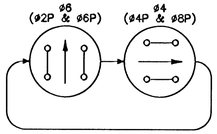
PHASE DIAGRAM



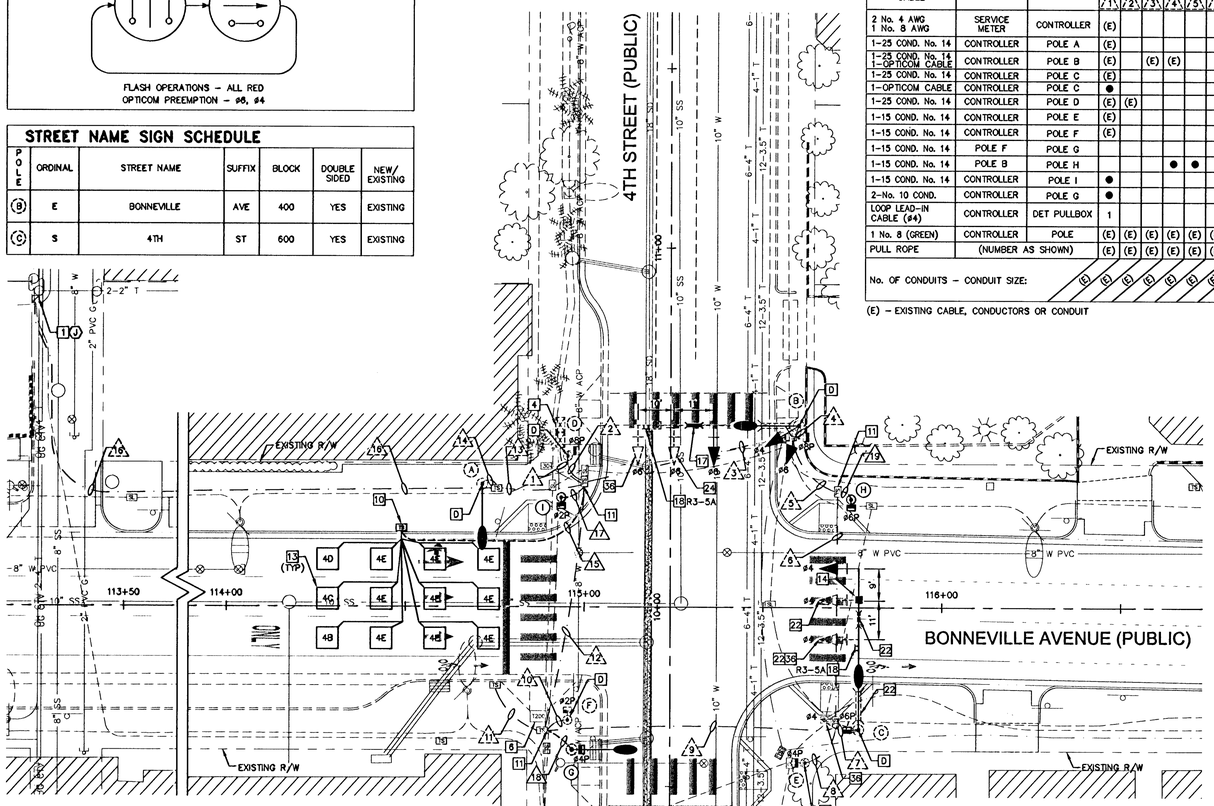
STREET NAME SIGN SCHEDULE

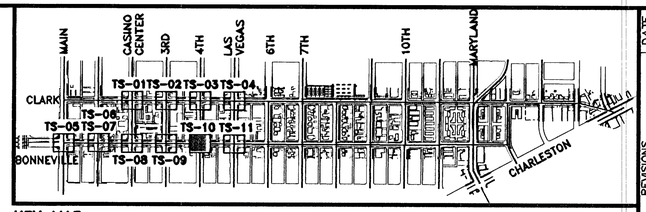
POLE	ORDINAL	STREET NAME	SUFFIX	BLOCK	DOUBLE SIDED	NEW/ EXISTING
(B)	E	BONNEVILLE	AVE	400	YES	EXISTING
(C)	S	4TH	ST	600	YES	EXISTING

