PHASE DIAGRAM

FLASH OPERATIONS – ALL RED
OPTICOM PREEMPTION – #2, #4, #6

STREET NAME SIGN SCHEDULE [16]

POLE	ORDINAL	STREET NAME	SUFFIX	BLOCK	DOUBLE SIDED	NEW/ EXISTING
(A)	E	BONNEVILLE	AVE	200	YES	NEW
(B)	S	3RD	ST	600	NO	NEW
(C)	E	BONNEVILLE	AVE	200	YES	NEW

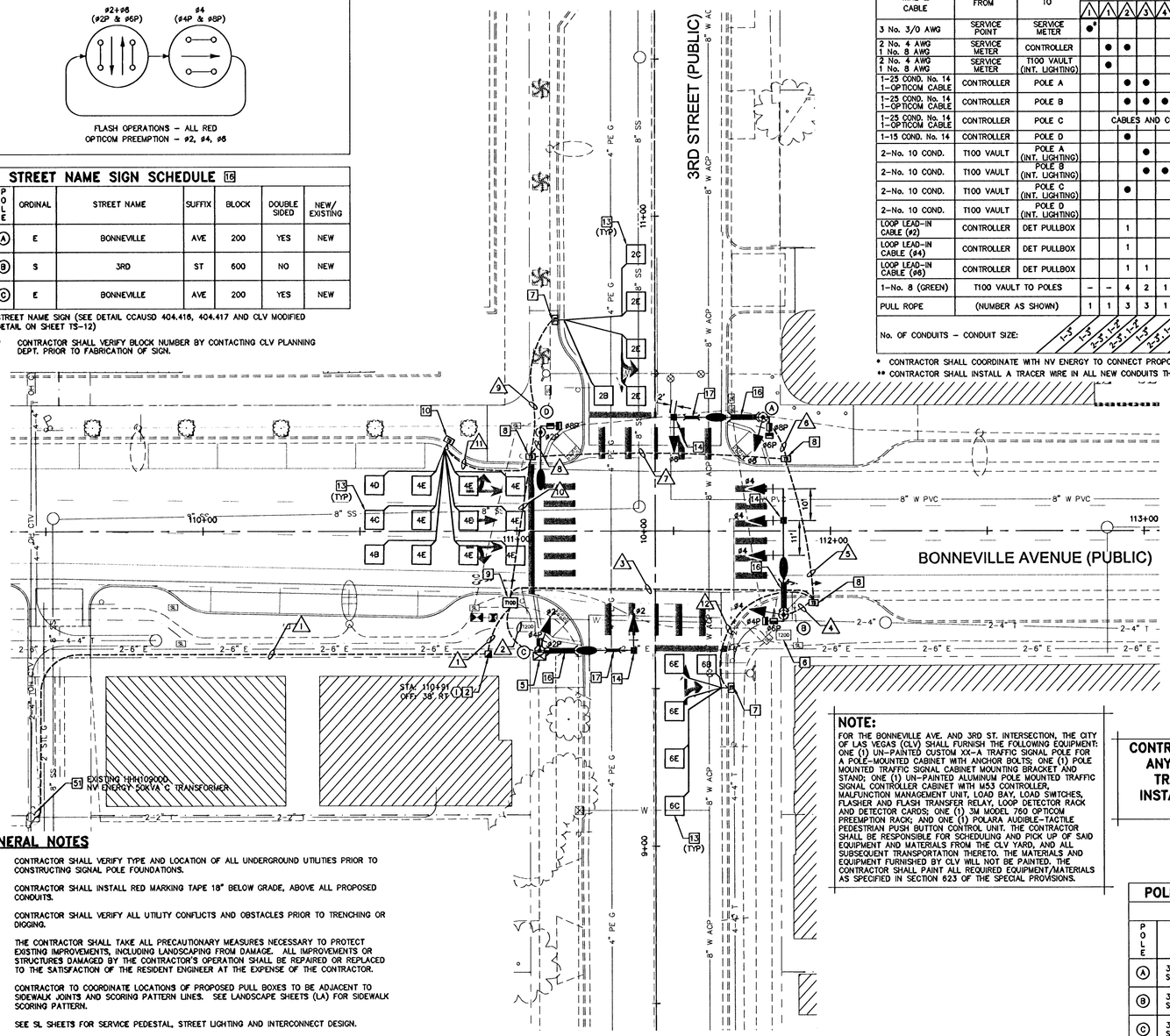
STREET NAME SIGN (SEE DETAIL CCAUSD 404.416, 404.417 AND CLV MODIFIED DETAIL ON SHEET TS-12)

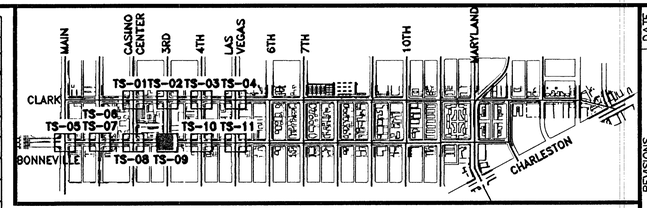
- CONTRACTOR SHALL VERIFY BLOCK NUMBER BY CONTACTING CLV PLANNING DEPT. PRIOR TO FABRICATION OF SIGN.

