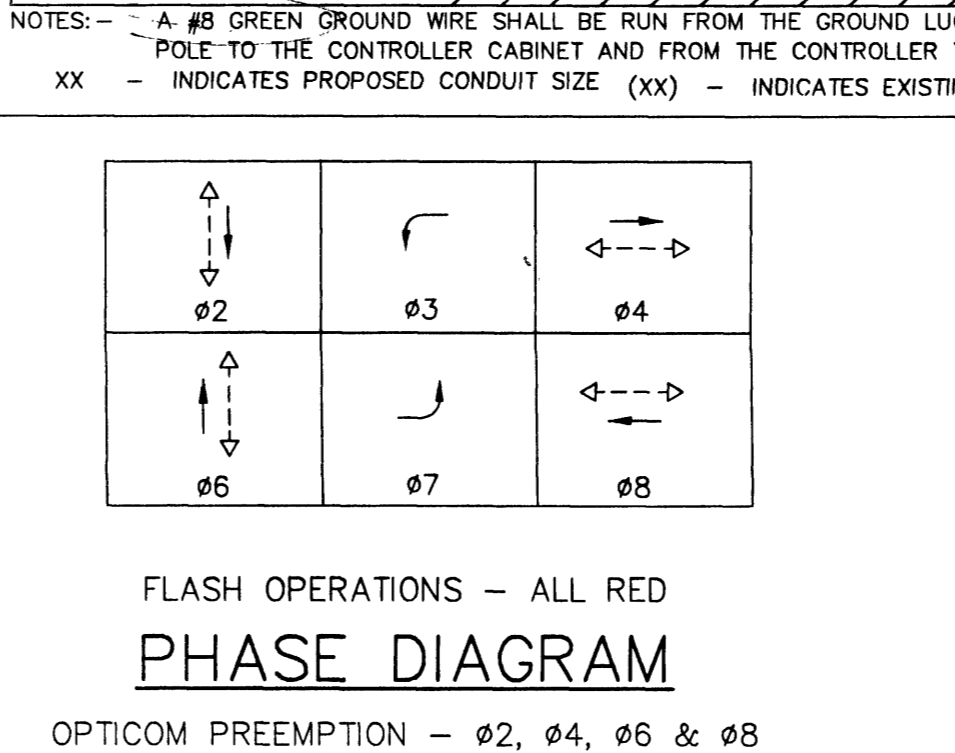
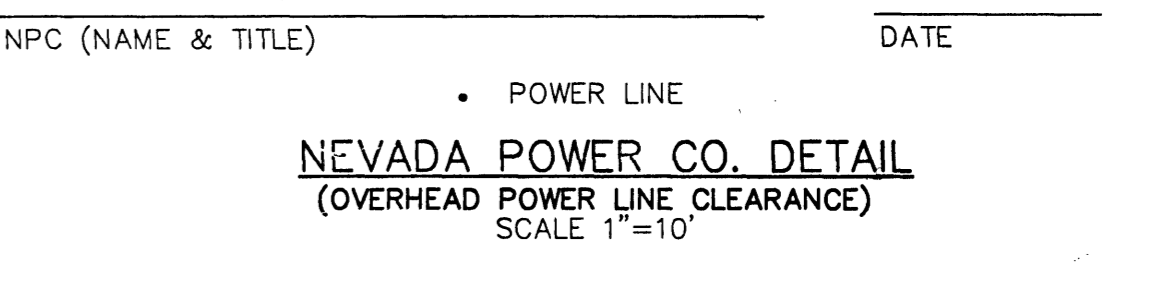
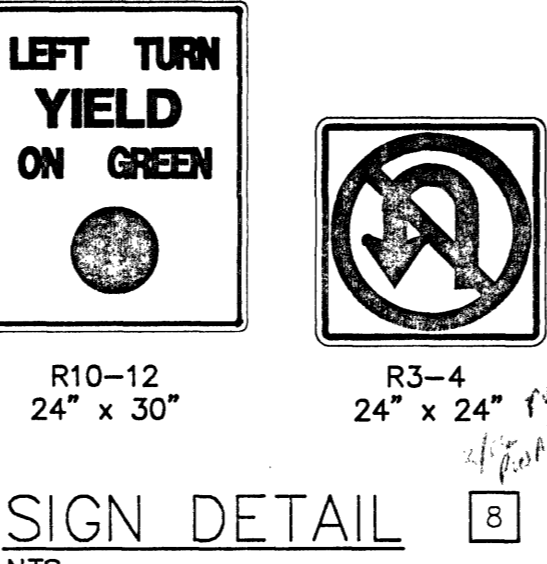


