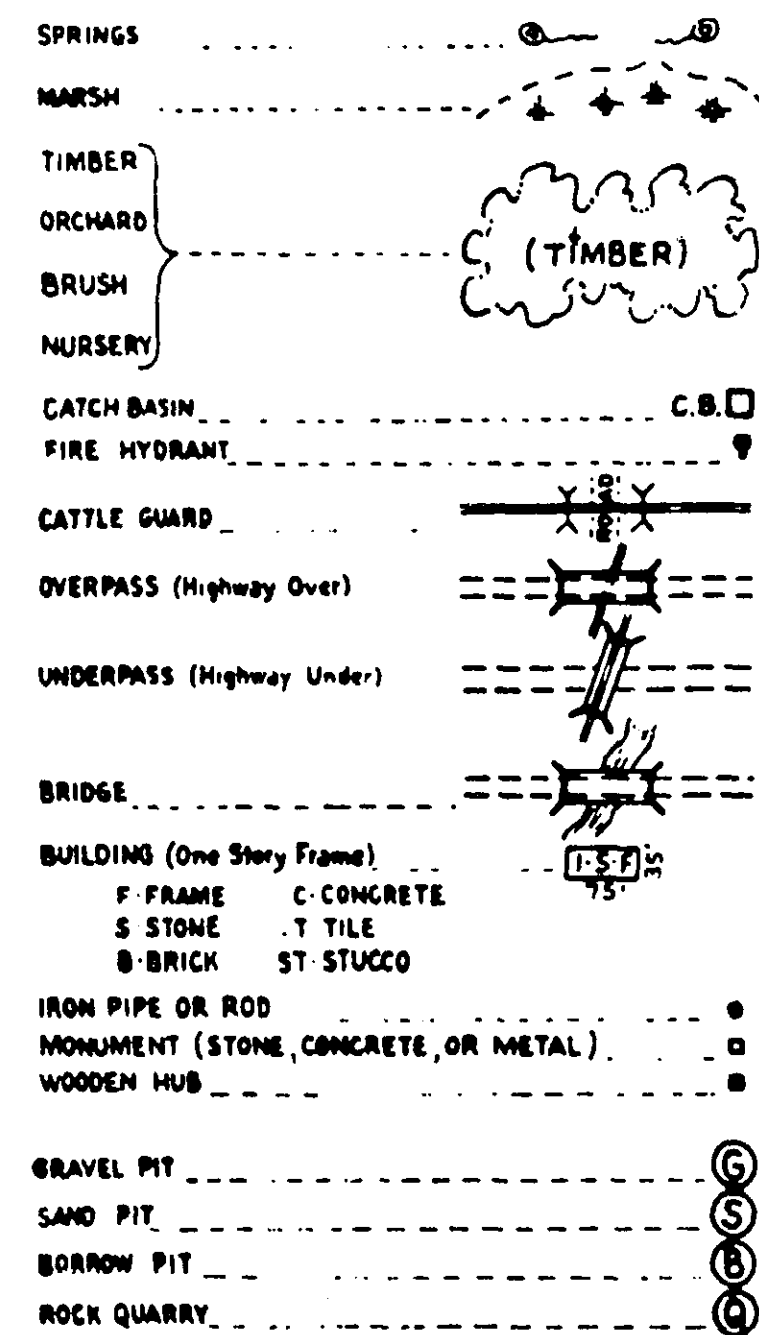
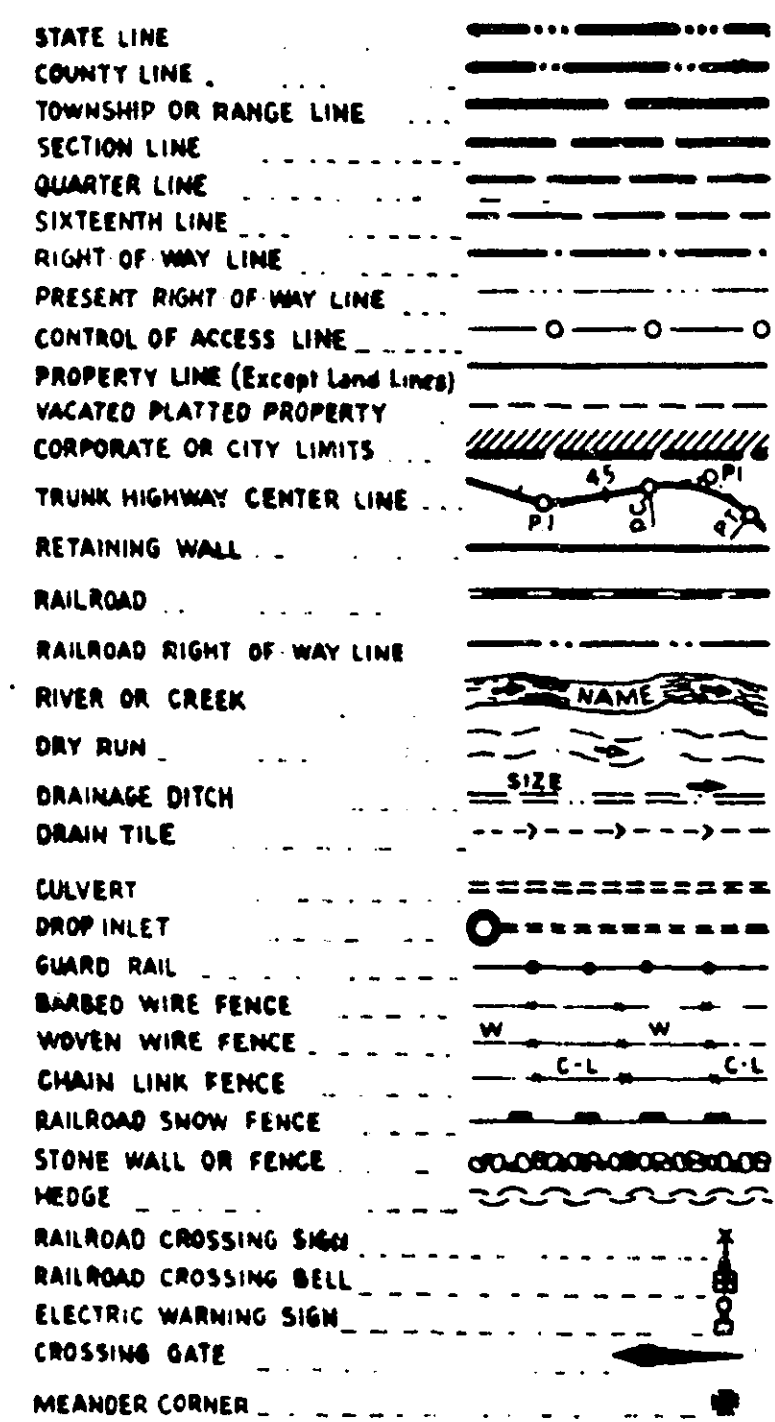


PLANS SYMBOLS



ABBREVIATIONS

EQUIPMENT & INDICATIONS

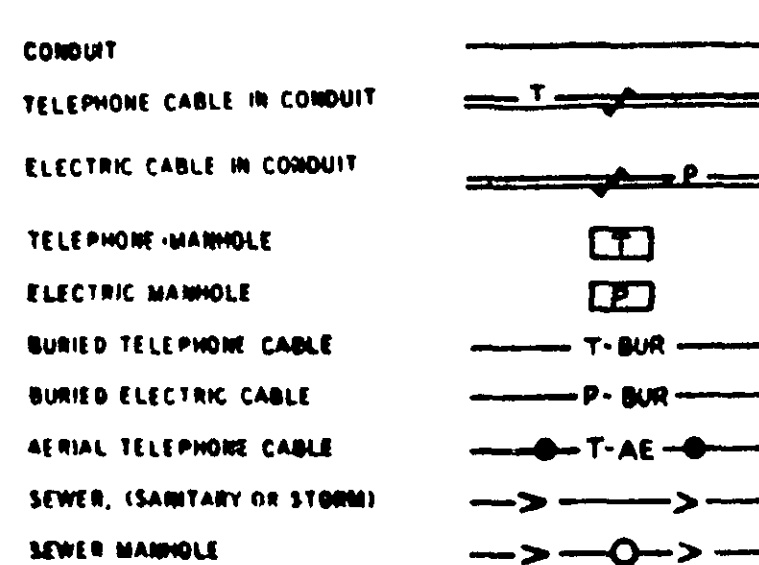
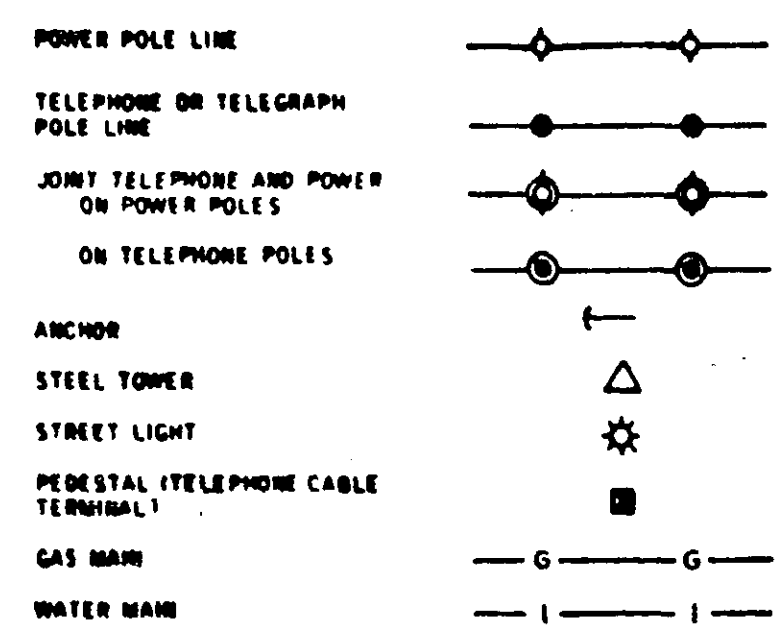
RED - RED
 YEL - YELLOW
 GRN - GREEN
 LTA - LEFT TURN ARROW
 THA - THRU ARROW
 RTA - RIGHT TURN ARROW
 TRA - THRU AND RIGHT ARROW
 WLK - WALK
 NEU - NEUTRAL
 DWK - DON'T WALK
 SW - SWITCH
 SWD - SWITCHED
 LUM - LUMINAIRE
 PA1(eg) - PEDESTRIAN INDICATION - "A" PHASE
 PB32(eg) - PUSH BUTTON - "B" PHASE
 C3(eg) - SIGNAL HEAD - "C" PHASE
 DA4(eg) - DETECTOR - "A" PHASE
 H.H. - HANDHOLE
 G.R.R. - GROUND ROD
 SERV. - SERVICE

