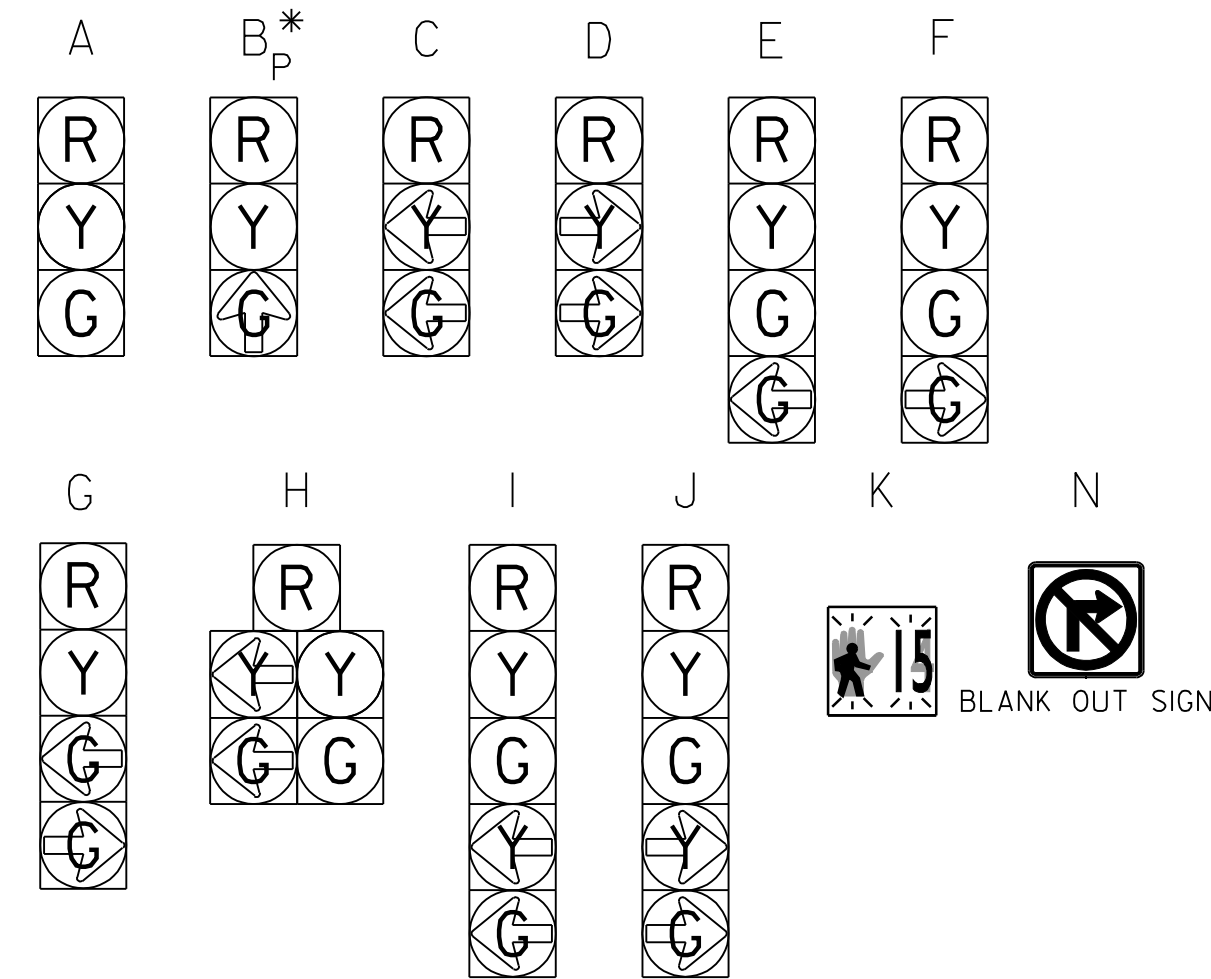


***CHART A SIGNAL SUMMARY**

SIGNAL FACE ARRANGEMENT	NO. SECTIONS (PER FACE)	SIGNAL MOUNTING TYPE	QUANTITY
A	3	MAST ARM W/BACKPLATE	8
I	5	MAST ARM W/BACKPLATE	3
C	1	MAST ARM W/BACKPLATE	1
N	1	MAST ARM - BLANKOUT SIGN	2
K	1	SIDE-OF-POLE	8
A	3	SIDE-OF-POLE	4