### CONDUIT AND CONDUCTOR SCHEDULE 5

WIRE & CABLE	FROM	TO	CONDUIT																
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
3- No. 4-0 AWG POWER SERVICE		SERVICE PEDESTAL	X																
3- No. 4 AWG SERVICE PEDESTAL		CONTROLLER	X																
1-25 COND. No.14 AWG		POLE A	X	X	X														
4- No.10 AWG		POLE B	X	X	X														
2- No.10 COAXIAL		CONTROLLER																	
1-25 COND. No.14 AWG		POLE C	X																
4- No.10 AWG		POLE D	X	X	X														
2- No.10 COAXIAL		CONTROLLER																	
1-25 COND. No.14 AWG		POLE E	X	X															
4- No.10 AWG		POLE F	X	X	X														
2- No.10 COAXIAL		CONTROLLER																	
1-15 COND. No.14 AWG		POLE G	X																
1-15 COND. No.14 AWG		CONTROLLER																	
1-15 COND. No.14 AWG		POLE H	X																
1-15 COND. No.14 AWG		CONTROLLER																	
OPTICOM CABLE		POLE A	X	X	X														
OPTICOM CABLE		POLE D	X																
INTERCONNECT		CONTROLLER PALACE	X																
		CONTROLLER RAMPART																	
PULL ROPE (NUMBER AS SHOWN)			1	3	3	1	3	1	3	1	1	1	1	1	1	1	1	3	1

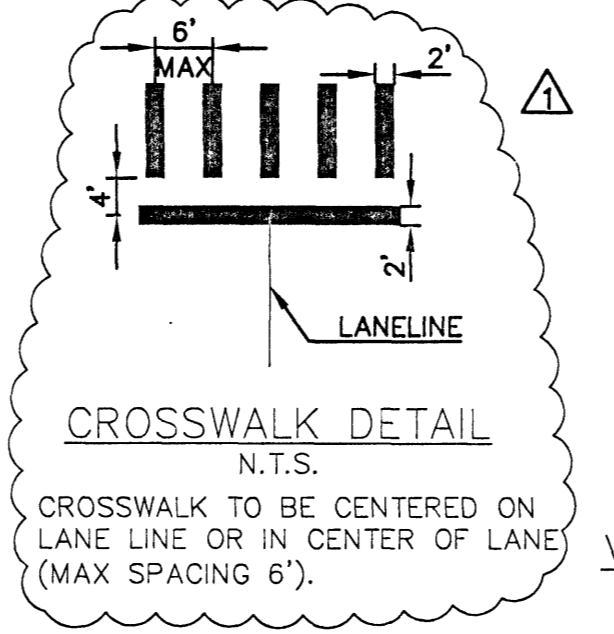
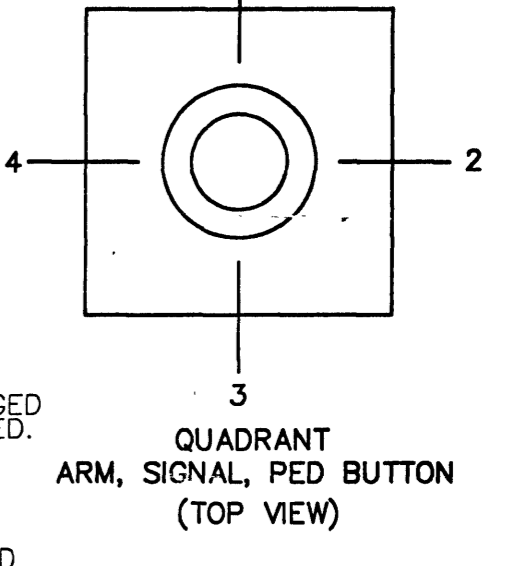


