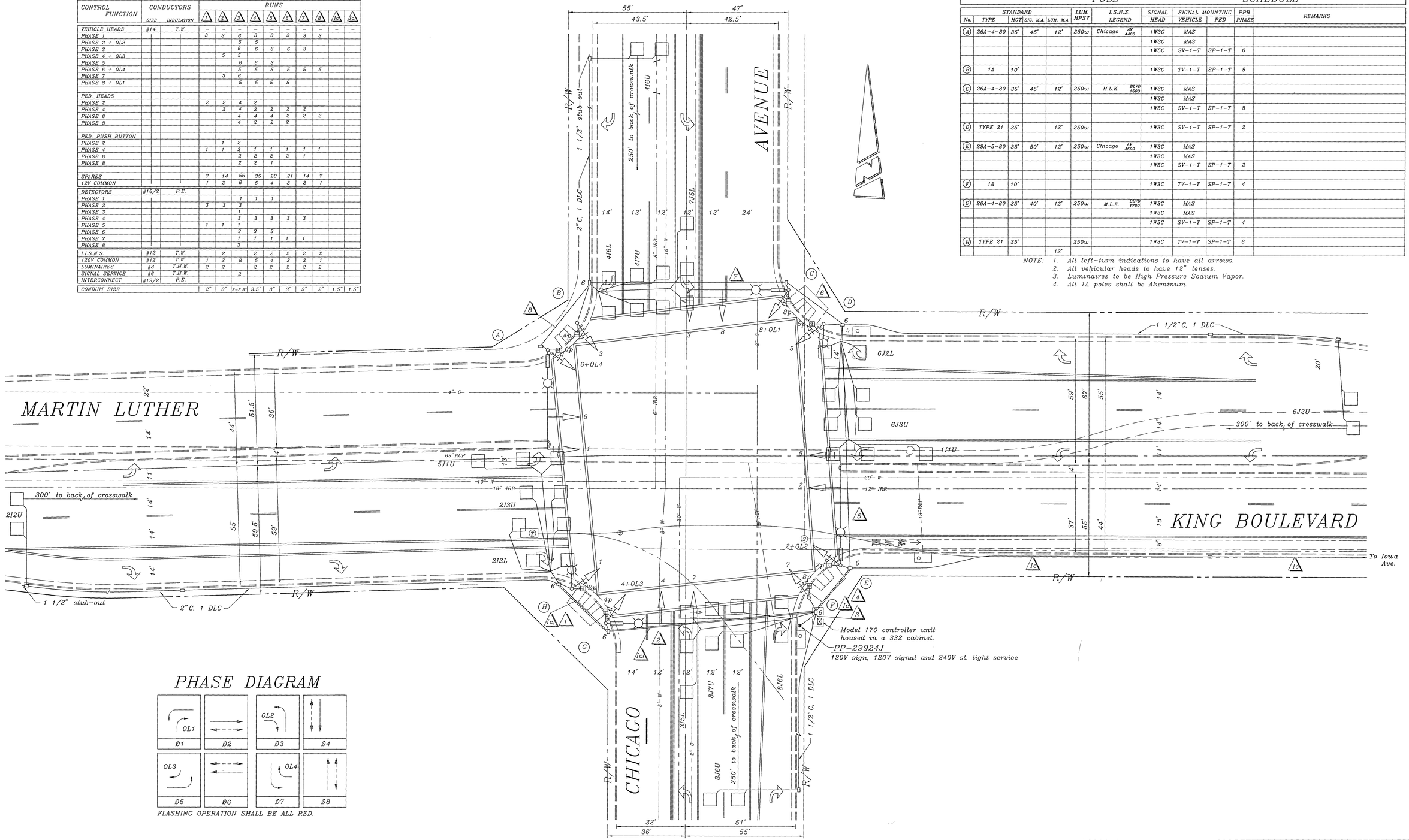
CONDUCTOR SCHEDULE

CONTROL FUNCTION	CONDUCTORS SIZE	CONDUCTORS INSULATION	RUNS 1	2	3	4	5	6	7	8	1c	1c
VEHICLE HEADS	#14	T.W.	–	–	–	–	–	–	–	–	–	–
PHASE 1			3	3	6	3	3	3	3	3		
PHASE 2 + OL2					5	5						
PHASE 3					6	6	6	6	3			
PHASE 4 + OL3				5	5							
PHASE 5					6	6	3					
PHASE 6 + OL4					5	5	5	5	5	5		
PHASE 7				3	6							
PHASE 8 + OL1					5	5	5	5				
PED. HEADS												
PHASE 2			2	2	4	2						
PHASE 4				2	4	2	2	2	2			
PHASE 6					4	4	4	2	2	2		
PHASE 8					4	2	2	2				
PED. PUSH BUTTON												
PHASE 2				1	2							
PHASE 4			1	1	2	1	1	1	1	1		
PHASE 6					2	2	2	2	1			
PHASE 8					2	2	1					
SPARES			7	14	56	35	28	21	14	7		
12V COMMON			1	2	8	5	4	3	2	1		
DETECTORS	#16/2	P.E.										
PHASE 1					1	1	1					
PHASE 2			3	3	3							
PHASE 3					1							
PHASE 4					3	3	3	3	3			
PHASE 5			1	1	1							
PHASE 6					3	3	3					
PHASE 7					1	1	1	1	1			
PHASE 8					3							
I.I.S.N.S.	#12	T.W.		2		2	2	2	2	2		
120V COMMON	#12	T.W.	1	2	8	5	4	3	2	1		
LUMINAIRES	#8	T.H.W.	2	2		2	2	2	2	2		
SIGNAL SERVICE	#6	T.H.W.			2							
INTERCONNECT	#19/2	P.E.										
CONDUIT SIZE			2"	3"	2-3.5"	3.5"	3"	3"	3"	2"	1.5"	1.5"

POLE SCHEDULE

No.	STANDARD TYPE	HGT	SIG. M.A.	LUM. M.A.	LUM. HPSV	I.S.N.S. LEGEND	SIGNAL HEAD	SIGNAL MOUNTING VEHICLE	PED	PPB PHASE	REMARKS
(A)	26A-4-80	35'	45'	12'	250w	Chicago AV 4400	1W3C	MAS			
