CITY OF LAS VEGAS TRAFFIC SIGNAL NOTES

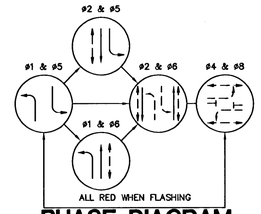
1. EXISTING TRAFFIC EQUIPMENT REMOVED AND NOT RELOCATED SHALL BE SALVAGED BY THE CONTRACTOR AND DELIVERED TO THE CITY OF LAS VEGAS, 3104 EAST BONANZA ROAD.
2. ALL WORK PERFORMED ON ANY TRAFFIC SIGNAL COMPONENT MUST BE UNDER THE DIRECT ON-SITE SUPERVISION OF AN IMSA CERTIFIED TECHNICIAN. EFFECTIVE MARCH 30, 2001, CERTIFICATION REQUIRED IS LEVEL II.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL EXISTING UTILITIES. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES TO VERIFY IN THE FIELD THE LOCATION OF THEIR INSTALLATIONS 72 HOURS PRIOR TO CONSTRUCTION.
   CALL BEFORE YOU OVERHEAD: 1-702-593-6111 CALL BEFORE YOU DIG: 1-800-227-2600
4. ALL TRAFFIC SIGNAL INSTALLATIONS SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS, SPECIFICATIONS AND SPECIAL PROVISIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA VOLUMES I AND II, ADOPTED BY THE REGIONAL TRANSPORTATION COMMISSION APRIL 8, 1992 WITH ALL SUBSEQUENT REVISIONS.
5. LINE SIDE OF METER TO BE WIRED WITH (3) #3/0 AWG THW. LOAD SIDE SHALL BE WIRED WITH (4) #4 AWG THW (2 BLACK, 2 WHITE) AND ONE #8 AWG THW (GREEN).
6. LUMINAIRES ON ALL SIGNAL POLES SHALL BE 400 WATT HIGH PRESSURE SODIUM CUTOFF (GE M400A) WITH MC-III DISTRIBUTION. EACH LUMINAIRE SHALL HAVE AN INDIVIDUAL 1000 WATT PE CONTROL. FOR LUMINAIRES THERE SHALL BE (2) #4 AWG THW CONDUCTORS FROM THE SERVICE TO THE CABINET. IN THE CABINET THE #4 AWG THW CONDUCTORS SHALL BRANCH OFF INTO #10 AWG THW CONDUCTORS INDIVIDUALLY FUSED WITH 10 AMP FUSES. THERE SHALL BE NO SPLICES BETWEEN THE CABINET AND THE LUMINAIRE FIXTURES.
7. NOT USED
8. CHECK CONDUIT AND CABLE SCHEDULE FOR CONDUIT, CABLE AND WIRE SIZE. CONTRACTOR TO VERIFY ALL EXISTING CONDUIT RUNS.
9. ALL PULLBOXES ARE NO 5 UNLESS OTHERWISE NOTED. ALL PULLBOXES SHALL BE IN ACCORDANCE WITH CCUSD DWG NO'S 404.110, 404.120 AND 404.130. PULLBOXES SHALL NOT BE INSTALLED IN SIDEWALK RAMPS.
10. TRAFFIC SIGNAL CABLE SHALL BE 25 CONDUCTOR #14 AWG SOLID (TYPICAL) CABLE AND SHALL CONFORM TO IMSA SPECIFICATION #20-1.
11. PEDESTRIAN PUSH BUTTONS SHALL BE POLARA NAVIGATOR 2 WIRE SYSTEM AUDIBLE TACTILE TYPE IN ACCORDANCE WITH THE CITY OF LAS VEGAS SPECIAL PROVISIONS AND SECTION 623 OF THE CCA USS. PUSH BUTTON SIGNS SHALL BE 9" x 12" R10-3e (2003 MUTCD) WITH FULL MOUNTING BRACKETS. ALL PUSH BUTTONS SHALL BE MOUNTED 42" ABOVE SIDEWALK. THE MAXIMUM HORIZONTAL REACH DISTANCE IS TO BE 24". PEDESTRIAN SIGNAL HEADS SHALL INCLUDE COUNTDOWN TIMING DISPLAY.
12. THE ROUTING AND TERMINATION OF CONDUITS AND THE PLACING OF POLES AND CABINETS SHALL BE AS INDICATED ON THE PLANS. ALL CHANGES SHALL BE APPROVED BY THE ENGINEER.
13. MAST ARM R10-12 (30" X 36") TO BE ADJACENT TO M-5 LEFT TURN SIGNAL HEAD.
14. CONTRACTOR SHALL POTHOLE SIGNAL POLE LOCATION PRIOR TO ORDERING OF THE POLES.
15. ALL MAST ARMS TO BE HOT-DIPPED GALVANIZED BY THE MANUFACTURER. THE MAST ARM IS TO BE FABRICATED WITH END TENON ONLY. THE END TENON SHALL BE FACTORY INSTALLED AND THE REMAINING TENONS SHALL BE FABRICATED IN THE FIELD AT THE LOCATION SHOWN ON THE PLANS OR AS DIRECTED BY THE TRAFFIC ENGINEER AND/OR HIS AUTHORIZED REPRESENTATIVE. FOR TENON FABRICATION DETAILS SEE CCUSD DWG NO 404.408 SHEET 2. ALL WELDS SHALL CONFORM TO AWS D 2.0 "SPECIFICATION FOR WELDED HIGHWAYS AND RAILWAY BRIDGES," AND TO ANY ADDITIONAL REQUIREMENTS OF SECTION 623T.02.09 OF THE SPECIFICATIONS. ALL EXPOSED WELDS SHALL BE PAINTED AS PROVIDED FOR REPAIRING DAMAGED GALVANIZED SURFACES.
16. ALL NEW VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LIGHT EMITTING DIODE (LED) TYPE INDICATIONS IN CONFORMANCE TO THE CITY OF LAS VEGAS SPECIAL PROVISIONS AND SECTION 623 OF THE CCA USS.
17. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY CONSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKINGS, SUCH PAVEMENT MARKINGS SHALL BE RESTORED OR REPLACED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE CITY.