### STREET NAME SIGN SCHEDULE 4

POLE	STREET NAME SIGN AND BLOCK NUMBER	SIZE
A	PALACE COURT S 1100	8' X 1.5'
B	CHARLESTON W 9400	8' X 1.5'
C	APPLE DRIVE S 1100	8' X 1.5'
D	CHARLESTON W 9400	8' X 1.5'

### SIGNAL ARM TENON LOCATION

POLE	MAST ARM	"N"	"P"
A	45'	10.5'	21.5'
B	45'	12.5'	23.5'
C	45'	11.5'	24.5'
D	35'	10.5'	20.5'



- ### CONSTRUCTION NOTES (CON'T)
- 16 EXISTING #5 PULL BOXES TO BE REPLACED BY #7 PULL BOXES WITH TWO PULL BOXES STACKED PER LOCATION.
  - 17 THE SIGNAL INTO EXISTING INTERCONNECT SYSTEM WITH CABLE LOCATED ALONG SOUTH SIDE OF CHARLESTON BOULEVARD.
  - 18 INSTALL NEW INTERCONNECT CABLE (12 PAIR) IN NEW CONDUIT FROM NEW CONTROLLER TO EXISTING CONTROLLER AT RAMPART/CHARLESTON INTERSECTION (SOUTHWEST CORNER). THE CONTRACTOR SHALL EXTEND ALL INTERCONNECT CABLE INTO CABINET(S) AT LOCATION OF PUNCH BLOCK FOR LVACTS STAFF TO PUNCH DOWN INTO CABINET. CONTRACTOR SHALL REMOVE AND REPLACE DAMAGED INTERCONNECT CABLE WITH NEW INTERCONNECT CABLE BETWEEN FORT APACHE RD. AND DURANGO DR. ON CHARLESTON BLVD. AS NEEDED.
  - 19 REMOVE AND SALVAGE EXISTING DETECTOR LEAD-IN CABLES.
  - 20 FOR "DALLAS" LEFT TURN PHASING: D.C.S. CIRCULAR INDICATIONS IN THE 5 SECTION LEFT TURN HEADS SHALL BE PROVIDED WITH GEOMETRICALLY PROGRAMMED (GPL) LOUVERS AND SHALL BE DRIVEN BY CONTROLLER OVERLAP A (04 & 08) FOR THE WESTBOUND TO SOUTHBOUND TURN INDICATION AND CONTROLLER OVERLAP B (04 & 08) FOR THE EASTBOUND TO NORTHBOUND TURN INDICATION.
  - 21 INSTALL COLD POLYMER PAVEMENT LEGEND (WHITE, 3M TYPE N440 WITH TYPE E44 ADHESIVE OR APPROVED EQUAL) PER CCA STD. DWG. #246. EXACT LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

