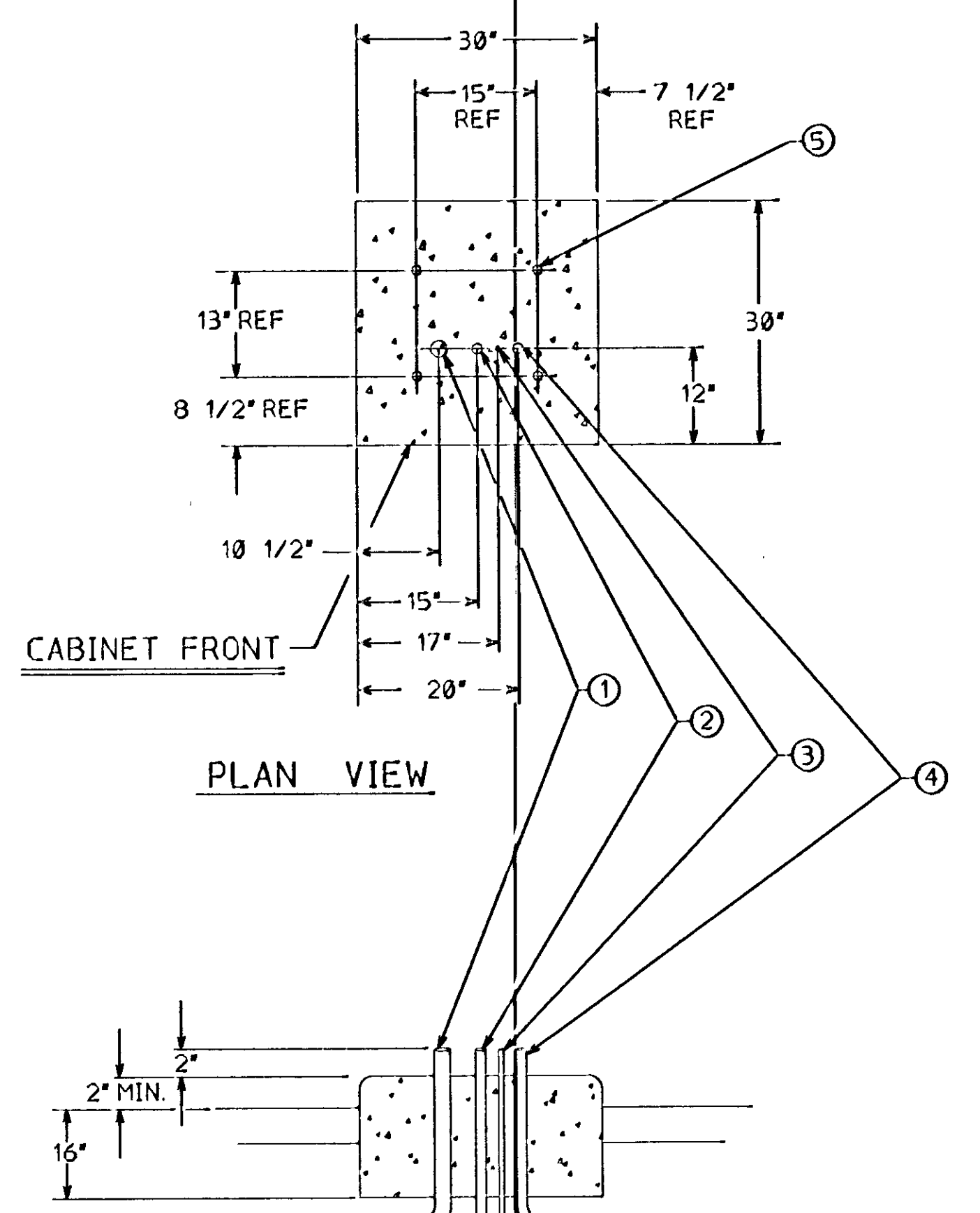
NO SCALE

- (A) 1 1/4" R.S.C. FOR SERVICE CONNECTION TO HH 13
- (B) 4" R.S.C. TO HH 2
- (C) 4" R.S.C. TO HH 1
- (D) 3" R.S.C. STUBOUT, THREAD & CAP BOTH ENDS. (FOR FUTURE INTERCONNECT).
- (E) 5/8" DIA X 15' GROUND ROD