LOOP DETECTION NOTES

1. LOOP LEAD-IN CABLE SHALL BE PER SPECIAL PROVISIONS 623 T.02.04
2. ALL LOOPS SHALL BE PRE-FORMED PER SPECIAL PROVISION 623 T.02.04
3. LOOPS SHALL BE CENTERED IN TRAVEL LANES AND SHALL BE PLACED 1' CLEAR ON APPROACHTO STOP BAR
4. NOT USED
5. NOT USED
6. ALL RIGHT TURN LOOPS SHALL BE ON A DETECTION DELAY

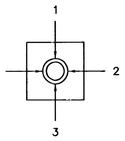
CONSTRUCTION NOTES

1. INSTALL TYPE VIII CABINET, COMMONLY REFERRED TO AS A TYPE "R" CABINET ON TYPE "J" FOUNDATION. THE CABINET SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS, SPECIFICATIONS AND SPECIAL PROVISIONS, CLARK COUNTY AREA, NEVADA. INSTALL CABINET NEAR THE R/W LINE OR AS SHOWN ON THE DRAWING.
2. PROTECT IN PLACE EXISTING NO 7 PULLBOX MARKED 'TRAFFIC SIGNAL'
3. THE CONTRACTOR SHALL SUPPLY A 2070N CONTROLLER TO THE CITY OF LAS VEGAS TRAFFIC SIGNAL REPAIR SHOP, FOURTEEN DAYS PRIOR TO SIGNAL TURN-ON FOR TESTING PURPOSES. THE CONTRACTOR SHALL DELIVER THE CONTROLLER TO, AND PICK UP CONTROLLER AT 2801 EAST CHARLESTON BOULEVARD. CONTRACTOR SHALL NOTIFY THE TRAFFIC SIGNAL REPAIR SHOP (229-6075) SEVEN DAYS PRIOR TO PICKUP. ALL 2070N CONTROLLERS MUST BE COMPATIBLE WITH AND FUNCTION PROPERLY WITH OS9 1998 OPERATION SYSTEM; THE LATEST REVISION OF THE "NEXT PHASE INTERSECTION MANAGEMENT SOFTWARE" (GARDNER TRANSPORTATION SYSTEM) AND THE ICONS (GARDNER TRANSPORTATION SYSTEM) GENERAL SOFTWARE.
4. INSTALL NEW NO. 7 PULLBOX PER CCUSD DWG NO 404.130.
5. INSTALL R10-12 (30" X 36") ON MAST ARM
6. MODEL 722 (TWO-WAY) OPTICOM DETECTORS ►◄ SHALL BE MOUNTED ON TOP OF THE LEFT-MOST SIGNAL HEAD ON THE MAST ARMS OF POLES "A" AND "B". THE CONTROLLER SHALL BE EQUIPPED FOR OPTICOM PRE-EMPTION USING A MODEL 754 PHASE SELECTOR. MODEL 138 OPTICOM DETECTOR CABLE SHALL BE RUN FROM THE CONTROLLER TO THE OPTICOM DETECTOR AS SHOWN IN THE CONDUIT AND WIRE SCHEDULE.
7. INSTALL NEW NO. 5 PULLBOX PER CCUSD DWG NO. 404.120.
8. EXISTING SCHOOL FLASHER POLE, ASSEMBLY, AND SOLAR PANEL TO BE REMOVED BY CITY OF LAS VEGAS (CLV) TRAFFIC ENGINEERING FIELD OPERATIONS UPON SIGNALIZATION. CLV STAFF TO INSTALL "SHORTY" POLE TO PLACE ON EXISTING FOUNDATION.
9. INSTALL NEW TENON ON MAST ARM OF POLES B AND D FOR FUTURE THIRD LANE SIGNAL HEAD.
10. INSTALL R3-4 (24"X24") ON MAST ARM
11. INSTALL R3-5 (L) (30"X36") ON MAST ARM.
12. INSTALL R3-5 (R) (30"X36") ON MAST ARM.
13. SERVICE SHALL HAVE 1-60 AMP SINGLE POLE BREAKER FOR SIGNAL, AND 1-40 AMP SINGLE POLE BREAKER FOR STREETLIGHTS. SERVICE SHALL BE 200 AMP PADMOUNT.
14. INSTALL NEW NO. 3-1/2 PULLBOX PER CCUSD DWG NO. 404.110