- ### VIDEO DETECTION NOTES
- THE VIDEO DETECTION SYSTEM FOR THIS PROJECT SHALL BE EITHER PEEK VIDEO TRAK-900 OR AUTOSCOPE 2004ID. THE CITY WILL NOT ACCEPT ANY OTHER VIDEO DETECTION SYSTEM.
  - THE NUMBER OF CAMERAS REQUIRED FOR THE SYSTEM SHALL BE DETERMINED BY THE MANUFACTURER UPON A DETAILED SITE ANALYSIS TO INSURE COMPLETE COVERAGE OF THE MINIMUM REQUIRED DETECTION ZONES SHOWN ON PLAN. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY CAMERAS AND EQUIPMENT AS SPECIFIED BY MANUFACTURER. ALL SYSTEM HARDWARE COMPONENTS SHALL BE WARRANTED BY THE SUPPLIER FOR A MINIMUM PERIOD OF TWO (2) YEARS.
  - THE VIDEO PROCESSING UNIT SHALL HAVE AT LEAST ONE RS-232 AND ONE RS-485 PORT AND SHALL BE CAPABLE OF REMOTE PROGRAMMING VIA A SUPERVISOR COMPUTER WITH MODEM COMMUNICATIONS, AND/OR VIA A DIRECT CABLE CONNECTED TO LOCAL LAPTOP OR PEN BASED COMPUTER. FOR MODEM COMMUNICATIONS, A CITY SUPPLIED MODEM AND TELEPHONE LINE CONNECTION SHALL BE ALL THAT IS REQUIRED TO ACCOMPLISH THE LINK.
  - THE CONTRACTOR SHALL FURNISH ALL OF THE INTERFACE HARDWARE AND SOFTWARE REQUIRED TO OPERATE THE VIDEO DETECTION SYSTEM, INCLUDING THE ON-SITE TRAINING NECESSARY FOR MAINTENANCE OF THE INSTALLED SYSTEM. THE SOFTWARE REQUIRED FOR THE REMOTE SUPERVISOR COMPUTER SHALL BE PROVIDED ALONG WITH THE NECESSARY ON-SITE TRAINING. A PENTIUM 300 MHZ LAPTOP COMPUTER WITH 32 MB RAM, 1.0 GB HARD DRIVE, ONE 3-1/2 INCH DRIVE, CD-ROM DRIVE, 33.6 KBAUD MODEM CARD, 12-INCH MIN. COLOR ACTIVE MATRIX SCREEN, WINDOWS 95 PLATFORM, INTEGRAL MOUSE, AC ADAPTER, CAR ADAPTER, AND EXTRA BATTERY PACK, SHALL BE PROVIDED AS A MINIMUM. VIDEO DISPLAYED ON THE LAPTOP SHALL BE REAL TIME VIDEO TO EASE SYSTEM CONFIGURATION AND MONITORING. ONE COMPLETE PACKAGE OF HARDWARE AND SOFTWARE SHALL BE PROVIDED FOR EACH TRAFFIC SIGNAL SYSTEM INSTALLED IN THIS PROJECT.

### POLE SCHEDULE

POLE	LOCATION STATION	POLE TYPE FOUNDATION TYPE	SIGNAL ARM		LUMINAIRE ARM		SIGNALS (VEH.)		SIGNALS (PED.)		PED. PUSH BUTTONS		REMARKS
			QUAD	LANG.	QUAD	LANG.	TYPE	QUAD	TYPE	QUAD	ARROW		
A	CHARLESTON BLVD. EXIST. FOUNDATION	XX-A 30'	3	45'	3	15'	(1)M-5 MA (2)M-2 MA (1)B-1T 1						3 4 6 7 8 15 20
B	CHARLESTON BLVD. EXIST. FOUNDATION	30'	4	45'	4	15'	(1)M-5 MA (2)M-2 MA (1)B-1T 2	W-3T	1	3	4	RT	4 6 7 8 20
C	CHARLESTON BLVD. EXIST. FOUNDATION	30'	1	45'	1	15'	(1)M-5 MA (2)M-2 MA (1)B-1T 3						4 6 7 8 15 20
D	CHARLESTON BLVD. EXIST. FOUNDATION	30'	2	35'	2	15'	(1)M-5 MA (2)M-2 MA (1)B-1T 4						3 4 6 7 8 15
E	CHARLESTON BLVD. EXIST. FOUNDATION	10' 10' 10'					A-16T POST TOP	W-3T		4	2	LT RT	
F	CHARLESTON BLVD. EXIST. FOUNDATION	10' 10' 10'					A-16T POST TOP	W-3T		4	2	LT RT	20
G	CHARLESTON BLVD. EXIST. FOUNDATION	10' 10' 10'					A-16T POST TOP	W-3T		2	1	LT RT	
H	CHARLESTON BLVD. EXIST. FOUNDATION	10' 10' 10'					A-16T POST TOP	W-3T		3	1	LT RT	20