							1W3C	MAS			
							1W5C	SV-1-T	SP-1-T	6	
(B)	1A	10'					1W3C	TV-1-T	SP-1-T	8	
(C)	26A-4-80	35'	45'	12'	250w	M.L.K. BLVD 1600	1W3C	MAS			
							1W3C	MAS			
							1W5C	SV-1-T	SP-1-T	8	
(D)	TYPE 21	35'		12'	250w		1W3C	SV-1-T	SP-1-T	2	
(E)	29A-5-80	35'	50'	12'	250w	Chicago AV 4300	1W3C	MAS			
							1W3C	MAS			
							1W5C	SV-1-T	SP-1-T	2	
(F)	1A	10'					1W3C	TV-1-T	SP-1-T	4	
(G)	26A-4-80	35'	40'	12'	250w	M.L.K. BLVD 1700	1W3C	MAS			
							1W3C	MAS			
							1W5C	SV-1-T	SP-1-T	4	
(H)	TYPE 21	35'			250w		1W3C	TV-1-T	SP-1-T	6	
				12'							

NOTE:
1. All left-turn indications to have all arrows.
2. All vehicular heads to have 12" lenses.
3. Luminaires to be High Pressure Sodium Vapor.
4. All 1A poles shall be Aluminum.



PHASE DIAGRAM

FLASHING OPERATION SHALL BE ALL RED.

MARK	REVISIONS	APPR	DATE
	AS-BUILT PER R-3057	MAC	11/00
	AS-BUILT PER R-2630	MAC	11/00
	AS-BUILT (UTL & EQUIP SCHED)	MHL	12/81
	AS-BUILT (LOOP DETECTORS)	JMW	1/67
	AS-BUILT PER SIGNALIZATION	RBD	8/65

DESIGNED BY JMW DRAWN BY MAC CHECKED BY

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE
ENGINEERING MANAGER		
PRINCIPAL ENGINEER		
P W INSPECTION		
TRAFFIC DIVISION		
PUBLIC UTILITIES		

APPROVED BY
DIRECTOR OF PUBLIC WORKS
DATE

TRAFFIC SIGNAL

CHICAGO AVENUE AND MARTIN LUTHER KING BOULEVARD

SCALE: 1" = 20'

ACCT. NO.