DNL - DOWNLIGHT
 P.E.C. - PHOTOELECTRIC CELL
 ST. LHT. - STREET LIGHT
 CH. - CHECK
 S.O.P. - SOURCE OF POWER
 E.Q.G. - EQUIPMENT GROUND
 SPR - SPARE CONDUCTOR

COLOR CODING OF CONDUCTORS

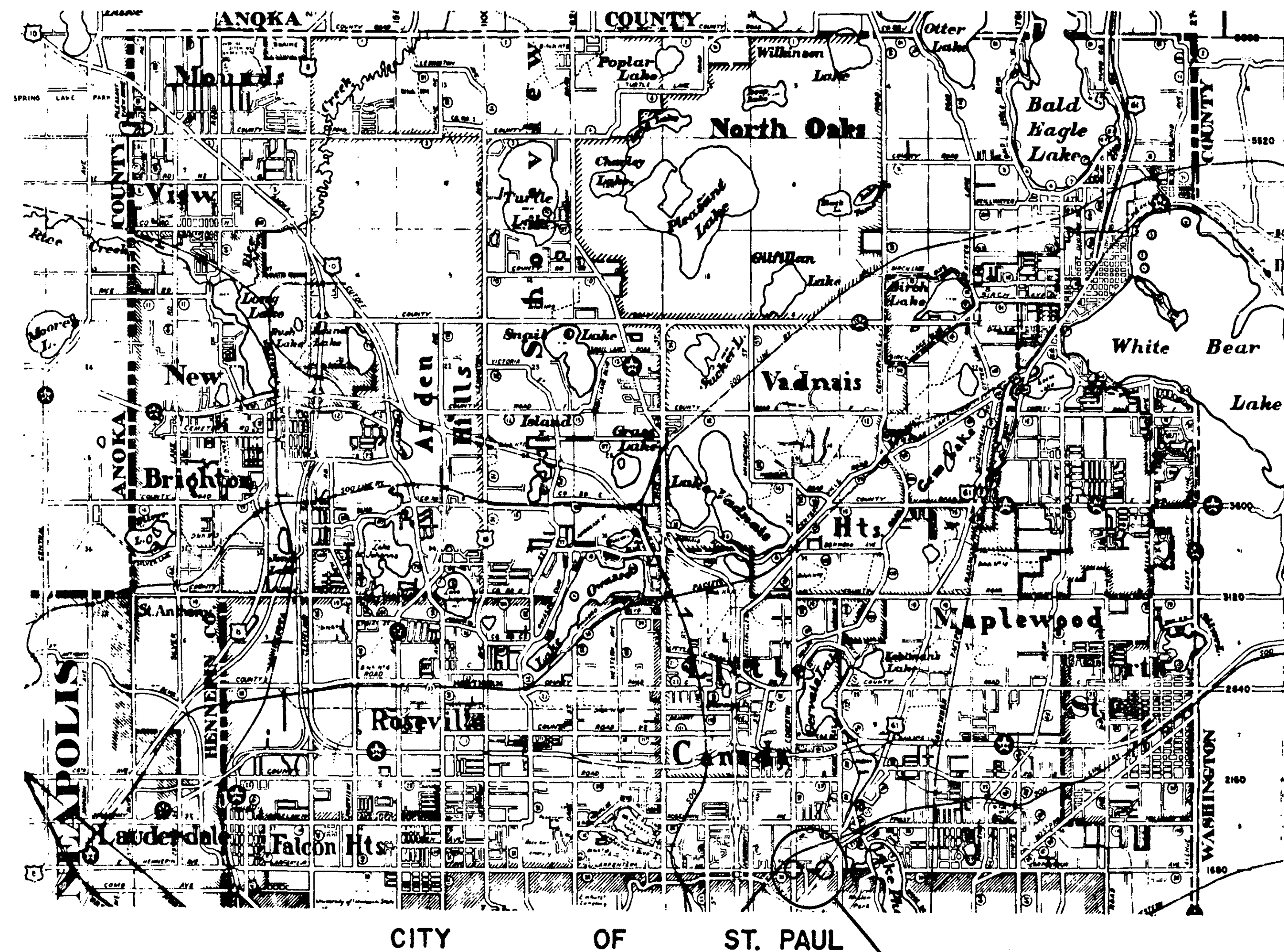
R - RED
 O - ORANGE
 BL - BLUE
 WH - WHITE
 R/BLK - RED WITH BLACK TRACER
 O/BLK - ORANGE WITH BLACK TRACER
 BL/BLK - BLUE WITH BLACK TRACER
 WH/BLK - WHITE WITH BLACK TRACER
 BLK - BLACK
 BLK/WH - BLACK WITH WHITE TRACER
 G/BLK - GREEN WITH BLACK TRACER
 G - GREEN

UTILITIES SYMBOLS



PIT DATA

PIT NO. _____ Located in _____
 PIT NO. _____ Located in _____



STATE PROJECT
 62-630-18

OFFICE OF COUNTY ENGINEER

RAMSEY COUNTY

PLAN OF TRAFFIC CONTROL SYSTEM FOR THE INTERSECTION OF
 LARPENTEUR AVE. & EDGERTON ST. (A)
 AND
 LARPENTEUR AVE. & PARKWAY DR. (B)

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	DETAILS
3	INTERSECTION LAYOUT
4	FIELD WIRING DIAGRAM
5	INTERSECTION LAYOUT
6	FIELD WIRING DIAGRAM

I hereby certify that this plan, specification or report 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.

Dean R. Ankles
 Date 5-26-72 Reg. No. 5031

RECOMMENDED FOR APPROVAL *W. V. Cheneveth* DATE 4/17/71
 DIRECTOR OF SAFETY
 RECOMMENDED FOR APPROVAL *Dean R. Ankles* DATE 4/18/72
 MAINTENANCE ENGINEER
 RECOMMENDED FOR APPROVAL *Charles R. Ankles* DATE 4/18/71
 CONSTRUCTION ENGINEER
 RECOMMENDED FOR APPROVAL _____ DATE _____
 RECOMMENDED FOR APPROVAL _____ DATE _____
 APPROVED _____ DATE _____
 COUNTY ENGINEER