- ### CONSTRUCTION NOTES
- EXISTING SERVICE PEDESTAL TO REMAIN IN PLACE. VERIFY THE FOLLOWING EQUIPMENT: 120/240 V, 1, 32, (1) 200A 2P MAIN CKT BKR, (1) 60A 1P CONTROLLER CKT BKR, AND (1) 30A 1P INTERSECTION LIGHTING CKT BKR, PROVIDE SAME AS NEEDED. CONTACT NEVADA POWER FOR SERVICE CONNECTION. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT, IF ANY, FOR ADDITIONAL SERVICE CONNECTION PER NEVADA POWER SPECIFICATIONS.
  - INSTALL TYPE J FOUNDATION PER CCA. STD. DWG. #404.213. INSTALL 2070N (8 PHASE) CONTROLLER IN TYPE VIII "R" CABINET PER CLV SPECIFICATIONS WITH EXHAUST FAN AND THERMOSTAT CONTROL, PER CCA. STD. DWG. #404.307. CABINET SHALL HAVE PAINTED WHITE FINISH, INSIDE AND OUT. ALL NECESSARY AMPLIFIER UNITS, VIDEO PROCESSING MODULES, LIGHT CONTROL UNITS, SWITCHES, OPTICOM, FLASHERS, AREA WIDE COMPUTER CONTROL, ETC. SHALL BE WIRED IN CABINET TO ACTIVATE THE PHASE OPERATION AS SHOWN. THE CONTRACTOR SHALL PREPARE AS BUILT DRAWINGS UPON COMPLETION OF PROJECT DETAILING ANY CHANGES TO CONTROLLER OPERATION. CABINET SHALL BE ORIENTED SO THAT MAINTENANCE PERSONNEL SHALL BE FACING TRAFFIC WHEN SERVICING OR AS DIRECTED BY THE ENGINEER. LOCATE AND MODIFY EXISTING CONDUIT RUN 2 AS NEEDED TO PROVIDE SERVICE CONDUIT INTO CONTROLLER.
  - INSTALL 3M MODEL 722 OPTICOM SENSORS (OR APPROVED EQUAL) ON THE TRAFFIC SIGNAL HEAD. RUN OPTICOM DETECTOR CABLE, 3M MODEL 138 (OR APPROVED EQUAL), FROM THE CONTROLLER TO POLES A AND D AS SHOWN IN THE CONDUIT AND CONDUCTOR SCHEDULE. WIRE CONTROLLER AND PROVIDE TWO (2) OPTICOM MODEL 562 PHASE SELECTORS (OR APPROVED EQUAL) IN CABINET FOR PREEMPTION OPERATION.
  - INSTALL DOUBLE-SIDED INTERNALLY ILLUMINATED STREET NAME SIGN WITH BLOCK NUMBER. MOUNT STREET NAME SIGN ONTO MAST ARM PER CCA. STD. DWG. #404.416 AND #404.417 AND AS DIRECTED BY THE ENGINEER. SEE STREET NAME SIGN SCHEDULE FOR TEXT AND SIZE DETAILS.
  - CONDUITS SHALL BE INSTALLED IN TRENCH SUCH THAT THE TOP OF CONDUIT SHALL HAVE A MIN. COVER OF 24" BELOW ADJACENT EDGE OF PAVEMENT OR ORIGINAL GROUND, WHICHEVER IS LOWER IN ELEVATION. ALL CONDUITS INSTALLED THAT ARE NOT UTILIZED IN THE SIGNAL WIRING SHALL HAVE MECHANICALLY SEALED CAPS AND SHALL HAVE A PULL ROPE PROPERLY ANCHORED AT EACH END.
  - INTERSECTION LIGHTING LUMINAIRES SHALL BE 400 WATT HIGH PRESSURE SODIUM WITH M-C-III DISTRIBUTION COMPLETE WITH 120V MAGNETIC REGULATOR TYPE BALLAST, CHARCOAL OPTICAL FILTER AND INDIVIDUAL PHOTOCCELL CONTROL (G.E. NO. M400A2 CUTOFF TYPE OR APPROVED EQUAL).
  - MOUNT VIDEO DETECTION CAMERA(S) ON LUMINAIRE ARM OF POLES A, B, C, AND D FOR 08+03, 06+01, 04+07, AND 02+05, RESPECTIVELY.
  - INSTALL MAST ARM SIGN. (TYPE AS SHOWN ON PLAN AND SIGN DETAIL.)
  - EXISTING STOP SIGN TO BE REMOVED AND DELIVERED TO CITY OF LAS VEGAS YARD AT 3100 E. BONANZA. CALL 229-6331 24 HRS. IN ADVANCE. LEAVE STREET NAME SIGN UPRIGHT UNTIL ILLUMINATED STREET NAME SIGNS ARE INSTALLED.
  - INSTALL NEW SIGN(S) WITH "ENCAPSULATED LENS RETROREFLECTIVE SHEETING (HIGH INTENSITY OR EQUAL). SIGN(S) SHALL BE MOUNTED ON POST OR AS DIRECTED BY THE ENGINEER.
  - INSTALL COLD POLYMER STOP BAR (24" WIDE ONE PIECE, 3M TYPE N440 WITH TYPE E44 ADHESIVE OR APPROVED EQUAL). SEE GENERAL NOTES. EXACT LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - INSTALL COLD POLYMER CROSSWALK LINES, WHITE, PER DETAIL THIS SHEET. (24" WIDE ONE PIECE, 10' LONG TRANSVERSE LINES SPACED A MAXIMUM OF 6' O.C., 3M TYPE N440 WITH TYPE E44 ADHESIVE, OR APPROVED EQUAL.) SEE GENERAL NOTES. EXACT LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - INSTALL ADDED TURN LANE LINE PER CCA STD. DWG. #246.
  - EXISTING PAVEMENT MARKING TO REMAIN.
  - REMOVE AND SALVAGE EXISTING STREET LIGHT LUMINAIRE, LUMINAIRE ARM, AND ALL ATTACHMENTS. DELIVER SALVAGED EQUIPMENT TO CITY OF LAS VEGAS TRAFFIC OPERATIONS. PROTECT EXISTING FOUNDATION FROM DRAINAGE AND MOUNT POLE, PER POLE SCHEDULE, ON EXISTING FOUNDATION.