CONDUIT AND WIRE SCHEDULE

WIRE & CABLE	FROM	TO	CONDUIT 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
2 No. 4 AWG 1 No. 8 AWG	SERVICE METER	CONTROLLER	(E)												(E)			(E)			
1-25 COND. No. 14	CONTROLLER	POLE A	(E)												(E)	(E)					
1-25 COND. No. 14 1-OPTICOM CABLE	CONTROLLER	POLE B	(E)		(E)	(E)															
1-25 COND. No. 14	CONTROLLER	POLE C	(E)						(E)		(E)			(E)							
1-OPTICOM CABLE	CONTROLLER	POLE C	●						●		●			●							
1-25 COND. No. 14	CONTROLLER	POLE D	(E)	(E)																	
1-15 COND. No. 14	CONTROLLER	POLE E	(E)							(E)	(E)			(E)							
1-15 COND. No. 14	CONTROLLER	POLE F	(E)									(E)		(E)							
1-15 COND. No. 14	POLE F	POLE G										●								●	
1-15 COND. No. 14	POLE B	POLE H				●	●														●
1-15 COND. No. 14	CONTROLLER	POLE I	●																●		
2-No. 10 COND.	CONTROLLER	POLE G	●											●						●	
LOOP LEAD-IN CABLE (#4)	CONTROLLER	DET PULLBOX	1														1				
1 No. 8 (GREEN)	CONTROLLER	POLE	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	1	–	1	1	1
PULL ROPE	(NUMBER AS SHOWN)		(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	1	–	1	1	1
No. OF CONDUITS – CONDUIT SIZE:			(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	1-2"	(E)	1-2"	1-3"	1-2"	

(E) – EXISTING CABLE, CONDUCTORS OR CONDUIT





KEY MAP
NTS

CONSTRUCTION NOTES (TS SHEETS ONLY)

1. EXISTING 200 AMP 120/240 VAC SERVICE PEDESTAL (SEE SHEET TS-13).
4. DISCONNECT SERVICE CABLE AT CONTROLLER CABINET AND BACKPULL TO SERVICE. REMOVE AND SALVAGE EXISTING UPS CABINET AND REMOVE FOUNDATION. JOIN EXISTING SERVICE CONDUIT AND RECONSTRUCT SIDEWALK PAVERS TO MATCH EXISTING CENTENNIAL STANDARDS. RE-PULL SERVICE CABLE TO CONTROLLER CABINET AND RECONNECT.
6. TYPE 200 VAULT MARKED "FIBER OPTIC" (SEE SL SHEETS FOR INTERCONNECT AND STREET LIGHTING EQUIPMENT AND DETAILS).
10. FURNISH AND INSTALL No. 5 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CCAUSD No. 404.120 AND 404.140.
11. INTERCEPT EXISTING CONDUIT OR PULL BOX AND INSTALL NEW CONDUIT.
12. ALL VEHICLE SIGNAL INDICATIONS AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE SUPPLIED AND INSTALLED WITH LIGHT EMITTING DIODE (LED) SIGNAL MODULES.
13. FURNISH AND INSTALL 8'x8' MULTIPLE LOOP SYSTEM (SEE SHEET TS-13 FOR LOOP LAYOUT AND DETAILS).
14. FURNISH AND INSTALL 3M MODEL 721 OPTICOM SENSORS ON THE TRAFFIC SIGNAL HEAD(S) IDENTIFIED ON PLAN. RUN OPTICOM DETECTOR CABLE, 3M MODEL 138 FROM THE CONTROLLER TO TRAFFIC SIGNAL HEAD(S) INDICATED ON PLANS AS SHOWN IN THE CONDUIT AND WIRE SCHEDULE, AND WIRE CONTROLLER.
15. FURNISH AND INSTALL 400 WATT HIGH PRESSURE SODIUM INTERSECTION LIGHTING WITH IES MC3 DISTRIBUTION COMPLETE WITH 120V MAGNETIC REGULATOR TYPE BALLAST (GARDCO CA22-1-3-400HPS-120-OC-RAL6012 MF PC OR APPROVED EQUAL) AND AREA LIGHTING RESEARCH ELECTRONIC PHOTOCELL (#2190VP3) AS INDICATED ON PLANS.
17. FURNISH AND INSTALL INTERNALLY-ILLUMINATED "ONE WAY" SIGN ON MAST ARMS. SEE "ONE WAY" SIGN DETAIL (SHEET TS-13) AND SIGN SCHEDULE (THIS SHEET) FOR DETAILS.
18. FURNISH AND INSTALL SIGN ON MAST ARM. SEE SIGN SCHEDULE (THIS SHEET) FOR SIGN DESIGNATION AND SIZE.
20. PEDESTRIAN PUSH BUTTONS SHALL BE AUDIBLE/TACTILE TYPE.
21. PEDESTRIAN SIGNAL HEADS SHALL BE COUNTDOWN TYPE.
22. INSTALL SALVAGED EQUIPMENT ON NEW MAST ARM (SEE DM SHEETS FOR SALVAGED EQUIPMENT).
24. RELOCATE SIGNAL HEADS AND/OR EQUIPMENT ON EXISTING MAST ARM (SEE DM SHEETS).
36. REPLACE GREEN BALL INDICATION WITH GREEN UP ARROW INDICATION (SEE SHEET TS-12 FOR DETAIL).
D. SEE DEMOLITION SHEETS (DM) FOR SALVAGED EQUIPMENT.