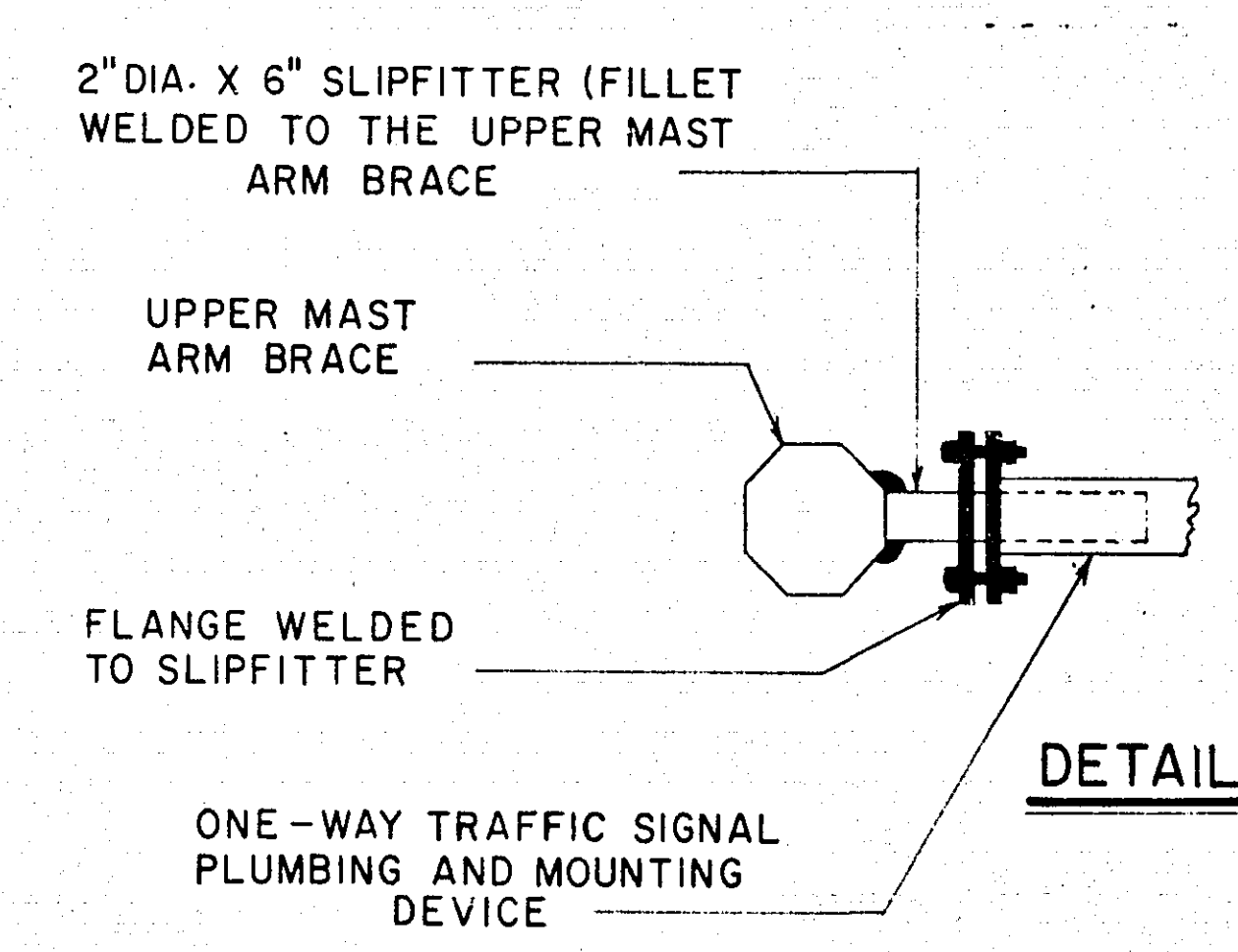
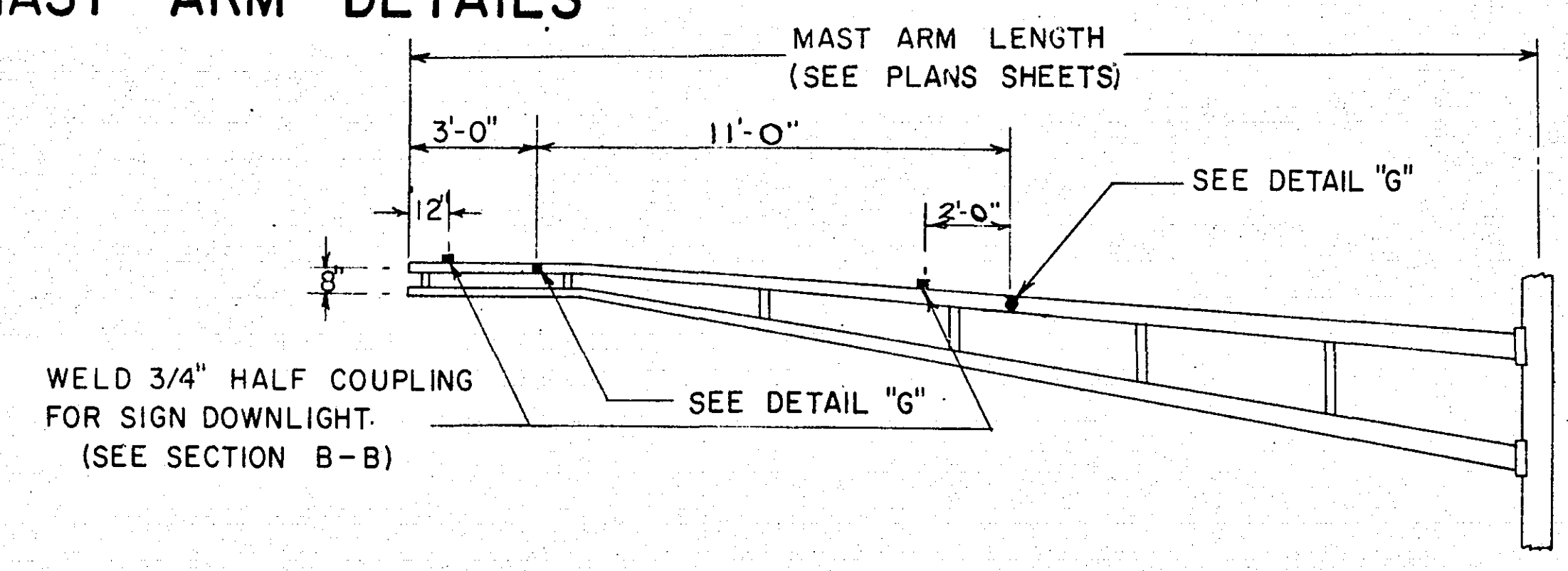
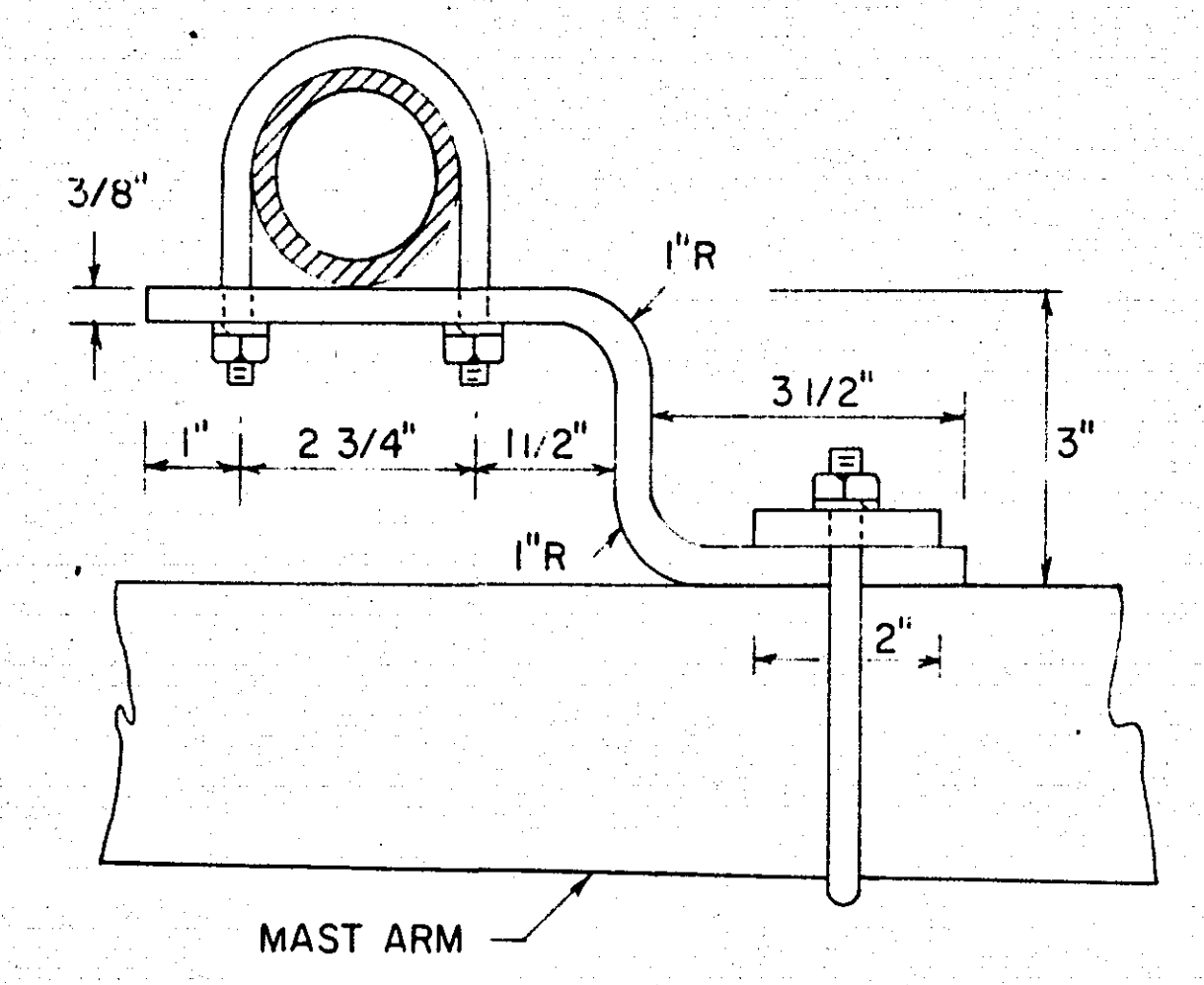
DESIGNED BY *W. V. Cheneveth* DATE 2/17/71
 DIRECTOR OF SAFETY
 RECOMMENDED FOR APPROVAL *Dean R. Ankles* DATE 4/18/72
 COUNTY ENGINEER
 APPROVED *Charles R. Ankles* DATE 4/18/72
 CHAIRMAN OF THE RAMSEY COUNTY BOARD
 APPROVED _____ DATE _____
 MAYOR, VILLAGE OF MAPLEWOOD
 APPROVED _____ DATE _____

MINNESOTA STATE HIGHWAY DEPARTMENT

RECOMMENDED FOR APPROVAL *James J. Solon* DATE 9-5-72
 DISTRICT STATE ENGINEER
 RECOMMENDED FOR APPROVAL *James J. Solon* DATE 4/27/72
 DISTRICT STATE ENGINEER
 APPROVAL *James J. Solon* DATE 9/6/72
 STATE AID ENGINEER