X-414

SHEET 1 OF 1

FILE NAME: X414AS.DWG

CONDUCTOR SCHEDULE									
AWG	CIRCUIT	RUN No. 1	2	3	4	5	6	7	8
#14	ø1	3	3	3	3	3	(N)3	(N)3	3/(N)3
	ø2 + OL1	–	–	–	–	5	–	–	5
	ø3	–	3	6	6	6	–	–	6
	ø4 + OL2	–	–	–	–	–	–	(N)5	(N)5
	ø5	–	–	–	3	6	–	–	6
	ø6 + OL4	5	5	5	5	5	–	–	5
	ø7	–	–	–	–	–	–	(N)3	3/(N)3
	ø8 + OL1	–	–	5	5	5	–	–	5
	ø2P	–	–	–	–	–	(N)2	(N)2	2/(N)2
	ø4P	–	2	2	2	2	–	(N)2	2/(N)2
	ø6P	2	2	2	4	4	–	–	4
	ø8P	–	–	2	2	2	–	–	4
	ø2 PPB	–	–	–	–	–	–	(N)1	1/(N)1
	ø4 PPB	1	1	1	1	1	(N)1	(N)1	1/(N)1
	ø6 PPB	–	1	2	2	2	–	–	2
	ø8 PPB	–	–	–	1	2	–	–	2
	PPB COMMON	1	2	3	4	5	(N)1	(N)2	5/(N)3
	SPARES	3	3	3	3	3	(N)3	(N)3	3/(N)3
	TOTAL	15	22	34	41	51	10	22	82
#12	I.I.S.N.S.	2	2	2	2	2	–	(N)2	–
	SIGNAL COMMON	1	2	3	4	5	(N)1	(N)2	6/(N)2
	TOTAL	3	4	5	6	7	1	4	8
#8	LUMINAIRE	2	2	2	2	2	(N)2	(N)2	–
TYPE B DLC	ø1	–	–	–	1	1	–	–	1
	ø2	–	–	–	–	–	(N)3	(N)3	(N)3
	ø3	–	–	–	–	–	–	–	1
	ø4	–	3	3	3	3	–	–	3
	ø5	–	–	–	–	–	(N)1	(N)1	(N)1
	ø6	–	–	–	3	3	–	–	3
	ø7	–	1	1	1	1	–	–	1
	ø8	–	–	–	–	–	–	–	3
	TOTAL	0	4	4	8	8	4	4	16
#6 SIGNAL SERVICE		–	–	–	–	–	–	–	2
6 PAIR #19 SIC		–	–	–	–	–	–	–	1/(N)1
CONDUIT SIZE		2"	3"	3"	3"	3.5"	(N)2"	(N)3"	2–3.5"
PERCENT FILL		15%	13%	17%	23%	20%	19%	13%	18%