SIGN SCHEDULE

CONSTRUCTION NOTE	18	17	
SIGN ILLUSTRATION	ONLY	ONE WAY	ONE WAY
SIGN DESIGNATION DIMENSIONS POLE*	R3-5A 30"x36" (B)(C)	SPECIAL (RIGHT) 72"x17.5" (B)	SPECIAL (LEFT) 48"x17.5" (C)

* (X) = EXISTING SIGN, (X) = NEW SIGN

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY TYPE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTING SIGNAL POLE FOUNDATIONS.
2. CONTRACTOR SHALL INSTALL RED MARKING TAPE 18" BELOW GRADE, ABOVE ALL PROPOSED CONDUITS.
3. CONTRACTOR SHALL VERIFY ALL UTILITY CONFLICTS AND OBSTACLES PRIOR TO TRENCHING OR DIGGING.
4. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS, INCLUDING LANDSCAPING FROM DAMAGE. ALL IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE RESIDENT ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
5. CONTRACTOR TO COORDINATE LOCATIONS OF PROPOSED PULL BOXES TO BE ADJACENT TO SIDEWALK JOINTS AND SCORING PATTERN LINES. SEE LANDSCAPE SHEETS (LA) FOR SIDEWALK SCORING PATTERN.
6. SEE SL SHEETS FOR SERVICE PEDESTAL, STREET LIGHTING AND INTERCONNECT DESIGN.
7. EXISTING TRAFFIC SIGNALS MUST REMAIN OPERATIONAL AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE UNIFORMED TRAFFIC CONTROL OFFICERS AT ALL TIMES WHEN THE TRAFFIC SIGNAL CANNOT REMAIN OPERATIONAL UNLESS ANOTHER METHOD IS APPROVED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
8. AS PART OF THE TRAFFIC SIGNAL INSTALLATION THE CONTRACTOR SHALL REMOVE AND SALVAGE ALL EXISTING TRAFFIC SIGNAL EQUIPMENT (POLES, MAST ARMS, INTERSECTION LIGHTING, CONTROLLER CABINET, ETC.) AS IDENTIFIED ON THE PLANS. SUB-SURFACE AND SURFACE CONDITIONS SHALL BE REPAIRED OR REPLACED TO MATCH THE SURROUNDING AREA. ALL STREET LIGHT AND TRAFFIC SIGNAL EQUIPMENT THAT IS SALVAGED SHALL BE RETURNED TO THE CLV EAST SERVICE YARD. PROVIDE 24 HOUR NOTICE PRIOR TO DELIVERY. CALL 702-229-3661 TO SCHEDULE DELIVERY TIME. CONTRACTOR MUST HAVE A MEANS TO UNLOAD EQUIPMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EQUIPMENT AND MATERIALS INCURRED IN THIS PROCESS.
9. AS PART OF THE INTERNALLY ILLUMINATED ONE WAY SIGN INSTALLATION THE CONTRACTOR MAY BE REQUIRED TO RELOCATE OR ADJUST EXISTING MAST ARM MOUNTED SIGNING, SIGNAL HEAD TENONS OR OTHER EQUIPMENT. ALL ADJUSTMENTS SHALL BE APPROVED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
10. PULL BOX AND VAULT LOCATIONS AND CONDUIT ROUTING ARE SCHEMATIC FOR THE PURPOSE OF CLARITY AND MAY DIFFER FROM ACTUAL INSTALLATION. FINAL LOCATION SHALL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