* ALL SIGNAL HEADS ON POLE SHALL BE INTELLILIGHT - ELECTRONICALLY STEERABLE BEAM OR APPROVED EQUAL

* SUBSCRIPT "P" INDICATES PROGRAMMED SIGNALS;

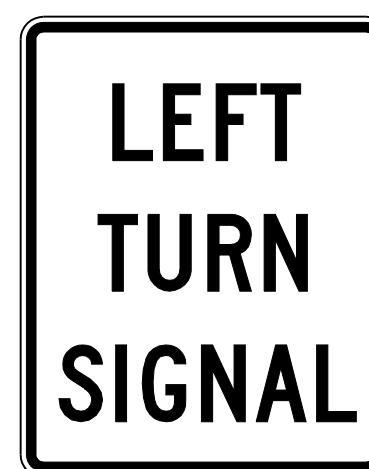
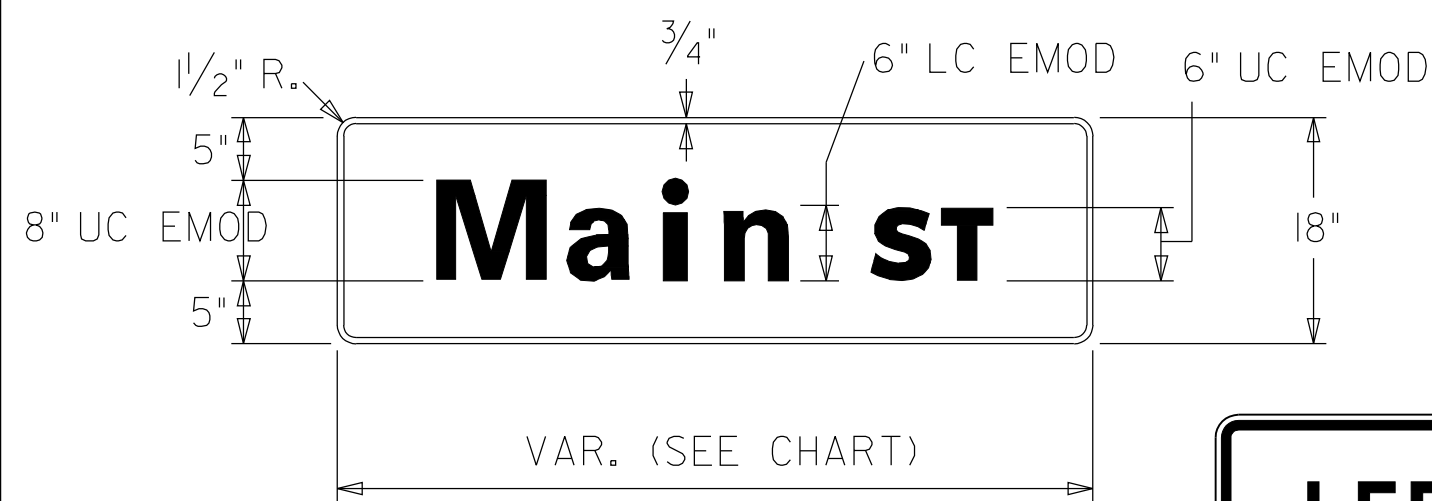
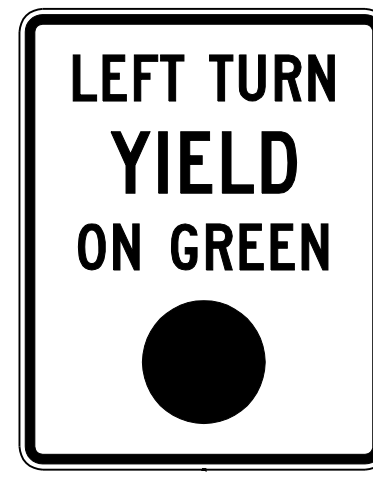
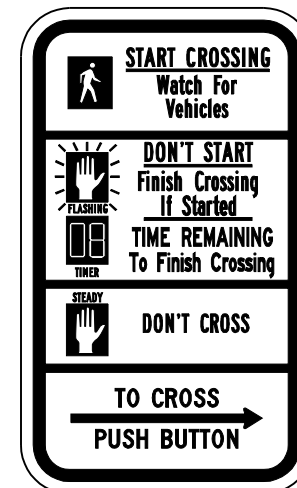
1. ALL LENSES SHALL BE L.E.D.
2. ALL LENSES SHALL BE 12"
3. ALL PEDESTRIAN SIGNAL HEADS SHALL BE COUNTDOWN.