ALL CONDUCTORS AND CONDUITS ARE EXISTING UNLESS OTHERWISE INDICATED.
(N) = NEW

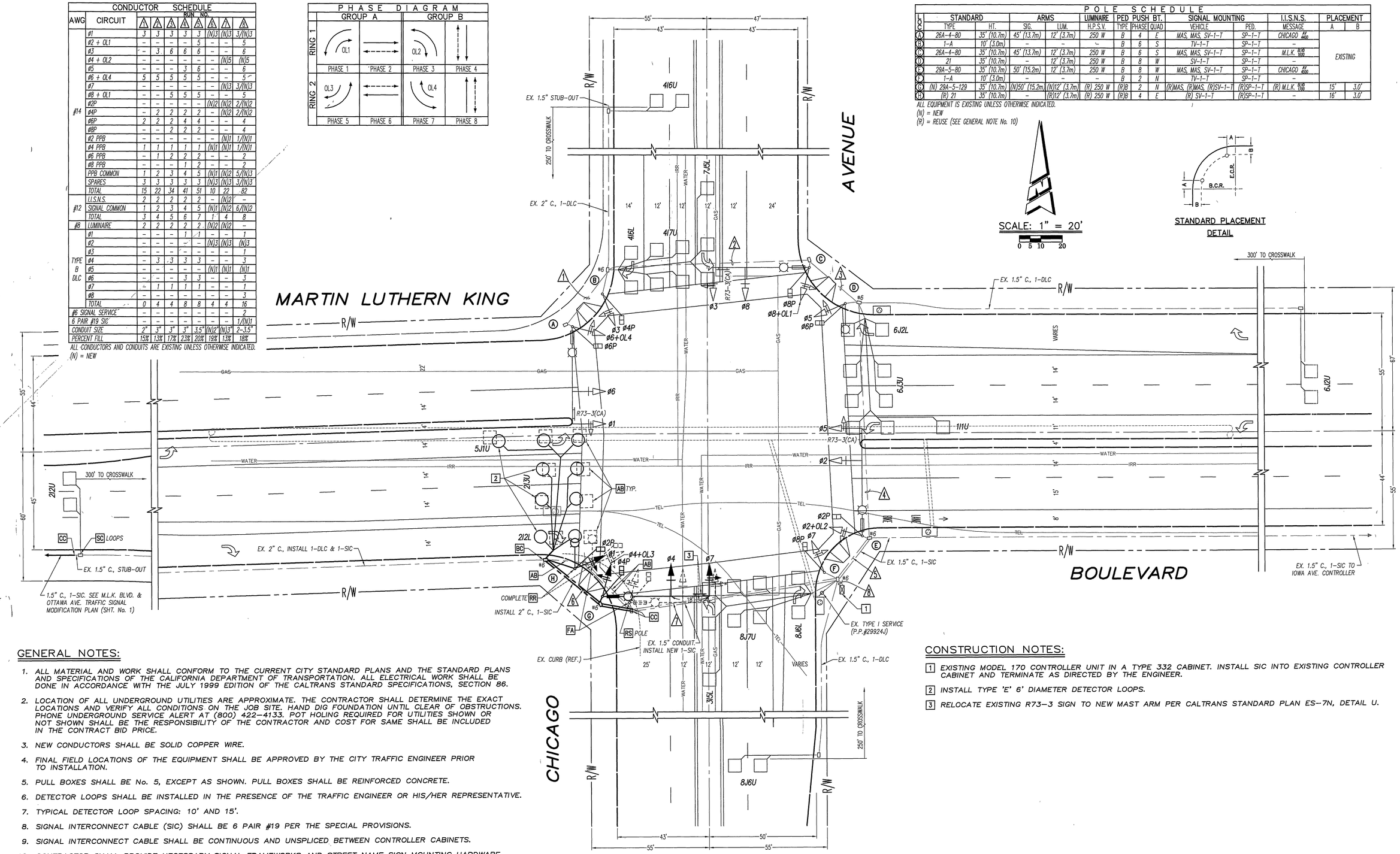
PHASE DIAGRAM				
	GROUP A		GROUP B	
RING 1	OL1		OL2	
	PHASE 1	PHASE 2	PHASE 3	PHASE 4
RING 2	OL3		OL4	
	PHASE 5	PHASE 6	PHASE 7	PHASE 8

POLE SCHEDULE														
LOC	STANDARD		ARMS		LUMINAIRE	PED PUSH BT.			SIGNAL MOUNTING		I.I.S.N.S.	PLACEMENT	
	TYPE	HT.	SIG.	LUM.	H.P.S.V.	TYPE	PHASE	QUAD	VEHICLE	PED.	MESSAGE	A	B
(A)	26A–4–80	35' (10.7m)	45' (13.7m)	12' (3.7m)	250 W	B	4	E	MAS, MAS, SV–1–T	SP–1–T	CHICAGO AV 4410	EXISTING	
(B)	1–A	10' (3.0m)	–	–	–	B	6	S	TV–1–T	SP–1–T	–		
(C)	26A–4–80	35' (10.7m)	45' (13.7m)	12' (3.7m)	250 W	B	6	S	MAS, MAS, SV–1–T	SP–1–T	M.L.K. BLVD 1102		
(D)	21	35' (10.7m)	–	12' (3.7m)	250 W	B	8	W	SV–1–T	SP–1–T	–		
(E)	29A–5–80	35' (10.7m)	50' (15.2m)	12' (3.7m)	250 W	B	8	W	MAS, MAS, SV–1–T	SP–1–T	CHICAGO AV 4500		
(F)	1–A	10' (3.0m)	–	–	–	B	2	N	TV–1–T	SP–1–T	–		
(G)	(N) 29A–5–129	35' (10.7m)	(N)50' (15.2m)	(N)12' (3.7m)	(R) 250 W	(R)B	2	N	(R)MAS, (R)MAS, (R)SV–1–T	(R)SP–1–T	(R) M.L.K. BLVD 1102	15'	3.0'
(H)	(R) 21	35' (10.7m)	–	(R)12' (3.7m)	(R) 250 W	(R)B	4	E	(R) SV–1–T	(R)SP–1–T	–	16'	3.0'