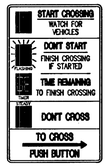
PHASE DIAGRAM

FLASHING OPERATION SHALL BE ALL RED OPTICOM PREEMPTION PHASES 2, 4, 6 &8 #4 AND #8 SHALL BE PERMISSIVE LEFTS ONLY; #1 AND #5 SHALL BE PROTECTED PERMISSIVE
PHASES 2 AND 6 OPERATE VIA MAXIMUM RECALL TIMES DEVELOPED BY CLV TRAFFIC/FAST STAFF. THE MAX TIMES WILL BE BASED ON VOLUMES AND SECTION 623 OF THE CCA USS



QUADRANT ARM OR SIGNAL LOCATION (TOP VIEW)

QUADRANT LOCATOR



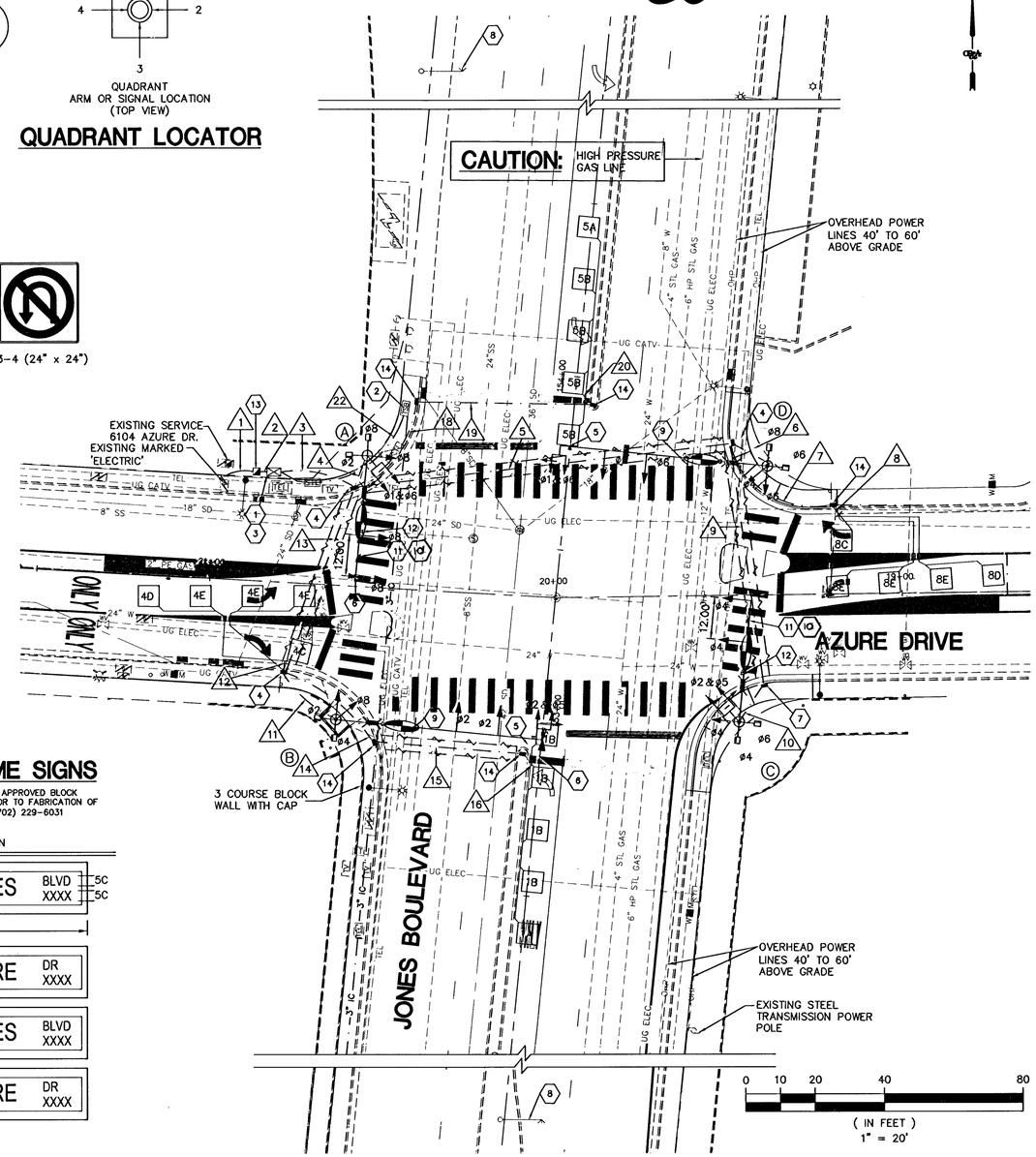
R10-3e (9" x 12")

R10-12 (30" x 36")

R3-4 (24" x 24")

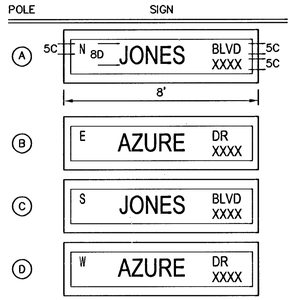
R3-5 (L) (30" x 36")

R3-5 (R) (30" x 36")



STREET NAME SIGNS

NOTE: CONTRACTOR SHALL OBTAIN APPROVED BLOCK NUMBERS FROM CLV PLANNING PRIOR TO FABRICATION OF SIGNS. CALL JONATHON BOYLES (702) 229-6031



NOTE:

CALL SOUTHWEST GAS AT 365-2296 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES

CONDUIT AND WIRE SCHEDULE

WIRE & CABLE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
NEVADA POWER SERVICE (3) #3/0 AWG THW	POWER SUPPLY TRANSFORMER	SERVICE PEDESTAL	●																					
(2) #4 (1 BLACK, 1 WHITE) FOR CONTROLLER (2) #4 (1 BLACK, 1 WHITE) FOR LUMINAIRES (1) #8 AWG THW GROUND	SERVICE PEDESTAL	CONTROLLER		●																				