SEE INTERSECTION LAYOUT FOR CONDUIT & CABLE INFORMATION

CONCRETE FOUNDATION  
32" X 50" X 18" DEEP

SERVICE CABINET FOUNDATION



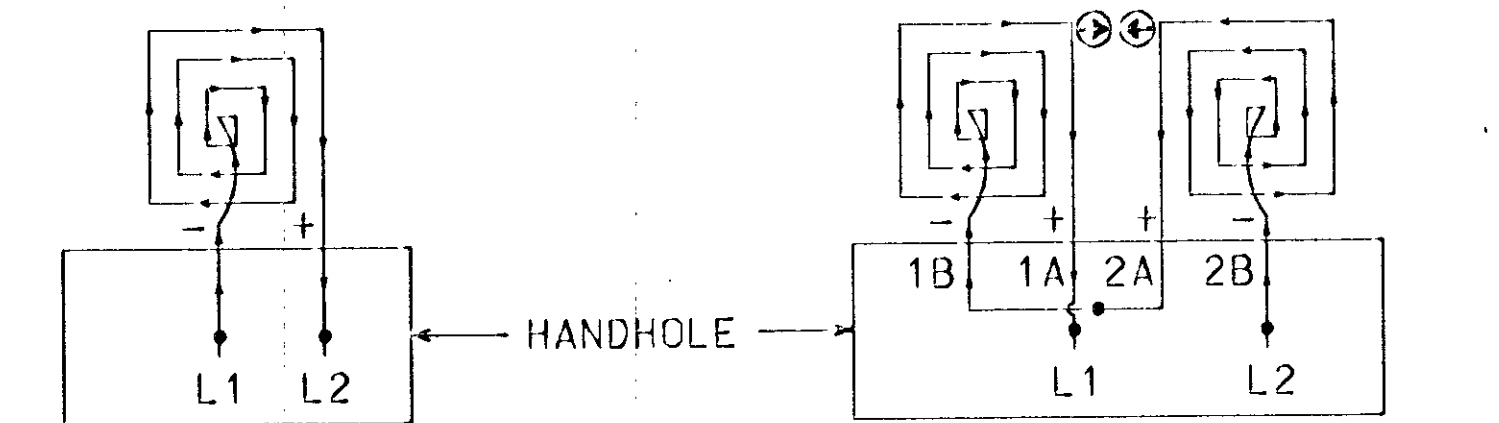
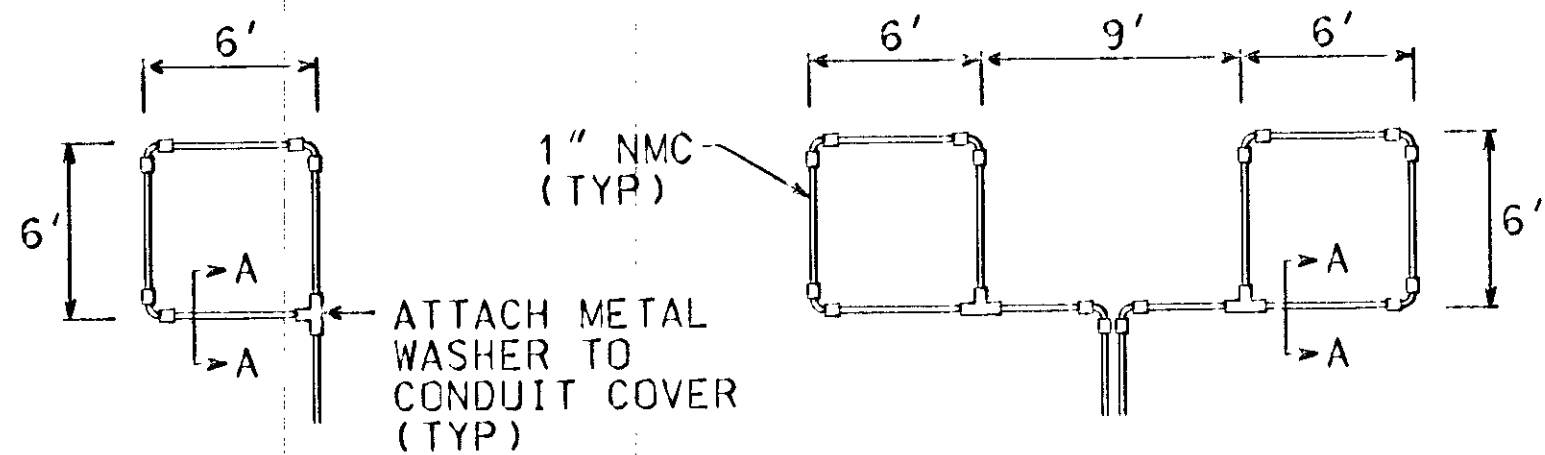
PLAN VIEW

ELEV. VIEW

- ① 2" RSC FROM SOURCE OF POWER (VIA HANDHOLE 14)
- ② 1 1/4" RSC TO CONTROLLER CABINET (VIA HANDHOLE 13)
- ③ GROUNDING ROD
- ④ 1 1/4" RSC TO HANDHOLE 1 (STREET LIGHTING)
- ⑤ ANCHOR BOLT LOCATIONS (4 REQUIRED)

PLAN NO.	5
DATE	05/24/95
DESIGN BY	CJM
CHECKED BY	COMING
REVISION NO.	AS NOTED
EXPLANATION	
<p>ENGINEERS ARCHITECTS PLANNERS SURVEYORS  <b>CSM</b> Schelen &amp; Mayeron &amp; Associates, Inc.          300 Park Place Center - 5775 W. 46th Street - Minneapolis, MN 55416-1228 - 612-590-5775</p>	
<p>SERVICE EQUIP. AND CONTROLLER PAD          COUNTY ROAD 10 (89TH AVE NE)          AND 8TH LANE          C.P. 94-05-10          BLAINE, MINNESOTA</p>	





LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:

L1 TO 1A  
1B TO 2A  
2B TO L2

LOOP DETECTOR  
DETAIL 'A'  
(LOOP PHASING FOR  
SINGLE CONNECTION)