ALL EQUIPMENT IS EXISTING UNLESS OTHERWISE INDICATED.
(N) = NEW
(R) = REUSE (SEE GENERAL NOTE No. 10)

SCALE: 1" = 20'
0 5 10 20

STANDARD PLACEMENT DETAIL



GENERAL NOTES:

1. ALL MATERIAL AND WORK SHALL CONFORM TO THE CURRENT CITY STANDARD PLANS AND THE STANDARD PLANS AND SPECIFICATIONS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE JULY 1999 EDITION OF THE CALTRANS STANDARD SPECIFICATIONS, SECTION 86.
2. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS AND VERIFY ALL CONDITIONS ON THE JOB SITE. HAND DIG FOUNDATION UNTIL CLEAR OF OBSTRUCTIONS. PHONE UNDERGROUND SERVICE ALERT AT (800) 422–4133. POT HOLING REQUIRED FOR UTILITIES SHOWN OR NOT SHOWN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COST FOR SAME SHALL BE INCLUDED IN THE CONTRACT BID PRICE.
3. NEW CONDUCTORS SHALL BE SOLID COPPER WIRE.
4. FINAL FIELD LOCATIONS OF THE EQUIPMENT SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER PRIOR TO INSTALLATION.
5. PULL BOXES SHALL BE No. 5, EXCEPT AS SHOWN. PULL BOXES SHALL BE REINFORCED CONCRETE.
6. DETECTOR LOOPS SHALL BE INSTALLED IN THE PRESENCE OF THE TRAFFIC ENGINEER OR HIS/HER REPRESENTATIVE.
7. TYPICAL DETECTOR LOOP SPACING: 10' AND 15'.
8. SIGNAL INTERCONNECT CABLE (SIC) SHALL BE 6 PAIR #19 PER THE SPECIAL PROVISIONS.
9. SIGNAL INTERCONNECT CABLE SHALL BE CONTINUOUS AND UNSPLICED BETWEEN CONTROLLER CABINETS.
10. CONTRACTOR SHALL PROVIDE NECESSARY SIGNAL FRAMEWORKS AND STREET NAME SIGN MOUNTING HARDWARE FOR RELOCATED EQUIPMENT.
11. SEE STREET IMPROVEMENT PLAN R–____ FOR IMPROVEMENTS.

CONSTRUCTION NOTES:

1. EXISTING MODEL 170 CONTROLLER UNIT IN A TYPE 332 CABINET. INSTALL SIC INTO EXISTING CONTROLLER CABINET AND TERMINATE AS DIRECTED BY THE ENGINEER.
2. INSTALL TYPE 'E' 6' DIAMETER DETECTOR LOOPS.
3. RELOCATE EXISTING R73–3 SIGN TO NEW MAST ARM PER CALTRANS STANDARD PLAN ES–7N, DETAIL U.

3/30/05 HCI CAD FILE: MLK-CHICAGO_MOD.dwg

DIG ALERT
DIAL TOLL FREE
1-800-422-4133
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER GERALD J. STOCK No. C052822 Exp. 12-31-06 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
HARTZOG CRABILL, Inc.
Consulting Traffic Engineers
275 Centennial Way, Suite 208
Tustin, California 92780
714.731.9455 fax: 714.731.9498
www.hartzog-crabill.com
GERALD J. STOCK R.C.E. No. C052822 Exp. 12-31-06 — 3/30/05 DATE

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: D.J.M. DRAWN BY: D.J.M. CHECKED BY: T.G.H.