25C #14 SIGNAL CABLE, (1) #8 AWG THW GROUND, (2) #10 AWG THW	CONTROLLER	POLE A			●	●																		
25C #14 SIGNAL CABLE, (1) #8 AWG THW GROUND, (2) #10 AWG THW	CONTROLLER	POLE B			●								●		●									
25C #14 SIGNAL CABLE, (1) #8 AWG THW GROUND, (2) #10 AWG THW	CONTROLLER	POLE C			●		●				●	●							USED				USED	
25C #14 SIGNAL CABLE, (1) #8 AWG THW GROUND, (2) #10 AWG THW	CONTROLLER	POLE D			●		●	●																
6 PR 18 AWG MULTI-CONDUCTOR LOOP LEAD-IN CABLE 4C, 4D, 4E	CONTROLLER	PULLBOX AT LOOP			●									●	●									
6 PR 18 AWG MULTI-CONDUCTOR LOOP LEAD-IN CABLE 8C, 8D, 8E	CONTROLLER	PULLBOX AT LOOP			●		●		●	●									NOT				NOT	
EMERGENCY VEHICLE PRE-EMPT CABLE	CONTROLLER	POLE A			●	●																		
EMERGENCY VEHICLE PRE-EMPT CABLE	CONTROLLER	POLE B			●								●		●									
6 PR 18 AWG MULTI-CONDUCTOR LOOP LEAD-IN CABLE 1A, 1B	CONTROLLER	PULLBOX AT LOOP			●										●	●	●	●						
6 PR 18 AWG MULTI-CONDUCTOR LOOP LEAD-IN CABLE 5A, 5B	CONTROLLER	PULLBOX AT LOOP			●											●					●	●	●	
#8 TRACER WIRE (FUTURE INTERCONNECT)	EXISTING NO. 7 PB	CONTROLLER																						●
CONDUIT NUMBER & SIZE (IC) = INTERCONNECT			2"	3"	3"	3"	2-3"	3"	2"	2"	2-3"	3"	3"	2"	2-3"	2"	2"	2"		2"	2"	2"		3"