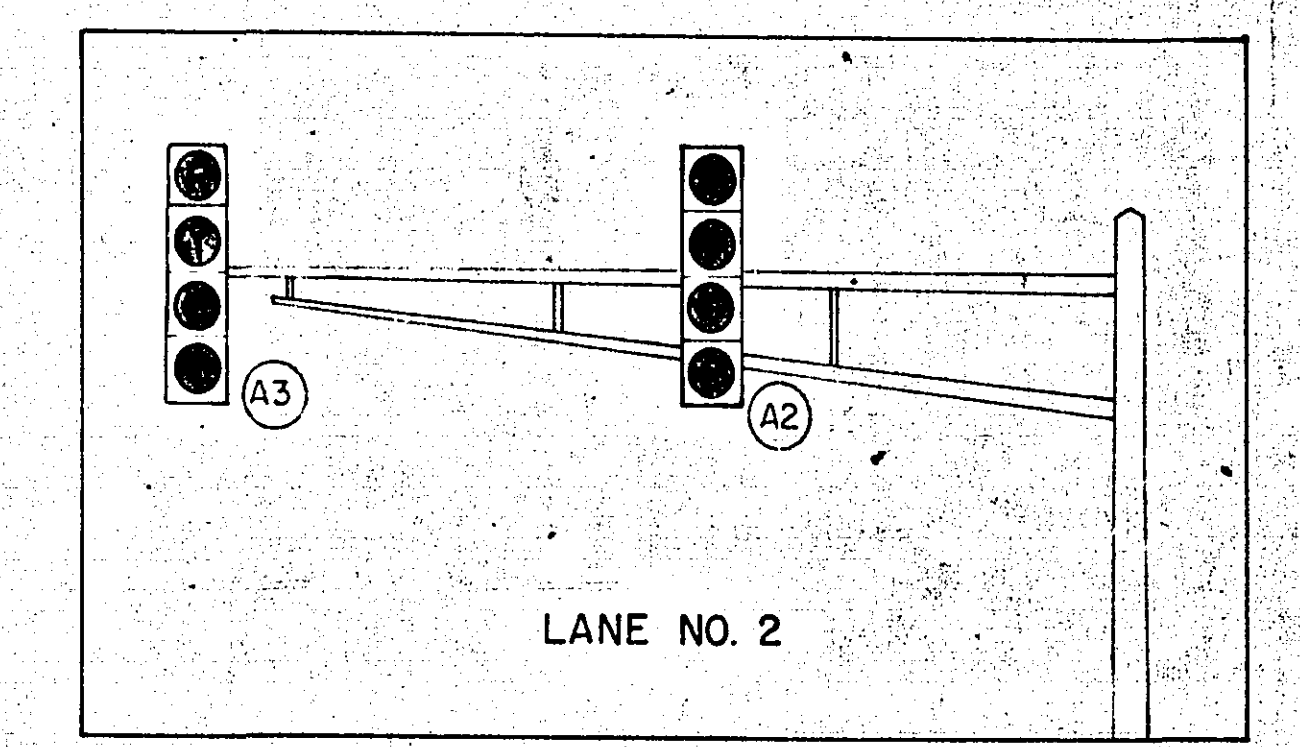
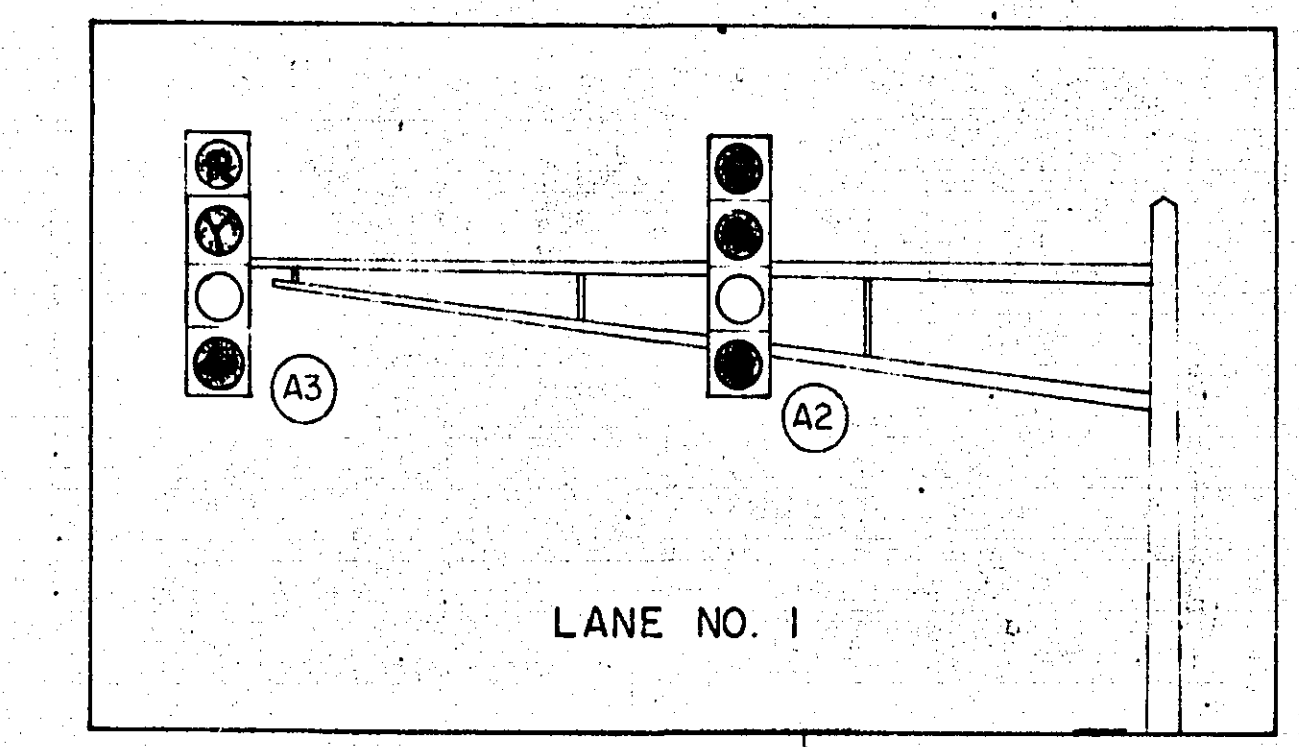
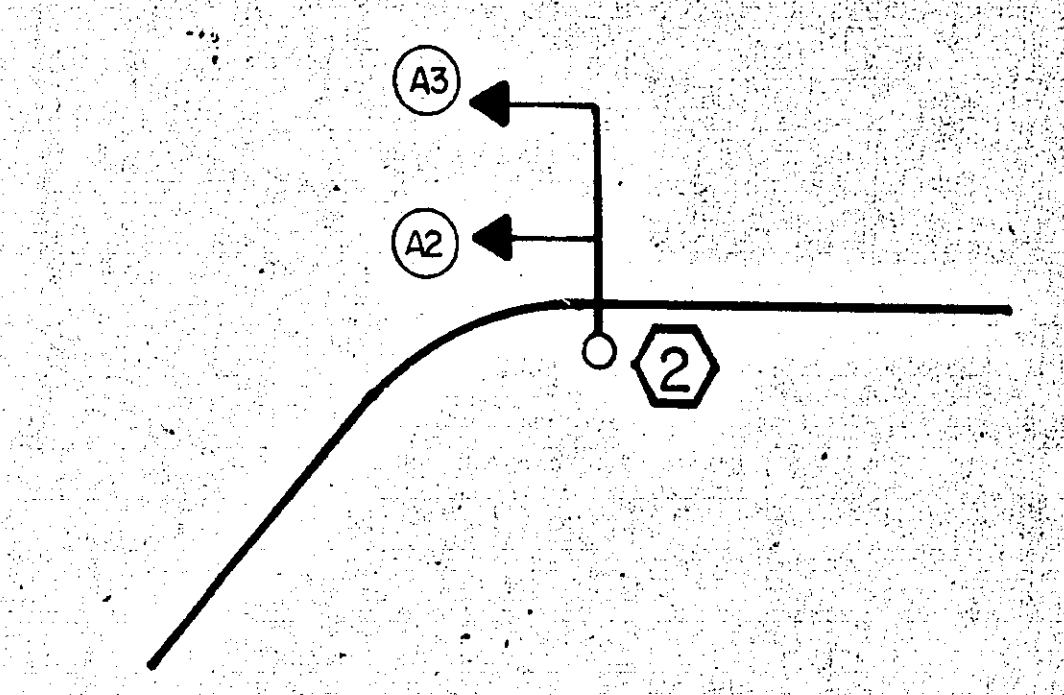
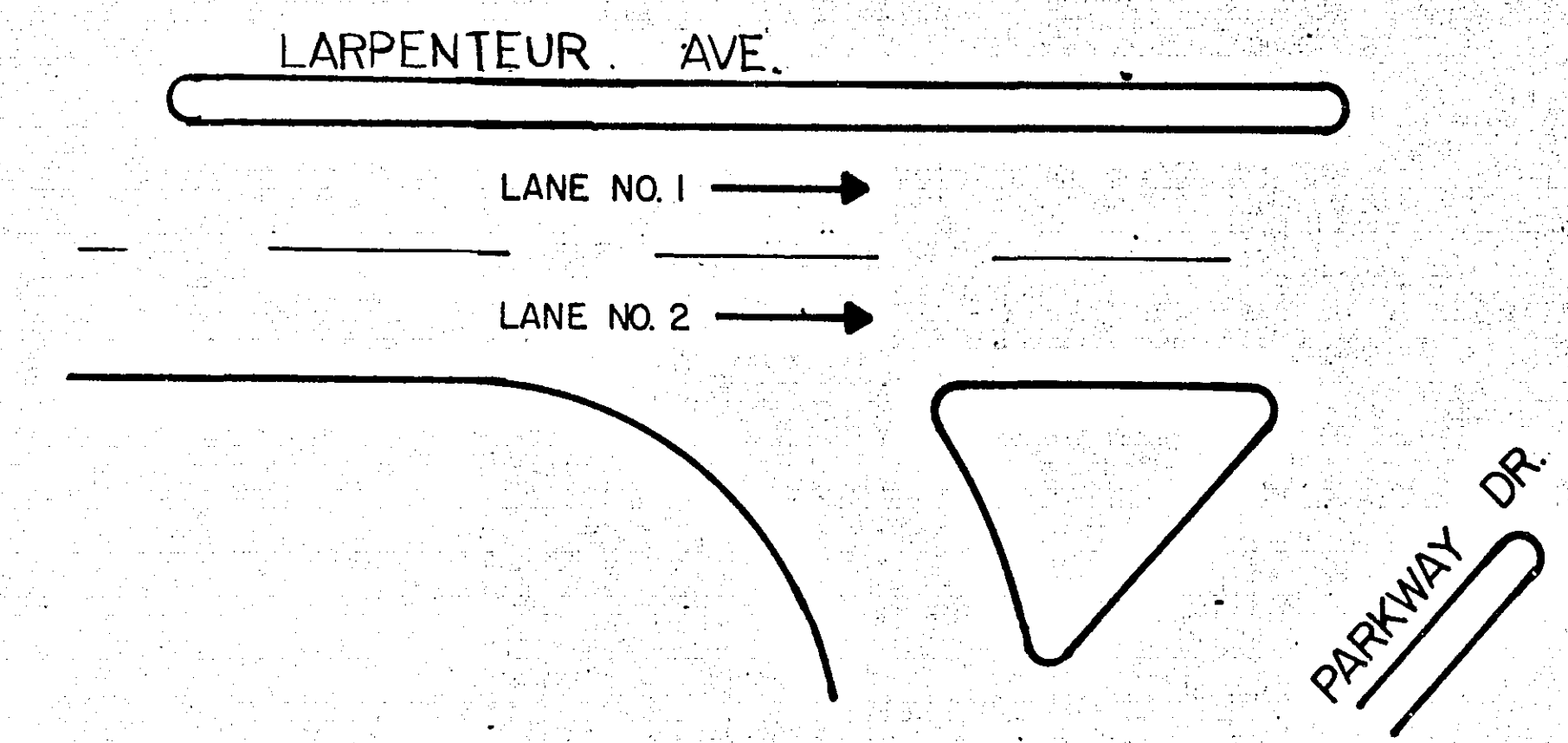
THE "MINNESOTA HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED JANUARY 1, 1972 SHALL GOVERN.