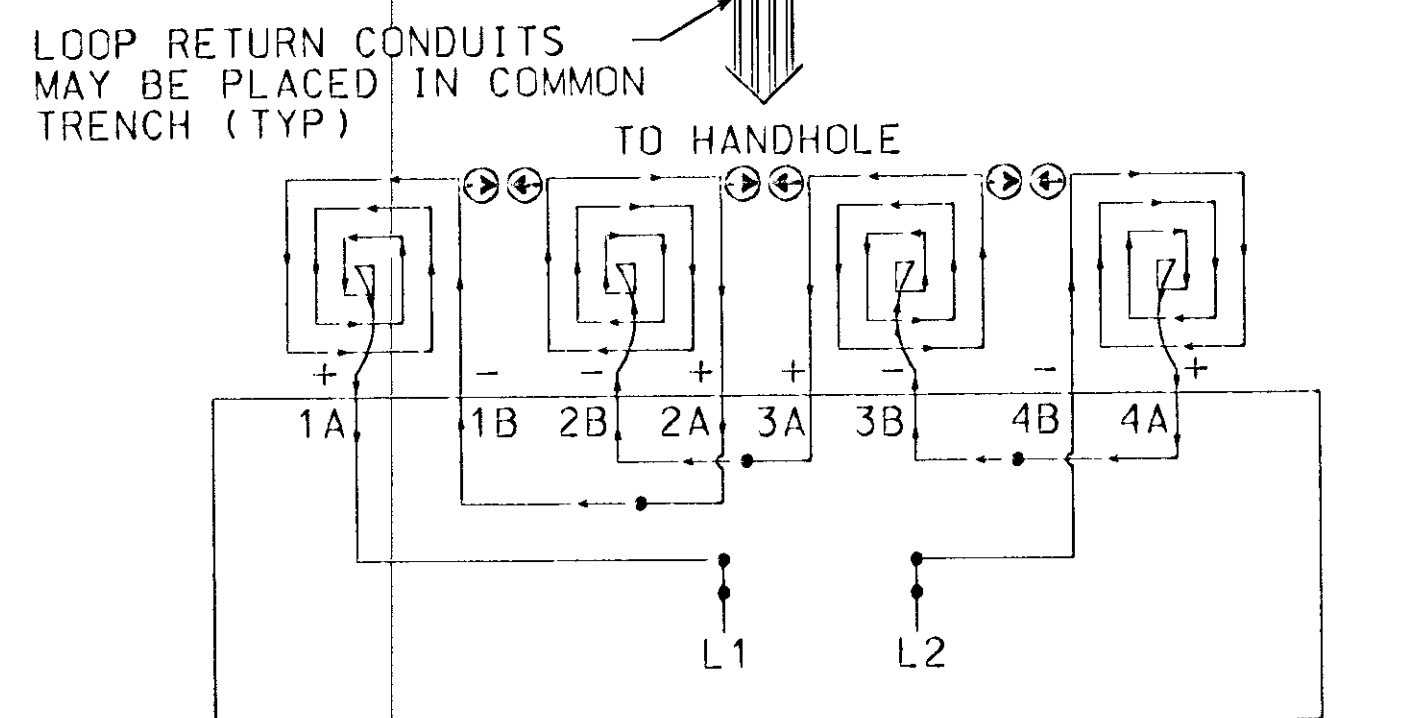
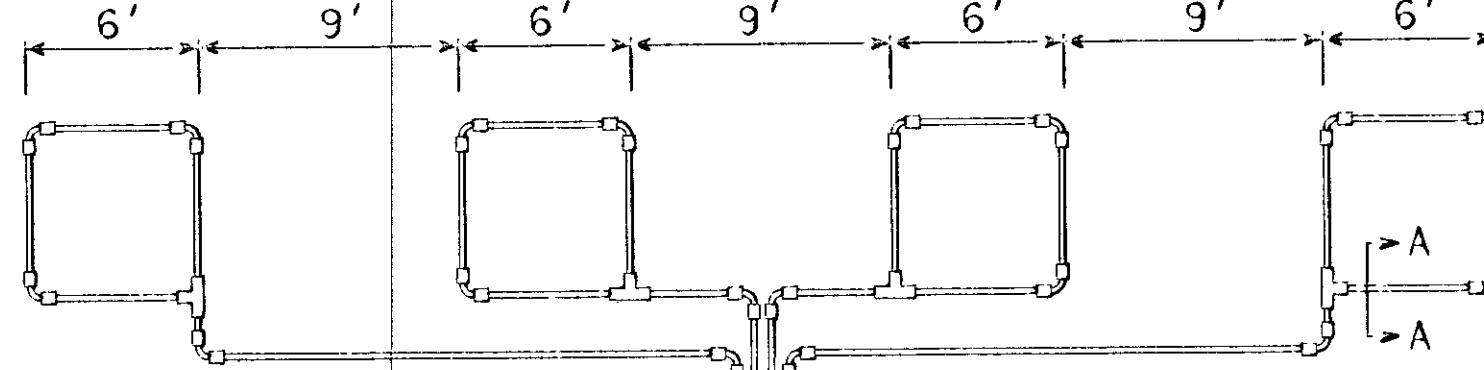
LOOP DETECTOR  
DETAIL 'B'  
(LOOP PHASING FOR  
SERIES CONNECTION)

LOOP DETECTOR WIRING

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6' x 6' THRU 6' x 14' SHALL HAVE (4) TURNS.
- 7) LOOPS 6' x 15' AND LARGER SHALL HAVE (2) TURNS.