CHART B TRAFFIC SIGNAL POLES

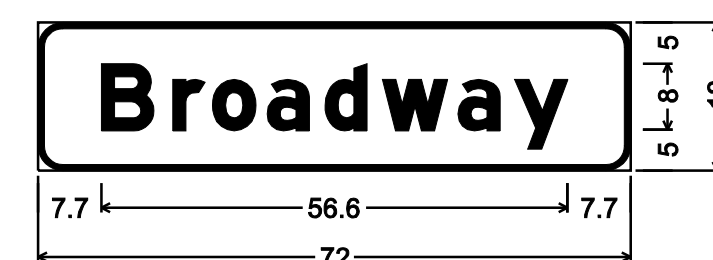
POLE HEIGHT	SIGNAL ARM LENGTH	SIGNAL ARM MOUNTING HEIGHT	NO. OF SIGNALS ON ARM	SIGNAL SPACING	LED LUMINAIRE ARM LENGTH	LED LUMINAIRE MOUNTING HEIGHT	QUANT.
25'	50'	19'	3	29.0', 40.0', 49.0'	8'	25'	1
25'	46'	19'	4	18.5', 23.5', 34.5', 44.0'	8'	25'	1
25'	46'	19'	3	22.5', 33.5', 44.0'	8'	25'	1
25'	48'	19'	4	26.0', 37.0', 43.0', 47.0'	8'	25'	1

CHART C OVERHEAD STREET NAME SIGNS

SIGN	LEGEND	LENGTH	QUANTITY
1, 5	BROADWAY	72"	2
3, 7	21ST ST N	72"	2



RIO-10



B	r	o	a	d	w	a	y		
7.7	8.6	4.9	6.6	7.1	6.9	9.2	6.9	6.4	7.7



2	1	s	t	N				
6.8	8.4	4.9	6.7	12.0	8.0	12.0	6.4	6.8

BILL OF MATERIALS

ITEM	QUANT.	UNIT	NOTE
CONTROLLER UNIT	1	EACH	
PROGRAM MODULE	1	EACH	
CONFLICT MONITOR	1	EACH	
FLASHER	2	EACH	
LOAD SWITCH	15	EACH	
FLASH TRANSFER RELAY	4	EACH	
SURGE PROTECTOR	1	EACH	
DC ISOLATOR	3	EACH	
AC ISOLATOR		EACH	
DETECTOR, 2-CHANNEL		EACH	
DETECTOR, 4-CHANNEL		EACH	
ISOLATION MODULE	1	EACH	
PAD MOUNTED CABINET	1	EACH	
BATTERY BACKUP SYSTEM (8 HR. MINIMUM BACKUP)	1	EACH	
TRAFFIC SIGNAL HEAD	CHART A	EACH	
SIGNAL HEAD MOUNTING BRACKET	CHART A	EACH	
BACK PLATE	CHART A	EACH	
VEHICLE TRAFFIC SIGNAL LAMP		EACH	
PEDESTRIAN TRAFFIC SIGNAL LAMP		EACH	
L.E.D. LENS	CHART A	EACH	
PEDESTRIAN PUSHBUTTON & SIGN (RIO-3E) (9"x12")	8	EACH	
TRAFFIC SIGNAL POLE	CHART B	EACH	
TRAFFIC SIGNAL PEDESTAL ALUMINUM		EACH	
TERMINAL BLOCK	5	EACH	
JUNCTION BOX		EACH	
SERVICE BOX	7	EACH	
LUMINAIRE (LED) & LUMINAIRE ARM	8	EACH	
LUMINAIRE LAMP 250 WATT		EACH	
PHOTOCELL		EACH	
UNFUSED STREET LIGHT CONNECTOR KIT		EACH	
FUSED STREET LIGHT CONNECTOR KIT		EACH	
OVERHEAD STREET NAME SIGN	CHART C	EACH	
RIO-10 SIGN (24" X 30")	1	EACH	
RIO-12 SIGN (24" X 30")	3	EACH	
BLANK OUT SIGN	2	EACH	
ENTRANCE HEAD		EACH	
SERVICE ENCLOSURE, 100 AMP.	1	EACH	
CIRCUIT BREAKER, TRAFFIC SIGNAL, 30 AMP.	1	EACH	
CIRCUIT BREAKER, LUMINAIRE, 20 AMP.		EACH	
GROUND ROD & CLAMP	14	EACH	
SERVICE WIRE NO. 3 AWG 1/C	190	LIN FT	
LIGHTING DISTRIBUTION WIRE NO. 8 AWG 1/C		LIN FT	
POLE & BRACKET WIRE NO. 12 AWG 3/C	760	LIN FT	
GROUND WIRE NO. 6 AWG 1/C	1680	LIN FT	
MULTI-CONDUCTOR CABLE NO. 14 AWG 5/C	1990	LIN FT	
MULTI-CONDUCTOR CABLE NO. 14 AWG 7/C	1830	LIN FT	
MULTI-CONDUCTOR CABLE NO. 14 AWG 9/C		LIN FT	
MULTI-CONDUCTOR CABLE NO. 14 AWG 3/C	1400	LIN FT	
MULTI-CONDUCTOR CABLE NO. 12 AWG 6/C	60	LIN FT	
COAXIAL CABLE	1400	LIN FT	
3 PAIR NO. 16 AWG	660	LIN FT	
CONDUIT, 1" & FITTINGS	40	LIN FT	
CONDUIT, 1 1/2" & FITTINGS		LIN FT	
CONDUIT, 2" & FITTINGS	285	LIN FT	
CONDUIT, 3" FITTINGS	662	LIN FT	
CONDUIT, 4" & FITTINGS	198	LIN FT	