CITY OF RIVERSIDE
DEPARTMENT OF PUBLIC WORKS

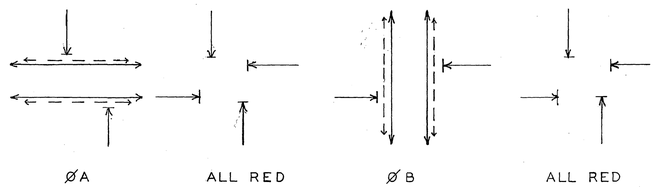
APPROVED BY	DATE	BY
PRINCIPAL ENGINEER	4/4/05	PH
TRAFFIC DIVISION	3/31/05	JL

APPROVED BY: CITY ENGINEER
DATE: 4/1/05

TRAFFIC SIGNAL MODIFICATION PLAN
Martin Luther King Bouleard and Chicago Avenue
SCALE: 1" = 20'

ACCOUNT No.
X-414A
Sheet 2 of 2

PHASE DIAGRAM

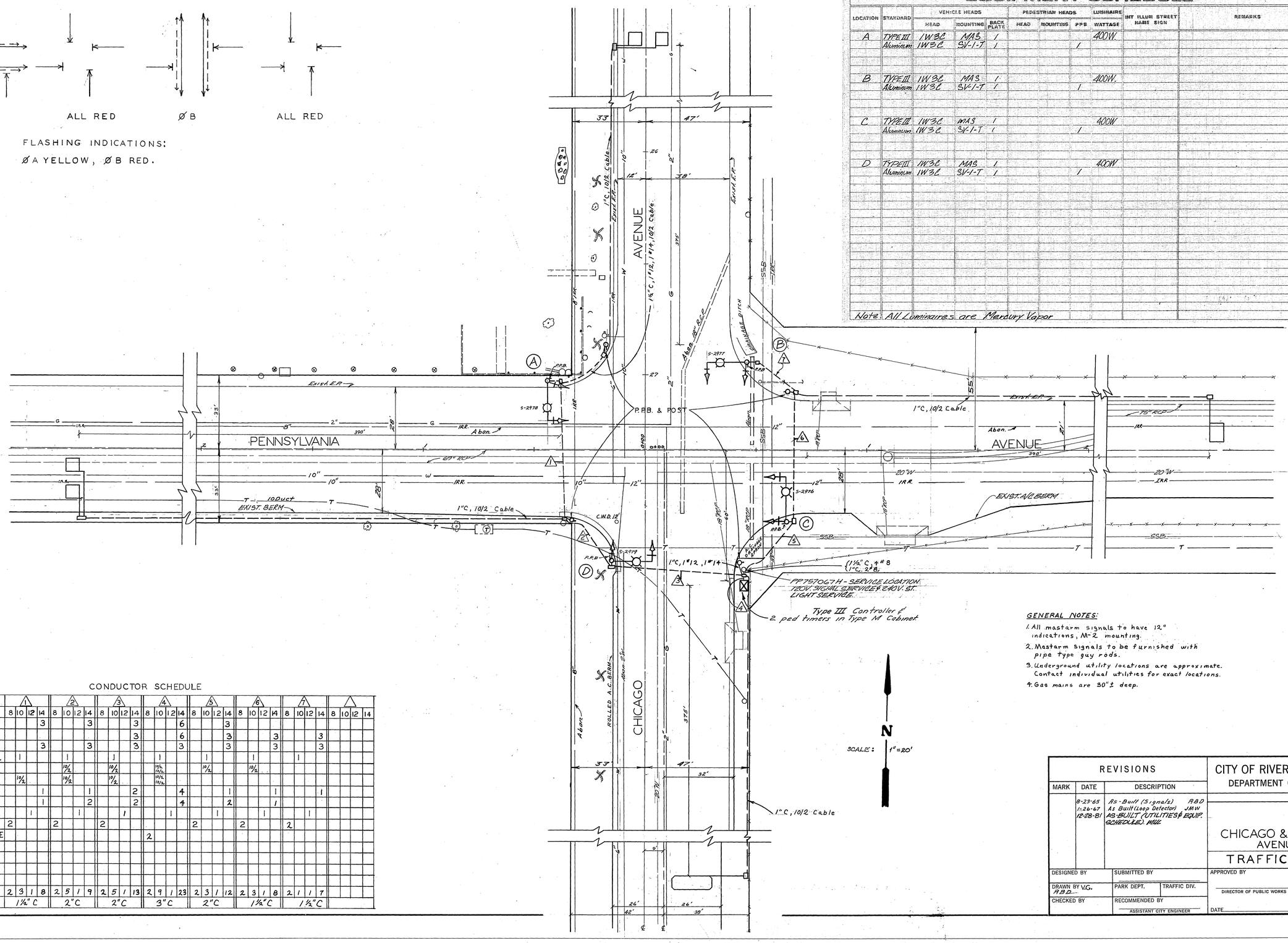


FLASHING INDICATIONS:
ØA YELLOW, ØB RED.

EQUIPMENT SCHEDULE

LOCATION	STANDARD	VEHICLE HEADS: HEAD	VEHICLE HEADS: MOUNTING	VEHICLE HEADS: BACK PLATE	PEDESTRIAN HEADS: HEAD	PEDESTRIAN HEADS: MOUNTING	PEDESTRIAN HEADS: PPB	LUMINAIRE: WATTAGE	INT ILLUM STREET NAME SIGN	REMARKS
A	TYPE III	1W3C	MAS	1				400W		
	Aluminum	1W3C	SV-1-T	1			1			
B	TYPE III	1W3C	MAS	1				400W		
	Aluminum	1W3C	SV-1-T	1			1			
C	TYPE III	1W3C	MAS	1				400W		
	Aluminum	1W3C	SV-1-T	1			1			
D	TYPE III	1W3C	MAS	1				400W		
	Aluminum	1W3C	SV-1-T	1			1			

Note: All Luminaires are Mercury Vapor



GENERAL NOTES:

1. All mastarm signals to have 12" indications, M-2 mounting.
2. Mastarm signals to be furnished with pipe type guy rods.
3. Underground utility locations are approximate. Contact individual utilities for exact locations.
4. Gas mains are 30"± deep.

CONDUCTOR SCHEDULE

CONDUCTOR RUN	1				2				3				4				5				6				7							