STANDARD PLATES	
THESE STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:	
PLATE NO.	DESCRIPTION
* 8110 C	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
8111 B	TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED
8112 C	PEDESTAL FOUNDATION
8113 C	MAGNETIC VEHICLE DETECTOR INSTALLATION
* 8115 C	PEDESTRIAN PUSH BUTTON INSTALLATION
* 8117 F	PRECAST CONCRETE HANDHOLE
8118 C	SERVICE EQUIPMENT AND POLE
* 8119 C	GROUND MOUNTED CABINET FOUNDATION
* 8120 J	PA85 AND PA90 POLE FOUNDATION
* 8121 C	TRANSFORMER BASE WITH POLE BASE
8122 C	PEDESTAL AND PEDESTAL BASE
* 8123 C	POLE AND MAST ARM
* 8124 D	SIGNAL HEAD MOUNTS
8126 E	PA100 POLE FOUNDATION
* 0003 A	REFLECTOR MOUNTINGS TO STANDARD PLATES
* 0004 A	REFLECTOR MOUNTINGS TO STANDARD PLATES
3221 B	DRUG AND ALCOHOL DETECTION COUPLING BAND
3035 U	CONCRETE CURB AND CURB STURNS AT ENTRANCES
* 7000 U	CONCRETE CURB AND CURB STURNS AT ENTRANCES
7000 U	CONCRETE CURB AND CURB STURNS AT ENTRANCES
* 7036 D	PEDESTRIAN CURB RAMP

\* - APPLIES TO THIS PROJECT  
\* - APPLIES TO THIS PROJECT



LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:

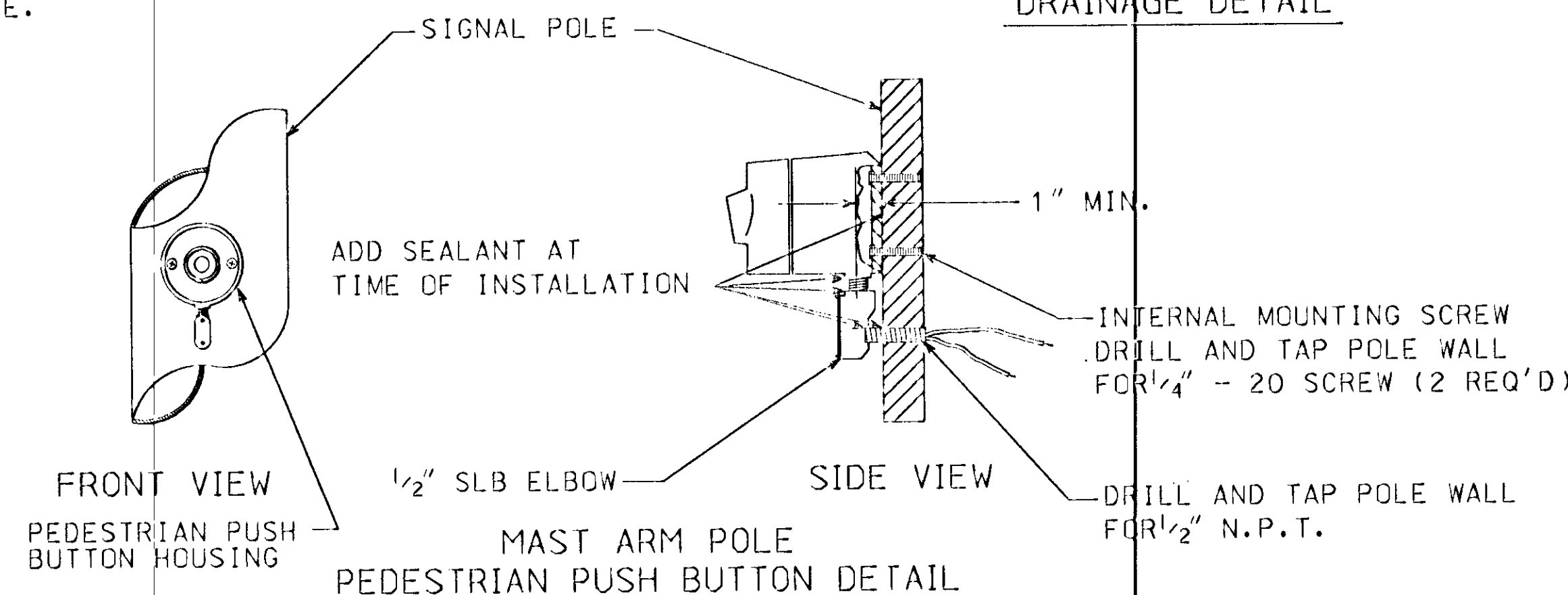
L1 TO 1A  
1B TO 2A  
2B TO 3A  
3B TO 4A  
4B TO L2

SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE. ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE (1A, 1B, ECT)

LOOP DETECTOR  
DETAIL 'C'  
(LOOP PHASING FOR  
SERIES CONNECTION)

LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQUIP. NO.'s	(A)
SIGNAL BASE NO.	(B)
SIGNAL FACE NO.	(C)
LUMINAIRE NO.	(D)
CONTROLLER AND CABINET	(E)
CONTROLLER AND CABINET - IN PLACE	(F)
HANDHOLE	(G)
HANDHOLE - IN PLACE	(H)
RIGID STEEL CONDUIT (RSC)	(I)
RIGID STEEL CONDUIT (RSC) - IN PLACE	(J)
SIGNAL FACE WITH BACKGROUND SHIELD	(K)
SIGNAL FACE W/O BACKGROUND SHIELD	(L)
SIGNAL FACE - IN PLACE	(M)
PEDESTRIAN INDICATORS	(N)
PEDESTRIAN INDICATORS - IN PLACE	(O)
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	(P)
PEDESTRIAN PUSH BUTTON STATION	(Q)
TRAFFIC SIGNAL PEDESTAL	(R)
TRAFFIC SIGNAL PEDESTAL - INPLACE	(S)
TRAFFIC SIGNAL POLE AND MAST ARM	(T)
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	(U)
STREET LIGHT POLE AND LUMINAIRE	(V)
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	(W)
MAST ARM AND LUMINAIRE	(X)
MAST ARM AND LUMINAIRE - INPLACE	(Y)
WOOD POLE	(Z)
WOOD POLE - IN PLACE	(AA)
SOURCE OF POWER	(AB)
RAILROAD SIGNAL - IN PLACE	(AC)
RIGHT OF WAY LINE	(AD)
CENTERLINE	(AE)
EDGE OF ROADWAY	(AF)
SHOULDERLINE	(AG)
CURB LINE	(AH)
STOP BAR	(AI)



ABBREVIATIONS

3-1(EG)	SIGNAL HEAD PHASE "3" - NO. "1"	O	CRANGE
BL	BLUE	O/BLK	CRANGE WITH BLACK TRACER
BL/BLK	BLUE WITH BLACK TRACER	P1-(EG)	PEDESTRIAN INDICATION PHASE "2"-NO. "1"
BLK	BLACK	PB	PUSH BUTTON
BLK/WH	BLACK WITH WHITE TRACER	PB-2(EG)	PUSH BUTTON PHASE "2"-NO. "1"
BR. GR.	BARE GROUND	PEC	PHOTOELECTRIC CELL
CH. SW.	CHECK SWITCH	PED	PEDESTRIAN
CLR	CLEAR	R	RED
D2-1(EG)	DETECTOR PHASE "2" - NO. "1"	R&S	REMOVE AND SALVAGE
DWK	DON'T WALK	R/BLK	RED WITH BLACK TRACER
EQG	EQUIPMENT GROUND	RLTA	RED LEFT TURN ARROW
EVP	EMERGENCY VEHICLE PRE-EMPTION	RRTA	RED RIGHT TURN ARROW
F&I	FURNISH AND INSTALL	RSC	RIGID STEEL CONDUIT
FL	FLASH/FLASHING	SOP	SOURCE OF POWER
G	GREEN	SPR	SPARE
G/BLK	GREEN WITH BLACK TRACER	ST. LHT.	STREET LIGHT
GLTA	GREEN LEFT TURN ARROW	STA	STATION
GRN	GREEN	SW	SWITCH
GR. R.	GROUND ROD	SWD	SWITCHED
GRTA	GREEN RIGHT TURN ARROW	TDW	TELEPHONE DROP WIRE
GTHA	GREEN THRU ARROW	WH	WHITE
HH	HANDHOLE	WH/BLK	WHITE WITH BLACK TRACER
HPS	HIGH PRESSURE SODIUM	WLK	WALK
JB	JUNCTION BOX	YEL	YELLOW
LUM	LUMINAIRE	YLTA	YELLOW LEFT TURN ARROW
NEU	NEUTRAL	YRTA	YELLOW RIGHT TURN ARROW
NMC	NONMETALLIC CONDUIT	YTHA	YELLOW THRU ARROW

C.P. 94-05-10

REVISION NO. DATE

SCALE: AS NOTED

DESIGN BY: CJK

CHECKED BY: RBK

COMMAND: 511409

RECORD COPY BY: DATE

EXPLANATION

DATE: 05/24/95

18327

RONALD B. BRAY

PLANNERS & SURVEYORS

300 Park Place Center • 5775 Wyzata Boulevard

Minneapolis, MN 55410-1220 • 612-666-0860

MISC. DETAILS

COUNTY ROAD 10 (89TH AVE NE)

AND 87TH LANE

C.P. 94-05-10

BLAINE, MINNESOTA

PLAN NO. 6

LOOP DETECTORS			
NUMBER	SIZE	FUNCTION	LOCATION
D1-1	2-6' X 6'	5/8/10	5'
D1-2	2-6' X 6'	3	AS SHOWN
D2-1	6' X 6'	1	120'
D2-2	6' X 6'	1	120'
D4-1	6' X 6'	3/8	120'
D4-2	2-6' X 6'	7	5'
D4-3	2-6' X 6'	1	5'
D4-4	6' X 6'	7	AS SHOWN
D5-1	2-6' X 6'	5/8/11	5'
D5-2	2-6' X 6'	3	AS SHOWN
D6-1	6' X 6'	1	120'
D6-2	6' X 6'	1	120'
D8-1	6' X 6'	3/8	120'
D8-2	2-6' X 6'	7	5'
D8-3	6' X 6'	7	AS SHOWN