MAST ARM DETAILS

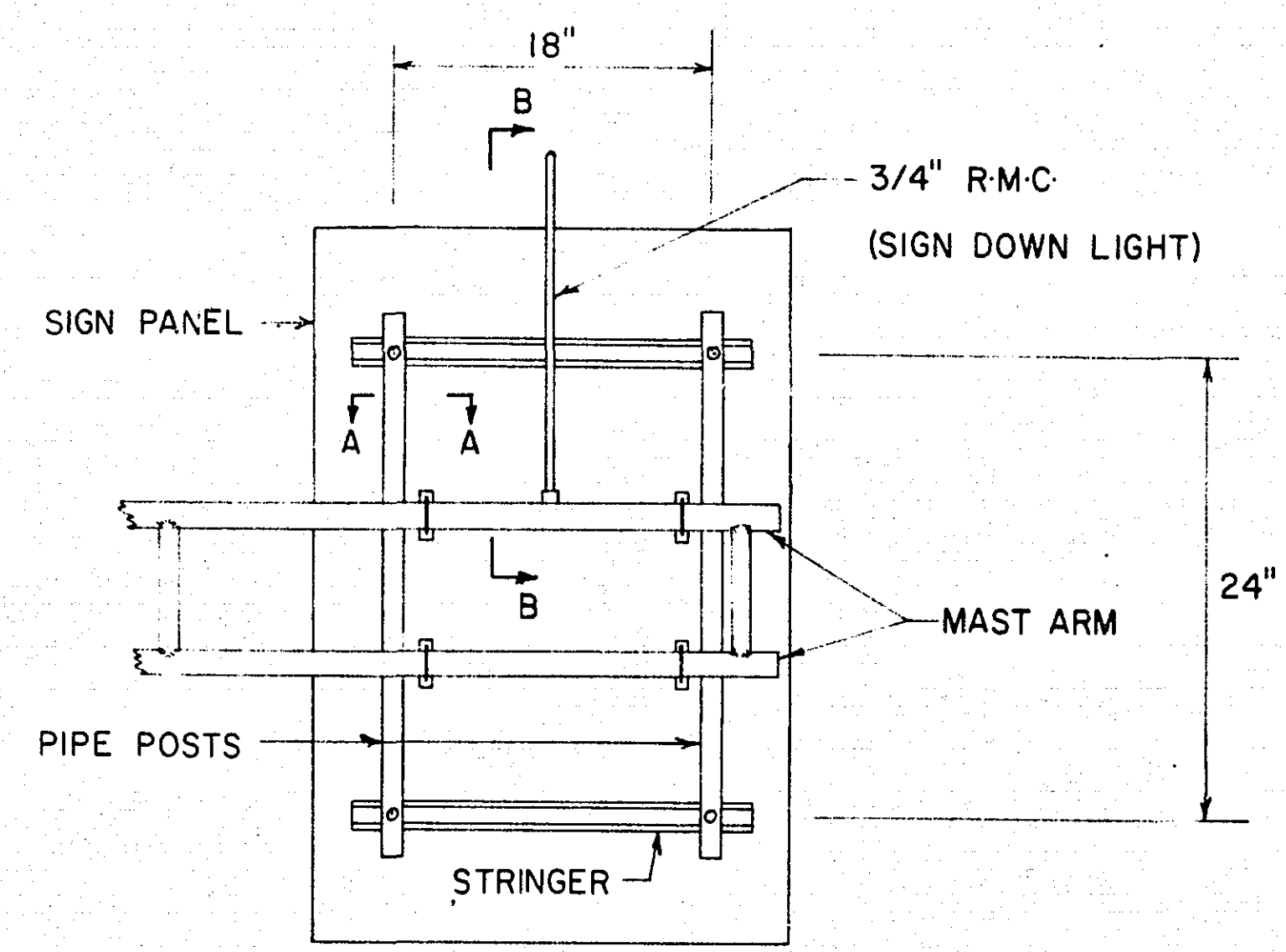
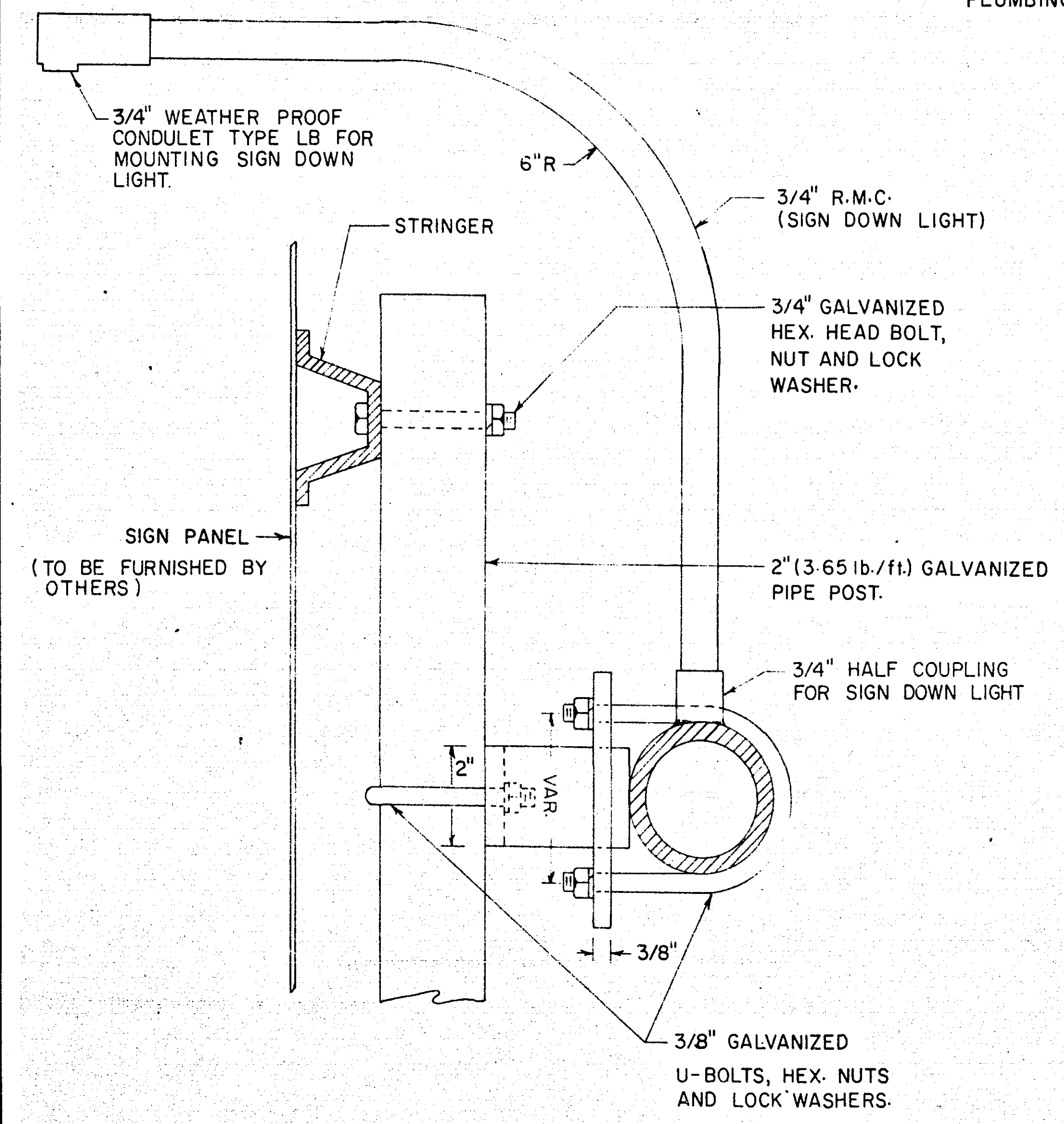