- QUANTITIES SHOWN ARE FOR BROADWAY SIGNAL.
- CONDUIT SHALL BE BORED UNDER EXISTING PAVEMENT TO REMAIN AND RAILROAD TRACKS.
- THE TRAFFIC SIGNAL SYSTEM SHALL BE FOR THE COMPLETE INSTALLATION OF ALL CONTROLLERS, CAMARAS, WIRE, CONNECTIONS, ETC. NEEDED FOR THE SATISFACTORY OPERATION OF THE TRAFFIC SIGNAL SYSTEM.
- THE 21ST AND BROADWAY INTERSECTION SHALL BE THE MASTER CONTROL SIGNAL FOR THE INTERCONNECTED SIGNALS.
- AN ISOLATION MODULE WILL BE REQUIRED FOR THE RAILROAD INTERCONNECT.
- A SEPARATE LOAD SWITCH SHALL BE USED TO CONTROL EACH BLANK OUT SIGN.
- THE CONFLICT MONITORS SUPPLIED SHALL BE 2010 ECL CONFLICT MONITORS AND SHALL MEET THE REQUIREMENTS OUTLINED IN CALTRANS TEES 2002 (LATEST VERSION).
- SUPPLIED CONTROLLER UNIT SHALL BE A 2070 CONTROLLER, IN ADDITION THE FOLLOWING EQUIPMENT SHALL BE REQUIRED
 - THE 2070L CONTROLLERS SHALL HAVE A 19" EIA RACK MOUNTABLE CHASSIS (MATED TO THE 170 CABINET).
 - 2070-IB CPU MODULE WITH RJ-45 ETHERNET PORT.
 - 2070-2A CFIELD I/O MODULE FOR COMPATIBLIT WITH CALTRANS STYLE CCONNECTOR.
 - 2070-3B 8X40 FRONT PANEL WITH LCD DISPLAY.
 - 2070-4A 10 AMP POWER SUPPLY.
 - 2070-7A ASYNCHRONOUS SERIAL COMMUNICATIONS MODULE (RS-232).
 - ANY UNUSED SLOT POSITION SHALL HAVE A COVER PLATE.
 - SHALL BE COMPATIBLE WITH OTHER VENDOR FIRMWARE.
- SEE LIGHTING DETAILS (SHEETS 129-134) FOR MORE INFORMATION REGARDING LIGHTING.

-QUANTITIES FOR INFORMATION ONLY-