LOCATION-DISTANCE FROM STOP LINE TO DETECTOR

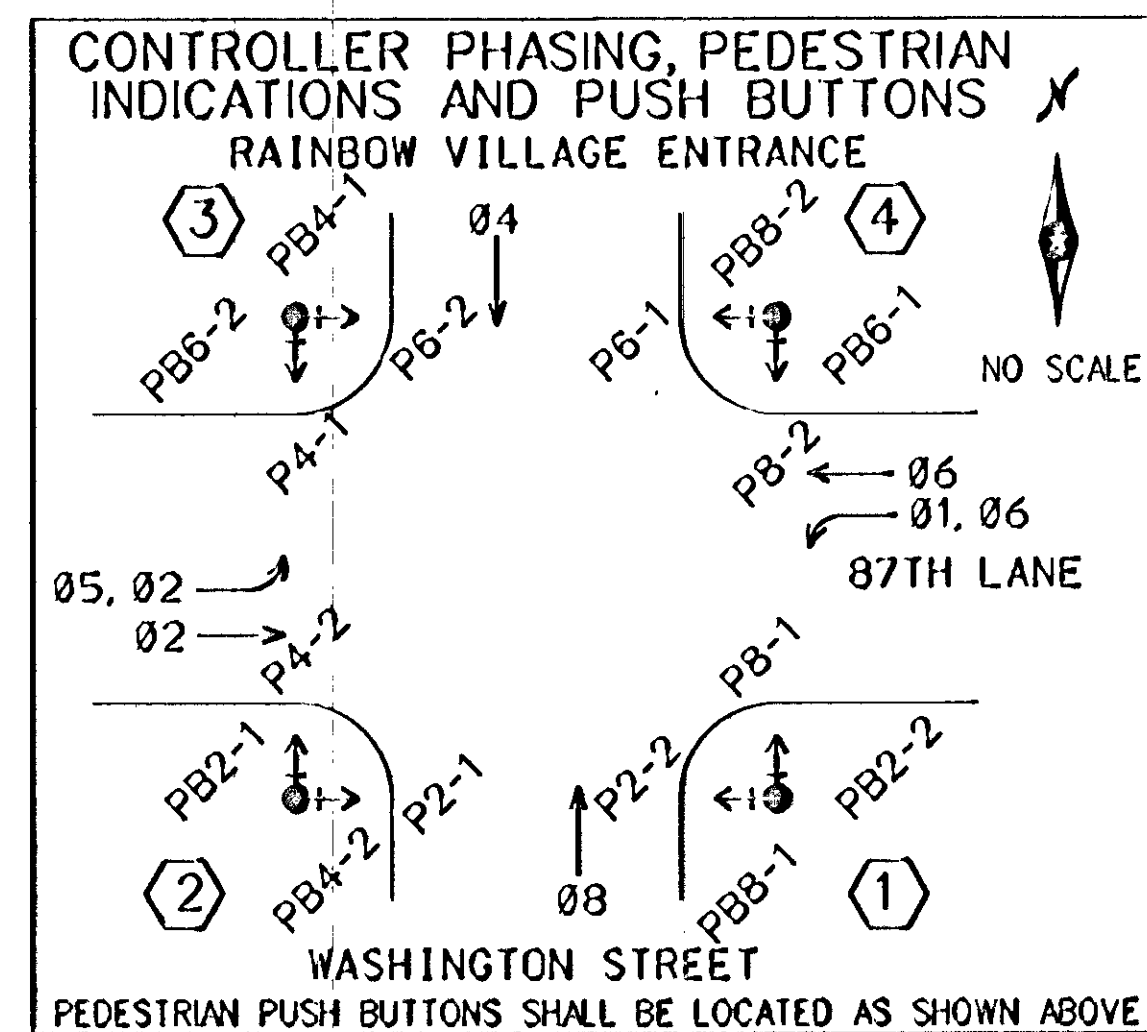
- FUNCTIONS:
- 1 - CALL AND EXTEND
  - 2 - CALL ONLY
  - 3 - EXTEND ONLY
  - 4 - CALL ONLY DENS
  - 5 - DLY CALL ONLY
  - 6 - DLY CALL ONLY DENSITY
  - 7 - DLY CALL IMMED EXTEND
  - 8 - CARRY OVER
  - 9 - ADVISORY
  - 10 - CALL DURING Ø 2 YELLOW
  - 11 - CALL DURING Ø 6 YELLOW

③ TYPE PA100-A45-D40-9 (DAVIT AT 350°)  
PA100 POLE FOUNDATION  
\*ONEWAY EVP DETECTOR AND LIGHT  
(6' FROM END OF MAST ARM)  
2-ONEWAY SIGNALS OVERHEAD  
(0' AND 18' FROM END OF MAST ARM)  
R10-12 SIGN (24x30) MOUNTED 3' FROM END OF MAST ARM  
TYPE 10B - AT 0°  
TYPE 10B - AT 180°  
TYPE 10B - AT 270°  
LUMINAIRE 250 WATT HPS  
2-PEDESTRIAN PUSH BUTTONS AND SIGNS  
EXTEND TO HH 7  
3" RSC  
2-12/C #12  
4-3/C #12  
1-3/C #12 (LUM)  
1-3/C #20