TYPICAL MAST ARM DETAIL FOR THE FOLLOWING MAST ARMS LISTED BELOW

INTERSECTION	MAST ARM N°
B LARPENTEUR & PARKWAY	2



SIGNAL NO. 2
LARPENTEUR AVE. & PARKWAY DR.
PROGRAM SIGNAL FACES AS SHOWN ABOVE

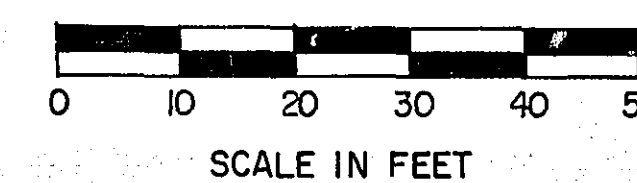


TYPICAL MOUNTING

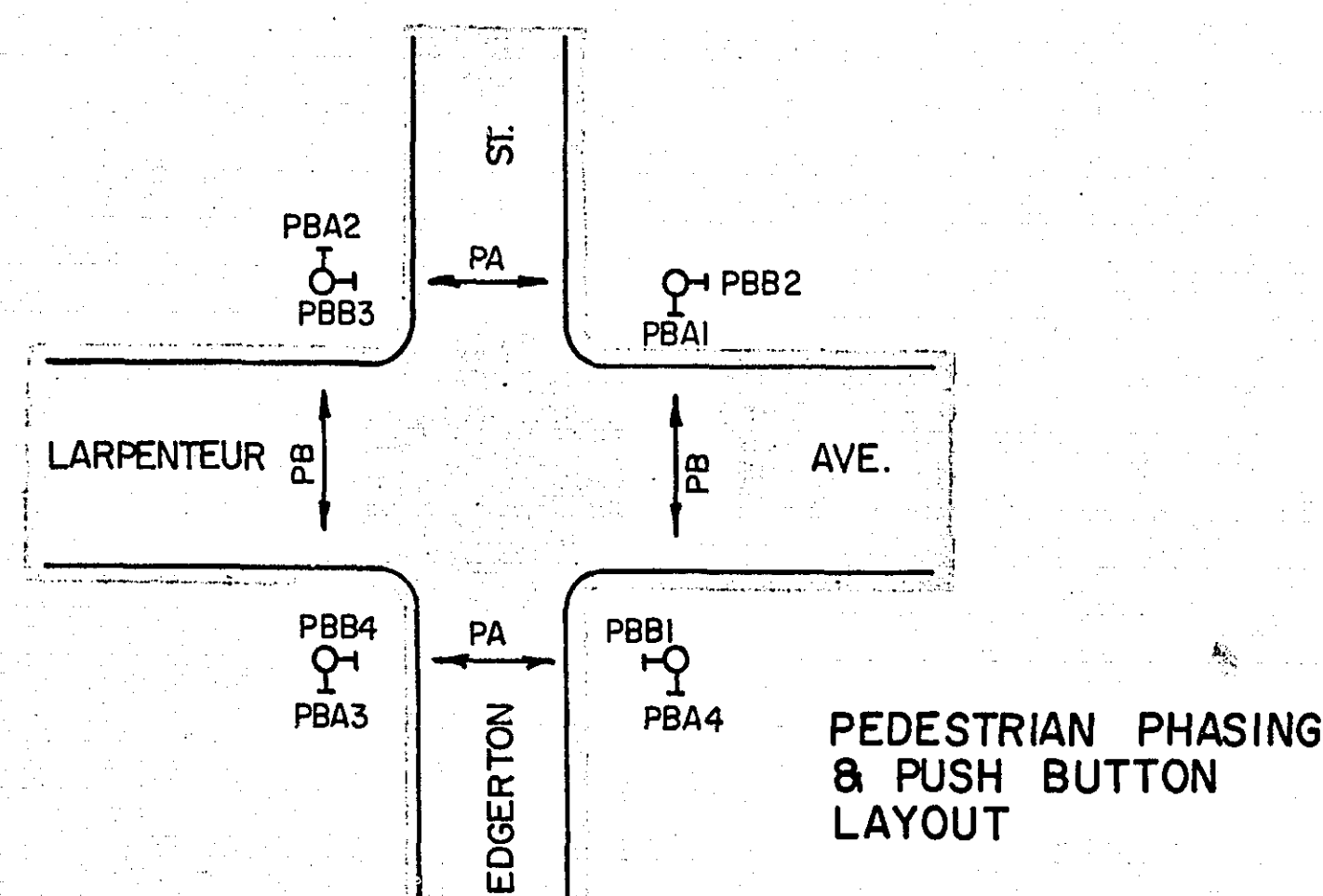
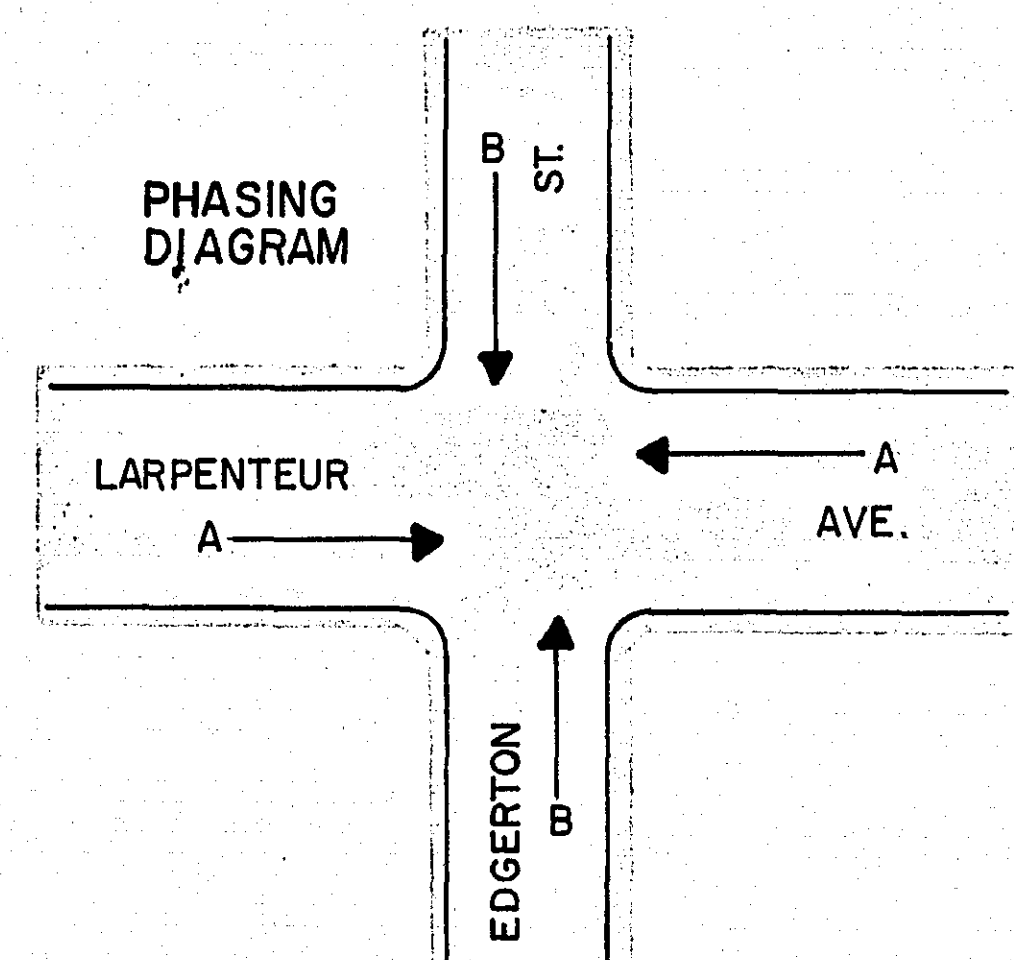
- NOTES:
1. PIPE MATERIAL SHALL CONFORM TO A.S.T.M. DESIGNATION A53, SCHEDULE 40.
 2. STRUCTURAL STEEL SHALL CONFORM TO M.H.D. 3306.
 3. GALVANIZING SHALL CONFORM TO M.H.D. 3392 AND M.H.D. 3394.

STANDARD PLATES	
PLATE NO.	TITLE
8110 B	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8111 A	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED)
8115 B	PEDESTRIAN PUSH BUTTON INSTALLATION
8116 C	STEEL GUARD POST
8117 C	PRECAST CONCRETE HANDHOLE
8118 B	SERVICE EQUIPMENT AND POLE
8119 B	GROUND MOUNT CABINET FOUNDATION
8123 A	POLE AND MAST ARM
8124 B	SIGNAL HEAD MOUNTS
8130 B	SAW CUT LOOP DETECTORS