CONDUIT AND WIRE SCHEDULE

WIRE & CABLE	FROM	TO	CONDUIT** 1	1	2	3	4	5	6	7	8	9	10	11	12
3 No. 3/0 AWG	SERVICE POINT	SERVICE METER	● *												
2 No. 4 AWG 1 No. 8 AWG	SERVICE METER	CONTROLLER		●	●										
2 No. 4 AWG 1 No. 8 AWG	SERVICE METER	T100 VAULT (INT. LIGHTING)		●											
1-25 COND. No. 14 1-OPTICOM CABLE	CONTROLLER	POLE A			●	●		●	●						
1-25 COND. No. 14 1-OPTICOM CABLE	CONTROLLER	POLE B			●	●	●								
1-25 COND. No. 14 1-OPTICOM CABLE	CONTROLLER	POLE C	CABLES AND CONDUCTORS INSTALLED IN POLE												
1-15 COND. No. 14	CONTROLLER	POLE D			●							●		●	
2-No. 10 COND.	T100 VAULT	POLE A (INT. LIGHTING)				●		●	●						
2-No. 10 COND.	T100 VAULT	POLE B (INT. LIGHTING)				●	●								
2-No. 10 COND.	T100 VAULT	POLE C (INT. LIGHTING)			●										
2-No. 10 COND.	T100 VAULT	POLE D (INT. LIGHTING)										●		●	
LOOP LEAD-IN CABLE (#2)	CONTROLLER	DET PULLBOX			1								1	1	
LOOP LEAD-IN CABLE (#4)	CONTROLLER	DET PULLBOX			1									1	1
LOOP LEAD-IN CABLE (#6)	CONTROLLER	DET PULLBOX			1	1									1
1-No. 8 (GREEN)	T100 VAULT TO POLES		–	–	4	2	1	1	–	1	–	1	–	–	
PULL ROPE	(NUMBER AS SHOWN)		1	1	3	3	1	3	1	3	1	1	3	1	1
No. OF CONDUITS – CONDUIT SIZE:			1-2"	1-2"	2-2", 1-4"	2-2", 1-4"	1-2"	2-2", 1-4"	2-2", 1-4"	1-2"	2-2", 1-4"	1-2"	2-2", 1-4"	1-2"	1-2"

* CONTRACTOR SHALL COORDINATE WITH NV ENERGY TO CONNECT PROPOSED SERVICE PEDESTAL TO SERVICE POINT.
** CONTRACTOR SHALL INSTALL A TRACER WIRE IN ALL NEW CONDUITS THAT ARE EMPTY (NO CONDUCTORS/CABLES)





KEY MAP
NTS

CONSTRUCTION NOTES (TS SHEETS ONLY)

2. FURNISH AND INSTALL NEW 200 AMP 120/240 VAC SERVICE PEDESTAL. SEE SERVICE PEDESTAL EQUIPMENT TABLE (SHEET TS-12) FOR DETAILS. CONTRACTOR TO STAKE FOUNDATION LOCATION FOR APPROVAL BY RESIDENT ENGINEER PRIOR TO CONSTRUCTION.
5. INSTALL CITY PROVIDED XX-A POLE AND POLE MOUNTED TRAFFIC SIGNAL CABINET ASSEMBLY. CONTRACTOR SHALL FURNISH AND INSTALL POLE FOUNDATION, MAST ARMS AND ALL HARDWARE AS SHOWN ON PLANS. ALL NECESSARY AMPLIFIER UNITS, MODULES, LIGHT CONTROL UNITS, SWITCHES, OPTICOM, FLASHERS, AREA WIDE COMPUTER CONTROL, ETC. SHALL BE WIRED IN CABINET TO ACTIVATE THE PHASE OPERATION AS SHOWN. CONTRACTOR SHALL PREPARE AS-BUILT DRAWINGS UPON COMPLETION OF PROJECT DETAILING ANY CHANGES TO THE CONTROLLER OPERATION OR CABINET CONFIGURATION. CABINET SHALL BE ORIENTED SO MAINTENANCE PERSONNEL SHALL BE FACING TRAFFIC WHEN SERVICING OR AS DIRECTED BY THE RESIDENT ENGINEER.
6. TYPE 200 VAULT MARKED "FIBER OPTIC" (SEE SL SHEETS FOR INTERCONNECT AND STREET LIGHTING EQUIPMENT AND DETAILS).
7. FURNISH AND INSTALL No. 3 1/2 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CCAUSD No.404.110, 404.140, AND 404.811.
8. FURNISH AND INSTALL No. 7 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CCAUSD No.404.130 AND 404.140.
9. FURNISH AND INSTALL TYPE 100 VAULT MARKED "TRAFFIC SIGNAL". SEE SPECIFICATIONS FOR DETAILS AND VENDOR CONTACT.
10. FURNISH AND INSTALL No. 5 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CCAUSD No. 404.120 AND 404.140.
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 6'x6' 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. WIRE CONTROLLER AND PROVIDE ONE (1) 3M MODEL 754 PHASE SELECTOR AND ONE (1) 760 3M OPTICOM PRE-EMPTION RACK IN CABINET.
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.
16. FURNISH AND INSTALL INTERNALLY-ILLUMINATED STREET NAME SIGN ON MAST ARM. SEE STREET NAME SIGN SCHEDULE (THIS SHEET).
17. FURNISH AND INSTALL INTERNALLY-ILLUMINATED "ONE WAY" SIGN ON MAST ARM. SEE "ONE WAY" SIGN DETAIL (SHEET TS-12) AND SIGN SCHEDULE (THIS SHEET) FOR DETAILS.
20. PEDESTRIAN PUSH BUTTONS SHALL BE AUDIBLE/TACTILE TYPE.
21. PEDESTRIAN SIGNAL HEADS SHALL BE COUNTDOWN TYPE.
51. INSTALL NEW RISER ON JOINT-USE WOOD POLE TO EXISTING TRANSFORMER IN ACCORDANCE WITH NV ENERGY REQUIREMENTS. COIL CONDUCTORS AT TOP OF RISER FOR NV ENERGY CONNECTION. SEE NV ENERGY DESIGN PLANS.