② TYPE PA90-A25  
PA90 POLE FOUNDATION  
\*ONEWAY EVP DETECTOR AND LIGHT  
(6' FROM END OF MAST ARM)  
ONEWAY SIGNAL OVERHEAD  
TYPE 10B - AT 0°  
TYPE 10B - AT 270°  
2-PEDESTRIAN PUSH BUTTONS AND SIGNS  
EXTEND INTO HH 3  
3" RSC  
2-12/C #12  
2-3/C #12  
1-3/C #20

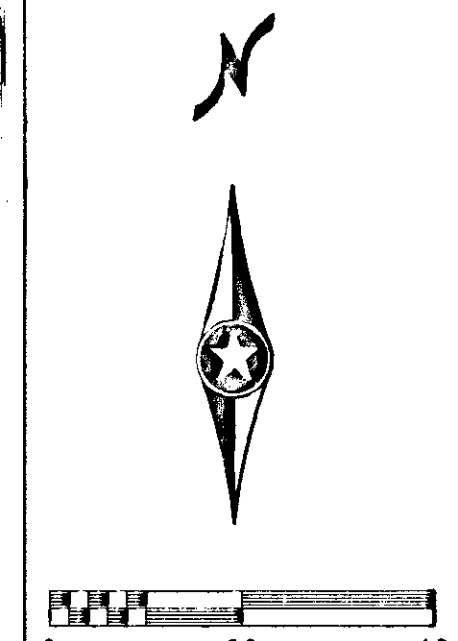
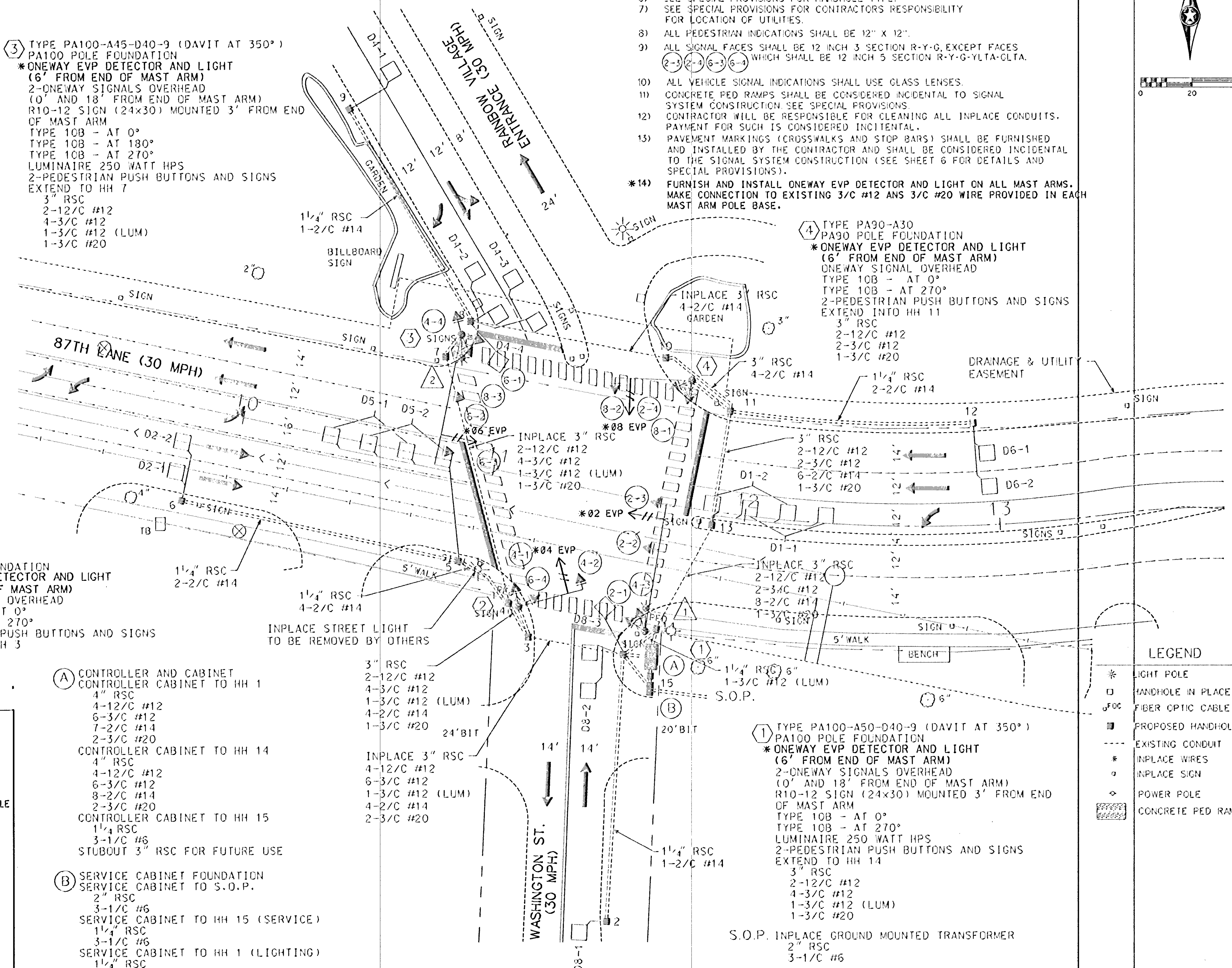
(A) CONTROLLER AND CABINET  
CONTROLLER CABINET TO HH 1  
4" RSC  
4-12/C #12  
6-3/C #12  
7-2/C #14  
2-3/C #20  
CONTROLLER CABINET TO HH 14  
4" RSC  
4-12/C #12  
6-3/C #12  
8-2/C #14  
2-3/C #20  
CONTROLLER CABINET TO HH 15  
1 1/4" RSC  
3-1/C #6  
STUBOUT 3" RSC FOR FUTURE USE