113889

POLE AND EQUIPMENT SCHEDULE

POLE	LOCATION STATION* (AZURE)	POLE TYPE / FOUND TYPE	SIGNAL ARM QUAD	SIGNAL ARM LNG	LUMINAIRE ARM QUAD	LUMINAIRE ARM LNG	SIGNALS (VEHICLE) TYPE	SIGNALS (VEHICLE) QUAD	SIGNALS (PEDESTRIAN) TYPE	SIGNALS (PEDESTRIAN) QUAD	PEDESTRIAN PUSH BUTTONS QUAD	PEDESTRIAN PUSH BUTTONS ARROW	REMARKS
* A	NEW STA 20+56.55 OFF 37.73' RT	XX / NEW H	3	35'	3	15'	M-2 (2) / B 14T	MAST ARM / 1	W-3T	1	2 #2 / 3 #8	LEFT / RIGHT	
* B	NEW STA 20+61.19 OFF 38.44' LT	NEW XX-A / NEW L	2	60'	2	15'	M-5 (1) M-2 (2) / B-2T	MAST ARM / 4	W-3T	4	1 #4 / 2 #2	LEFT / RIGHT	SEE DETAIL SHEET R-7
* C	NEW STA 19+47.47 OFF 36.43' LT	XX / NEW H	1	35'	1	15'	M-2 (2) / B 14T	MAST ARM / 3	W-3T	3	4 #6 / 1 #4	LEFT / RIGHT	
* D	NEW STA 19+38.44 OFF 37.07' RT	NEW XX-A / NEW L	4	60'	4	15'	M-5 (1) M-2 (2) / B 2T	MAST ARM / 2	W-3T	2	3 #8 / 4 #6	LEFT / RIGHT	

* EXACT POLE LOCATION SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION AND SHALL BE APPROVED BY THE ENGINEER

OR&A
Orth-Rodgers and Associates, Inc.
TRANSPORTATION ENGINEERS and PLANNERS
3130 South Durango Drive, Suite 404
Las Vegas, NV 89117 (702) 233-4060

NO.	DATE:	DESCRIPTION	APP'D

REVISIONS

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DESIGN SECTION

CITY ENGINEER:
PROJECT MANAGER:
JORGE CERVANTES, P.E., P.T.O.E.
COREY SCHMIDT, P.E.
DESIGNED BY: RR
DRAWN BY: JS, KA
CHECKED BY: RM, RR
HORIZONTAL SCALE: AS SHOWN
VERTICAL SCALE: NONE
DATE: 2/22/2008

TITLE: TRAFFIC PACKAGE 6A
JONES BOULEVARD AND AZURE DRIVE

SHEET: TRAFFIC SIGNAL PLAN

REGISTERED PROFESSIONAL ENGINEER RICHARD M. BOMER EXP. 12-31-09 CIVIL No. 8962 STATE OF NEVADA 2/22/08

SAFETY ALERT
Call Before You Overhead 1-702-227-2929
AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY!
Call before you UnderGround 1-702-455-7511
C.C. TRAFFIC OPERATIONS 1-702-229-6611
LV AREA COMPUTERIZED TRAFFIC SYS. 1-702-455-7544
Call before you Dig
Avoid cutting underground utility lines, we'll notify.
Call 811
1-800-227-2600
CLARK COUNTY WATER CONSERVATION

Sheet T-2
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DRAWING NO. 107-V4797

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