CONDUCTORS	8	10	12	14	8	10	12	14	8	10	12	14	8	10	12	14	8	10	12	14	8	10	12	14	8	10	12	14	8	10	12	14
ØA				3				3				3				6				3												
ØB												3				6				3				3				3				
SPARES				3				3				3				3				3				3				3				
120 V. NEUTRAL		1				1				1				1				1				1				1						
ØA DET.							10/2				10/2				10/2, 10/2,				10/2				10/2									
ØB DET.			10/2				10/2				10/2				10/2, 10/2,																	
ØA P.P.B.				1				1				2				4				1				1				1				
ØB P.P.B.				1				2				2				4				2				1								
12 V. NEUTRAL			1				1				1				1				1				1				1					
LIGHTING	2				2				2								2				2				2							
SIGNAL SERVICE													2																			
TOTAL CONDUCTORS	2	3	1	8	2	5	1	9	2	5	1	13	2	9	1	23	2	3	1	12	2	3	1	8	2	1	1	7				
CONDUIT SIZE	1½" C				2" C				2" C				3" C				2" C				1½" C				1½" C							

REVISIONS			
MARK	DATE	DESCRIPTION	
	8-23-65	As-Built (Signals)	ABD
	1-26-67	As Built (Loop Detector)	JMW
	12-28-81	AS-BUILT (UTILITIES & EQUIP. SCHEDULE)	MHL

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

CHICAGO & PENNSYLVANIA AVENUES

TRAFFIC SIGNALS

DESIGNED BY	SUBMITTED BY		APPROVED BY	PROJ. NO.
DRAWN BY V.G. A.B.D.	PARK DEPT.	TRAFFIC DIV.	DIRECTOR OF PUBLIC WORKS	X-414
CHECKED BY	RECOMMENDED BY ASSISTANT CITY ENGINEER		DATE	SHEET ___ OF ___