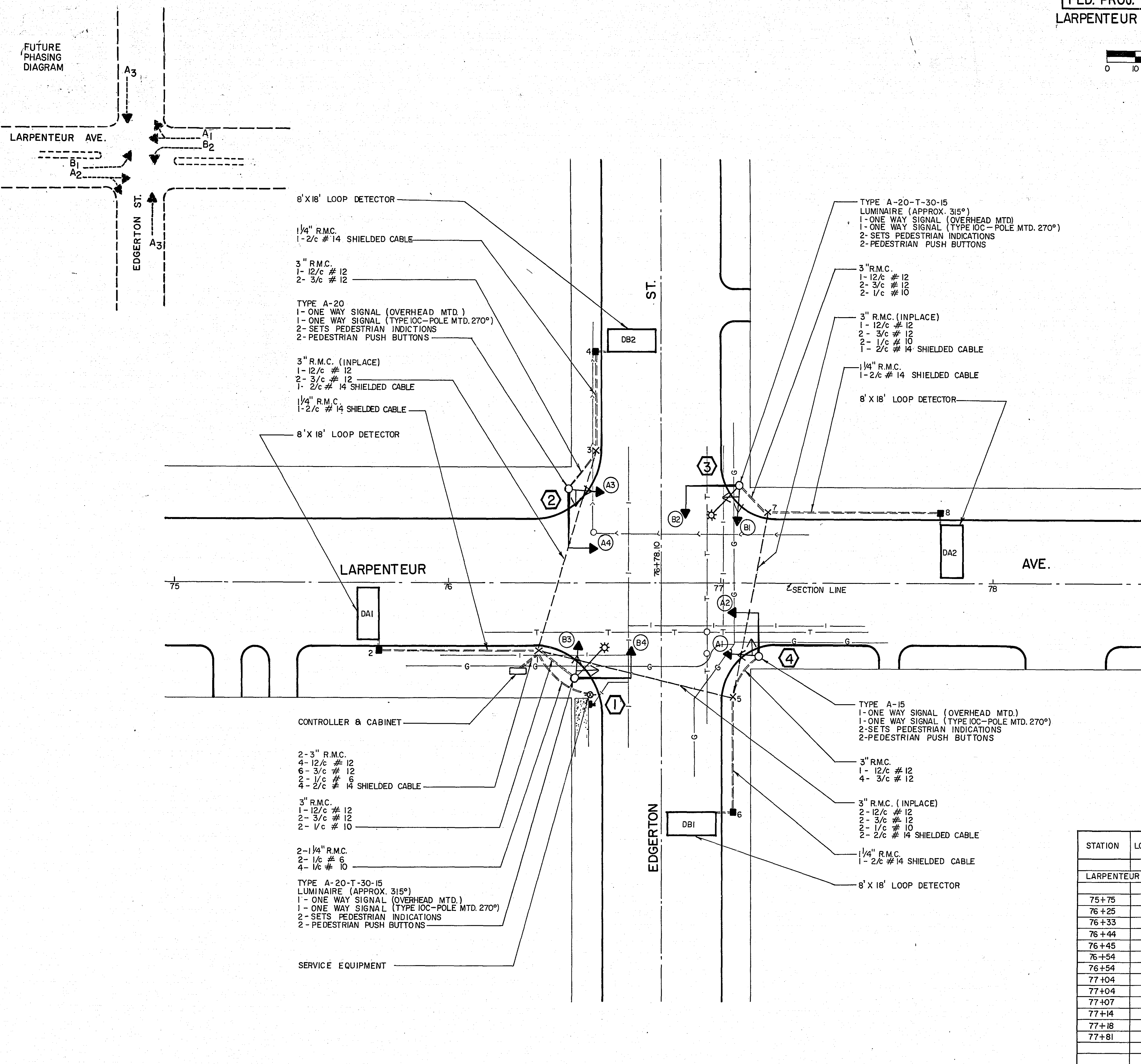
STATEMENT OF ESTIMATED QUANTITIES				
PROJECT NO.	ITEM NO.	ITEM	UNIT	QUANT.
62-630-18	2565.501	FULL TRAFFIC ACTUATED TRAFFIC CONTROL SYSTEM A	SIGNAL SYSTEM	1
62-630-18	2565.501	FULL TRAFFIC ACTUATED TRAFFIC CONTROL SYSTEM B	SIGNAL SYSTEM	1



LEGEND OF SYMBOLS	
[Symbol]	CONTROLLER AND CABINET
[Symbol]	HANDHOLE (PULLBOX)
[Symbol]	RIGID METALLIC CONDUIT (R.M.C.)
[Symbol]	MAST ARM & POLE
[Symbol]	SIGNAL FACE
[Symbol]	SIGNAL FACE WITH BACKGROUND SHIELD
[Symbol]	MAST ARM & LUMINAIRE
[Symbol]	PEDESTRIAN INDICATION
[Symbol]	SOURCE OF POWER (S.O.P.) WOOD POLE INPLACE
[Symbol]	HANDHOLE (PULLBOX) INPLACE
[Symbol]	RIGID METALLIC CONDUIT (R.M.C.) INPLACE



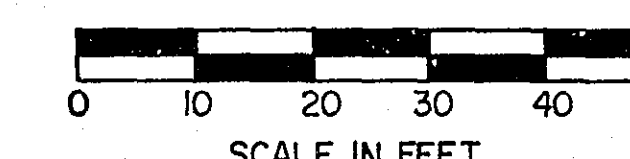
FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	←	↑	→
A1	A	R	12"	12"	12"	-	-	-
A2	A	R	12"	12"	12"	-	-	-
A3	A	R	12"	12"	12"	-	-	-
A4	A	R	12"	12"	12"	-	-	-
B1	B	R	12"	12"	12"	-	-	-
B2	B	R	12"	12"	12"	-	-	-
B3	B	R	12"	12"	12"	-	-	-
B4	B	R	12"	12"	12"	-	-	-



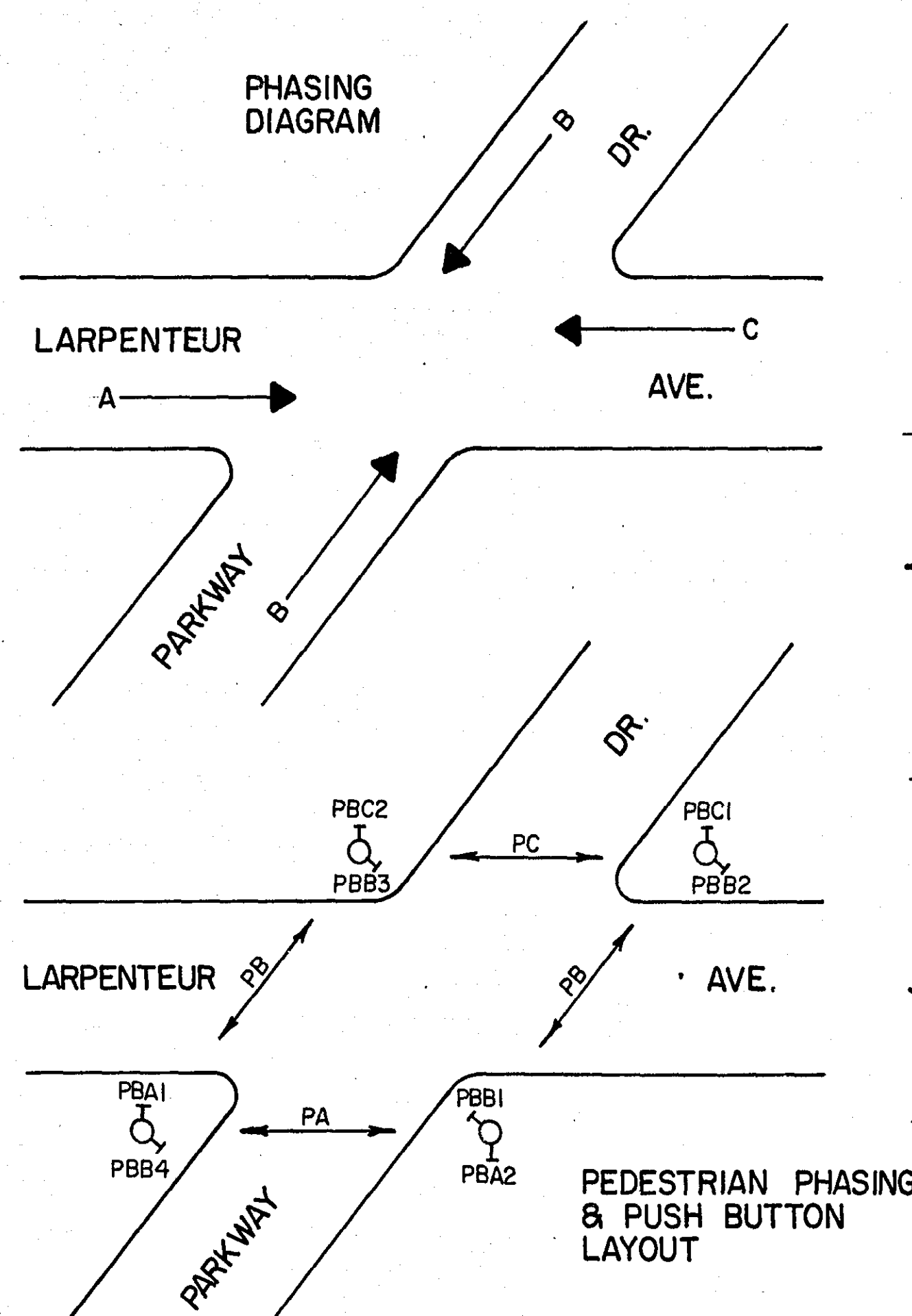
STATION	LOCATION	DESCRIPTION
LARPEN TEUR AVE.		
75+75	RT. 26'	PULLBOX 2
76+25	RT. 31'	CONTROLLER CABINET
76+33	RT. 26'	PULLBOX 1
76+44	LT. 33'	SIGNAL NO. 2
76+45	RT. 33'	SIGNAL NO. 1
76+54	LT. 46'	PULLBOX 3
76+54	LT. 80'	PULLBOX 4
77+04	RT. 40'	PULLBOX 5
77+04	RT. 80'	PULLBOX 6
77+07	LT. 34.5'	SIGNAL NO. 3
77+14	RT. 25.5'	SIGNAL NO. 4
77+18	LT. 28'	PULLBOX 7
77+81	LT. 28'	PULLBOX 8