(B) SERVICE CABINET FOUNDATION  
SERVICE CABINET TO S.O.P.  
2" RSC  
3-1/C #6  
SERVICE CABINET TO HH 15 (SERVICE)  
1 1/4" RSC  
3-1/C #6  
SERVICE CABINET TO HH 1 (LIGHTING)  
1 1/4" RSC  
2-3/C #12 (LUM)



- NOTES:
- 1) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
  - 2) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
  - 3) EACH LUMINAIRE SHALL HAVE A PEC AND CHECK SWITCH.
  - 4) SEE SHEET NO. 5 AND SPECIAL PROVISIONS FOR SERVICE CABINET DETAILS.
  - 5) DIRECTIONAL SIGNS (TYPE D) TO BE FURNISHED AND INSTALLED ON MAST ARMS AT POLES 1,2,3 AND 4 SHALL BE CONSIDERED INCIDENTAL.
  - 6) SEE SPECIAL PROVISIONS FOR HANDHOLE TYPE.
  - 7) SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR LOCATION OF UTILITIES.
  - 8) ALL PEDESTRIAN INDICATIONS SHALL BE 12" X 12".
  - 9) ALL SIGNAL FACES SHALL BE 12 INCH 3 SECTION R-Y-G, EXCEPT FACES (2-3) (2-4) (6-3) (6-4) WHICH SHALL BE 12 INCH 5 SECTION R-Y-G-YLTA-CLTA.
  - 10) ALL VEHICLE SIGNAL INDICATIONS SHALL USE GLASS LENSES.
  - 11) CONCRETE PED RAMPS SHALL BE CONSIDERED INCIDENTAL TO SIGNAL SYSTEM CONSTRUCTION. SEE SPECIAL PROVISIONS.
  - 12) CONTRACTOR WILL BE RESPONSIBLE FOR CLEANING ALL INPLACE CONDUITS. PAYMENT FOR SUCH IS CONSIDERED INCIDENTAL.
  - 13) PAVEMENT MARKINGS (CROSSWALKS AND STOP BARS) SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE SIGNAL SYSTEM CONSTRUCTION (SEE SHEET 6 FOR DETAILS AND SPECIAL PROVISIONS).
  - \*14) FURNISH AND INSTALL ONEWAY EVP DETECTOR AND LIGHT ON ALL MAST ARMS. MAKE CONNECTION TO EXISTING 3/C #12 AND 3/C #20 WIRE PROVIDED IN EACH MAST ARM POLE BASE.

④ TYPE PA90-A30  
PA90 POLE FOUNDATION  
\*ONEWAY EVP DETECTOR AND LIGHT  
(6' FROM END OF MAST ARM)  
ONEWAY SIGNAL OVERHEAD  
TYPE 10B - AT 0°  
TYPE 10B - AT 270°  
2-PEDESTRIAN PUSH BUTTONS AND SIGNS  
EXTEND INTO HH 11  
3" RSC  
2-12/C #12  
2-3/C #12  
1-3/C #20



- LEGEND
- \* LIGHT POLE
  - HANDHOLE IN PLACE
  - FOC FIBER OPTIC CABLE
  - PROPOSED HANDHOLE
  - EXISTING CONDUIT
  - \* INPLACE WIRES
  - INPLACE SIGN
  - ◇ POWER POLE
  - ▨ CONCRETE PED RAMPS

S.O.P. INPLACE GROUND MOUNTED TRANSFORMER  
2" RSC  
3-1/C #6

\* INDICATES REVISIONS TO EXISTING SIGNAL SYSTEM.

EVERY COUNTY HAS THE PROFESSIONAL SERVICE OF ENGINEERS THAT ARE REGISTERED UNDER THE LAWS OF THE STATE OF MINNESOTA.

DESIGNED BY: [Signature]  
CHECKED BY: [Signature]  
DATE: 05/24/95

PLAN NO. 7

EVP INSTALLATION  
COUNTY ROAD 10 (89TH AVE NE)  
AND 87TH LANE  
CP-94-05-10  
BLAINE, MINNESOTA

Ort Schelen  
Schelen  
Mayeron &  
Associates, Inc.  
Engineers-Architects-Planners-Surveyors  
300 Park Place Center • 876 Wayzata Boulevard  
Minneapolis, MN 55418-1228 • 612-938-8776