POLE AND EQUIPMENT SCHEDULE

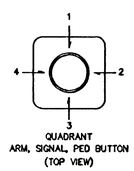
POLE*	LOCATION STATION AND OFFSET	TYPE HEIGHT FOUND.	MAST ARM QUAD	MAST ARM LENGTH	LUMINAIRE QUAD	LUMINAIRE LENGTH	SIGNALS VEHICLE TYPE	SIGNALS VEHICLE QUAD	SIGNALS PEDESTRIAN TYPE	SIGNALS PEDESTRIAN QUAD	PEDESTRIAN PUSH BUTTON PHASE	PEDESTRIAN PUSH BUTTON ARROW	PEDESTRIAN PUSH BUTTON QUAD	EMERGENCY VEHICLE DETECTOR	REMARKS
(A)	4TH STREET EXISTING	XX 30' (E)	–	–	3	15' (N)	– –	– –	–	–	–	–	–	–	D 15
(B)	4TH STREET EXISTING	XX 30' (E)	4	45' (E)	4	15' (N)	2 M-2 (R) M-2 (N) B-2T (N)	MA MA 2	W-4T (R)	2	ø8	R (E)	1	ONE-WAY (E)	D 12 15 17 18 24 36
(C)	4TH STREET EXISTING	XX 30' (E)	1	45' (N)	1	15' (N)	(2) M-2 (R) M-2 (N) B-1T (R)	MA MA 3	W-0T (N)	3	ø6	L (N)	4	ONE-WAY (N)	D 12 14 15 18 20 21 22 36
(D)	4TH STREET EXISTING	1-A 10' (E)	–	–	–	–	– –	– –	W-3T (R)	1	ø8	L (E)	1	–	D
(E)	4TH STREET EXISTING	1-B 7' (E)	–	–	–	–	– –	– –	W-2T (R)	TOP	ø4	L (E)	3	–	D
(F)	4TH STREET EXISTING	1-B 7' (E)	–	–	–	–	– –	– –	W-2T (R)	TOP	ø2	L (E)	4	–	D
(G)	4TH STREET STA 09+60, 27'± LT**	XX 30' H	–	–	2	15' (N)	– –	– –	W-0T (N)	4	ø4	R (N)	3	–	12 15 20 21
(H)	4TH STREET STA 10+30, 50'± RT**	1-B 7' C	–	–	–	–	– –	– –	W-1T (N)	TOP	ø6	R (N)	4	–	12 20 21
(I)	4TH STREET STA 10+30, 31'± LT**	1-B 7' C	–	–	–	–	– –	– –	W-1T (N)	TOP	ø2	R (N)	4	–	12 20 21

SEE CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS (CCAUSD) FOR POLE, POLE FOUNDATION, SIGNAL MOUNTING HARDWARE AND OTHER DETAILS RELATED TO SIGNAL POLE INSTALLATION.

* ALL POLES, MAST ARMS, AND LUMINARIES SHALL CONFORM TO THE CITY OF LAS VEGAS CENTENNIAL STANDARDS.

** CONTRACTOR TO STAKE FOUNDATION LOCATIONS FOR APPROVAL BY RESIDENT ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO POTHOLE NEW FOUNDATION LOCATIONS PRIOR TO CONSTRUCTION TO IDENTIFY ALL SUBSURFACE CONFLICTS. IF CONFLICTS ARE IDENTIFIED THE CONTRACTOR SHALL WORK WITH THE RESIDENT ENGINEER TO DETERMINE AN ALTERNATE FOUNDATION LOCATION.

(N) – NEW EQUIPMENT
(R) – EQUIPMENT TO BE RELOCATED OR REVISED ACCORDING TO THIS PLAN.
(E) – EXISTING EQUIPMENT



QUADRANT
ARM, SIGNAL, PED BUTTON
(TOP VIEW)

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)

811 know what's below Call before you dig 1-702-227-2929

SAFETY ALERT Call Before You Overhead

Call before you UnderGround 1-702-492-5300

REVISIONS		DATE
1	SHEET REPLACEMENT	6/21/10

SCALE (H): 1"=20' | SCALE (V): N/A | DATE: FEBRUARY 2010
DRAWN BY: AP | DESIGNED BY: AP/RC | CHECKED BY: RC/RF

Kimley-Horn and Associates, Inc.
Engineering, Planning, and Environmental Consultants
2080 E. Flamingo Road, Suite 210, Las Vegas, NV 89119
PH. (702) 734-5666 FAX (702) 735-4949

DEPARTMENT OF PUBLIC WORKS

PROJECT: BONNEVILLE/CLARK ONEWAY COUPLET PHASE 1 IMPROVEMENT PLANS

SHEET: TRAFFIC SIGNAL BONNEVILLE AVE AND 4TH ST

PROFESSIONAL ENGINEER STATE OF NEVADA RANDY W. CARROLL Exp. 12/31/10 CIVIL No. 16131 6-21-10

SHEET NO. TS-10
SHEET 69 of 91
DRAWING NO. 107V5201

BID# 09.1730.37 REV 3

124558

Jun 21, 2010 – 1:56pm – USER peter.meyerhofer
\\LAVFP01\Projects\LAV_PublicTrees\092256\016 Bonneville-Clark 2008\CADD\256016tk-07_11.dwg