LARPENTER & EDGERTON



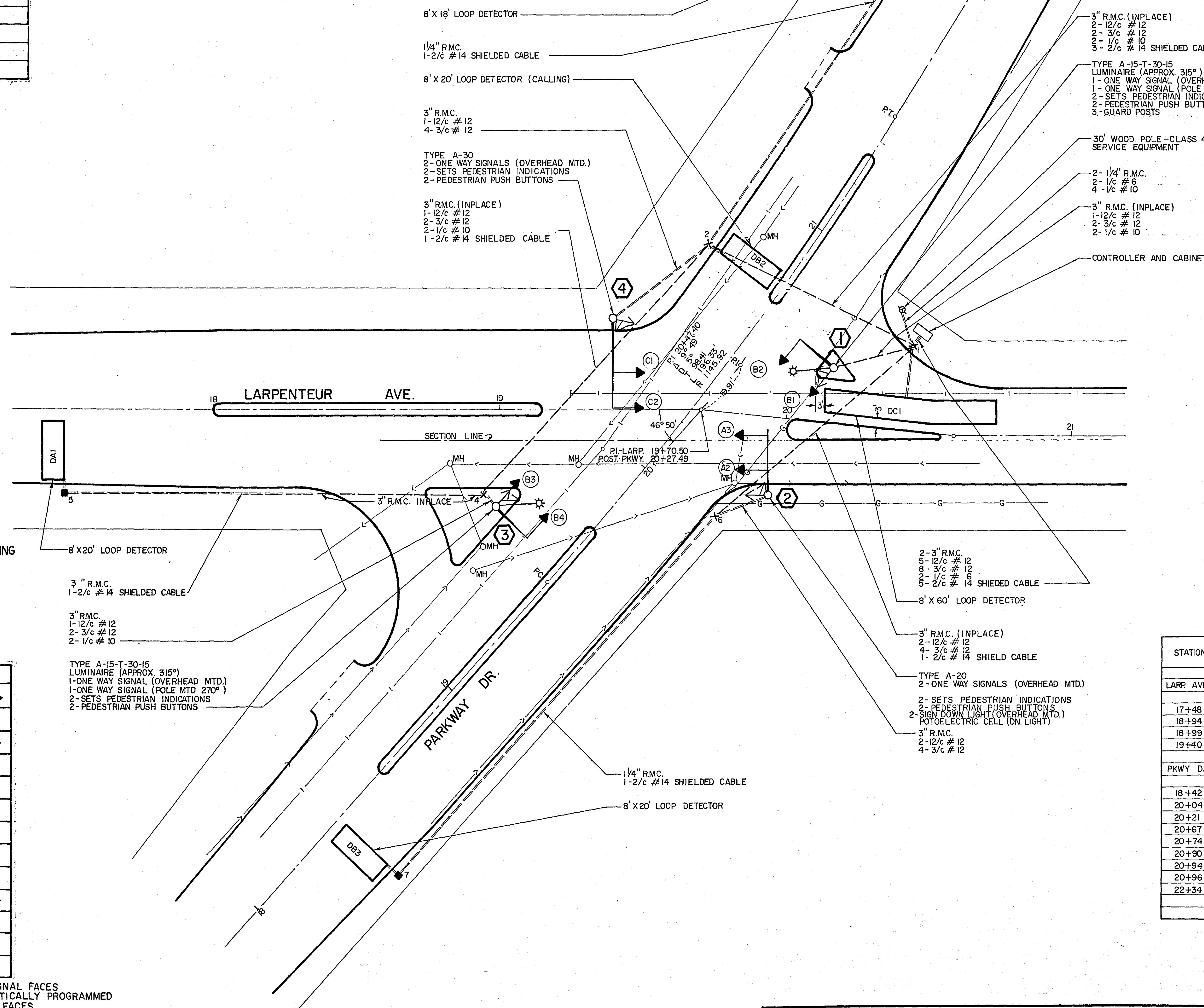
LEGEND OF SYMBOLS	
[Symbol]	CONTROLLER
[Symbol]	HANDHOLE (PULLBOX)
[Symbol]	RIGID METALLIC CONDUIT (R.M.C.)
[Symbol]	MAST ARM & POLE
[Symbol]	SIGNAL FACE
[Symbol]	SIGNAL FACE WITH BACKGROUND SHIELD
[Symbol]	MAST ARM & LUMINAIRE
[Symbol]	PEDESTRIAN INDICATION
[Symbol]	SOURCE OF POWER (S.O.P.)
[Symbol]	HANDHOLE (PULLBOX) INPLACE
[Symbol]	RIGID METALLIC CONDUIT (R.M.C.) INPLACE



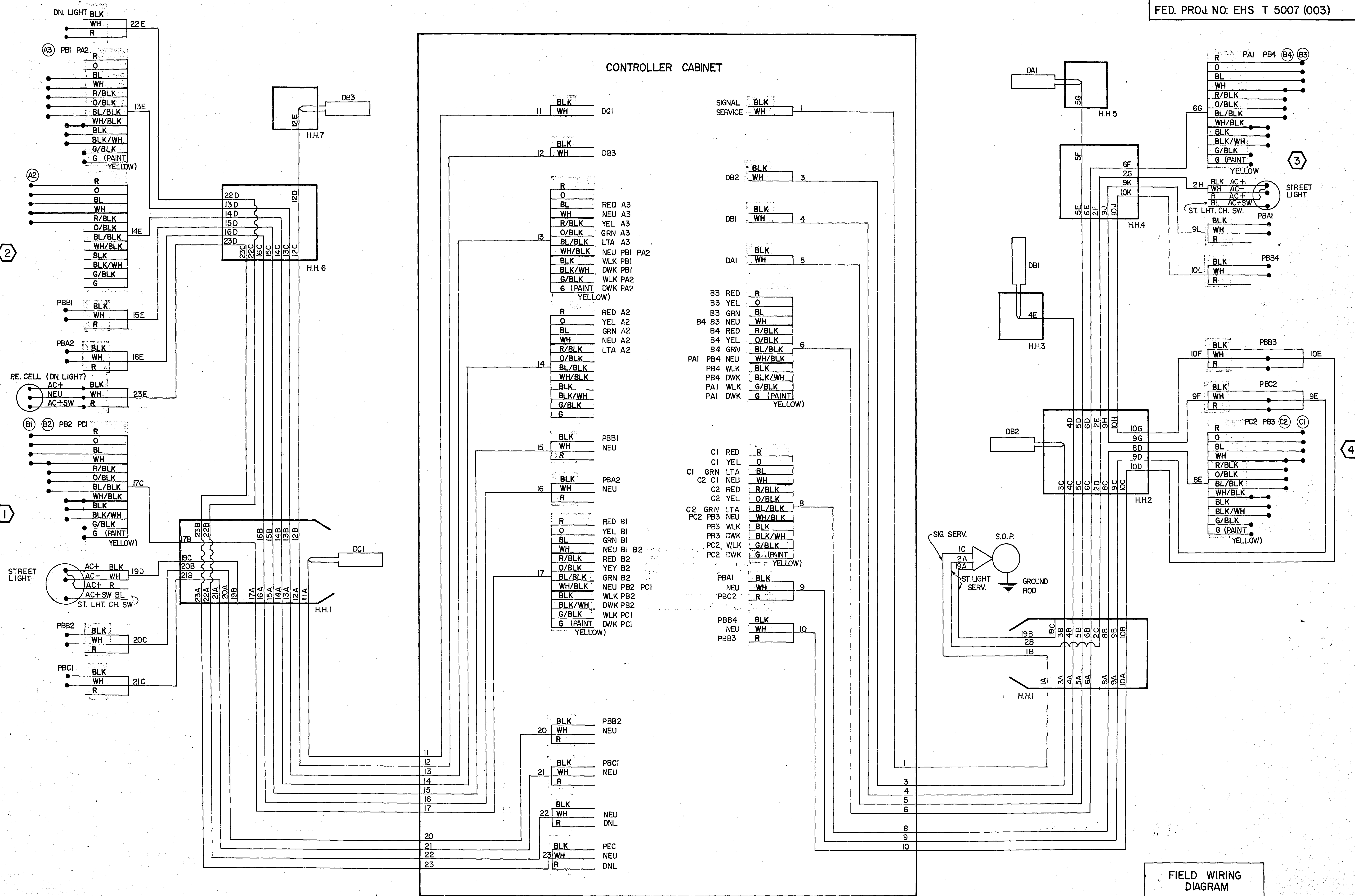
FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	←	↑	→
* A2	A	R	12"	12"	12"	12"	-	-
* A3	A	R	12"	12"	12"	12"	-	-
B1	B	R	12"	12"	12"	-	-	-
B2	B	R	12"	12"	12"	-	-	-
B3	B	R	12"	12"	12"	-	-	-
B4	B	R	12"	12"	12"	-	-	-
C1	C	R	12"	12"	12"	12"	-	-
C2	C	R	12"	12"	12"	12"	-	-

* SEE SHEET NO. 3 (SIGNAL NO. 2)

NOTE: ALL SIGNAL FACES ARE OPTICALLY PROGRAMMED SIGNAL FACES.



STATION	LOCATION	DESCRIPTION
LARP. AVE.		
17+48	RT 28'	PULLBOX 5
18+94	RT 28'	PULLBOX 4
18+99	RT. 32'	SIGNAL NO. 3
19+40	LT. 31'	SIGNAL NO. 4
PKWY. DR.		
18+42	RT. 28'	PULLBOX 7
20+04	RT. 29'	PULLBOX 6
20+21	RT. 38.5'	SIGNAL NO. 2
20+67	RT. 30'	SIGNAL NO. 1
20+74	LT. 29'	PULLBOX 2
20+90	RT. 48'	PULLBOX 1
20+94	RT. 48'	CONTROLLER CABINET
20+96	RT. 38'	SOURCE OF POWER
22+34	LT. 25'	PULLBOX 3



FIELD WIRING DIAGRAM

LARPENTEUR AVE. & PARKWAY DR. RAMSEY CO. ENGR.