**SAFETY ALERT**  
Call Before You Overhead  
1-702-593-6111

**Call before you dig**  
1-800-227-2600

**FINAL**  
Kimley-Horn and Associates, Inc.  
ENGINEERING, PLANNING AND ENVIRONMENTAL CONSULTANTS  
Engineer: CARSON P. TURNER  
P.E. No. 11759 Date: 11/17/98

**Professional Engineer - State of Nevada**  
CARSON P. TURNER  
CIVIL  
No. 11759

8-6-99  
SHEET C20  
3 OF 4 SHEETS  
DRAWING NO. 10166661

DOT PERMIT #209-99

REVISED POLES A, B & D AND CHANGED SOUTH LEG TO TWO LANES PER MIKE SCHNIDER.

REVISED POLES A, B & F PER MIKE SCHNIDER

REVISE CROSSWALK PATTERN PER NDOT ENCROACHMENT PERMIT #209-99

1050 East Flamingo Road  
Suite S-210  
Las Vegas, Nevada 89119  
Tel. No. (702) 735-4949  
Fax. No. (702) 735-4949

**PECCOLE NEVADA CORP.**  
865 SOUTH RAMPART SUITE 100  
LAS VEGAS, NEVADA 89128  
(702) 933-1111

**Kimley-Horn and Associates, Inc.**  
Engineering, Planning, and Environmental Consultants

**CHARLESTON BLVD./PALACE COURT**

**TRAFFIC SIGNAL PLAN**

DRAWN BY: CDR/JK 10/26/98  
DESIGNED BY: CDR/JK 10/26/98  
CHECKED BY: CPT 11/17/98  
PROJECT NO.: 092191.06  
SCALE: 1" = 20' HOR.

43494

101-13078