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.

NOTE:
FOR THE BONNEVILLE AVE. AND 3RD ST. INTERSECTION, THE CITY OF LAS VEGAS (CLV) SHALL FURNISH THE FOLLOWING EQUIPMENT: ONE (1) UN-PAINTED CUSTOM XX-A TRAFFIC SIGNAL POLE FOR A POLE-MOUNTED CABINET WITH ANCHOR BOLTS; ONE (1) POLE MOUNTED TRAFFIC SIGNAL CABINET MOUNTING BRACKET AND STAND; ONE (1) UN-PAINTED ALUMINUM POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET WITH M53 CONTROLLER, MALFUNCTION MANAGEMENT UNIT, LOAD BAY, LOAD SWITCHES, FLASHER AND FLASH TRANSFER RELAY, LOOP DETECTOR RACK AND DETECTOR CARDS; ONE (1) 3M MODEL 760 OPTICOM PREEMPTION RACK; AND ONE (1) POLARA AUDIBLE-TACTILE PEDESTRIAN PUSH BUTTON CONTROL UNIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND PICK UP OF SAID EQUIPMENT AND MATERIALS FROM THE CLV YARD, AND ALL SUBSEQUENT TRANSPORTATION THERETO. THE MATERIALS AND EQUIPMENT FURNISHED BY CLV WILL NOT BE PAINTED. THE CONTRACTOR SHALL PAINT ALL REQUIRED EQUIPMENT/MATERIALS AS SPECIFIED IN SECTION 623 OF THE SPECIAL PROVISIONS.

CONTRACTOR RESPONSIBLE FOR REPLACEMENT OF ANY PAVERS REMOVED OR DAMAGED DURING TRAFFIC SIGNAL, PULL BOX, AND CONDUIT INSTALLATION ON THE SOUTHEAST CORNER OF THIS INTERSECTION.

SIGN SCHEDULE

CONSTRUCTION NOTE	17	17
SIGN ILLUSTRATION	ONE WAY	ONE WAY
SIGN DESIGNATION DIMENSIONS	SPECIAL (RIGHT) 72"x17.5"	SPECIAL (LEFT) 72"x17.5"
POLE*	(A)	(C)

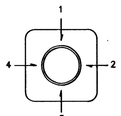
* (X) = EXISTING SIGN, (X) = NEW SIGN

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	PUSH BUTTON ARROW	PUSH BUTTON QUAD	EMERGENCY VEHICLE DETECTOR	REMARKS
(A)	3RD STREET STA 10+38, 34'± RT ***	XX 30' H	4	30'	4	15'	M-2 8-1T	MA 2	W-4T**	2	#6 #8	R L	4 3	ONE-WAY	12 14 15 16 17 20 21
(B)	3RD STREET STA 09+73, 41'± RT ***	XX 30' H	1	40'	1	15'	(3) M-2 8-1T	MA 3	W-4T**	3	#4 #6	L L	3 4	ONE-WAY	12 14 15 16 20 21
(C)	3RD STREET STA 09+82, 37'± LT ***	XX-A 30' L	2	30'	2	15'	M-2 8-1T	MA 4	PP PP	2 1	#2 #4	R L	2 1	ONE-WAY	5 12 14 15 16 17 20 21
(D)	3RD STREET STA 10+31, 37'± LT ***	XX 30' H	–	–	3	15'	– –	– –	W-4T**	1	#2 #8	L R	2 3	–	12 15 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.
** SEE SHEET TS-12 FOR PEDESTRIAN SIGNAL ASSEMBLY DETAIL.
*** 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.
PP – REFER TO CCAUSD No. 404.1201 FOR POLE PLATE PEDESTRIAN SIGNAL HEAD MOUNTING ASSEMBLY DETAIL.



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
1 SHEET REPLACEMENT — DATE 6/21/10

DATE: FEBRUARY 2010 | CHECKED BY: RC/RF | © 2010

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

DEPARTMENT OF PUBLIC WORKS

PROJECT: BONNEVILLE/CLARK ONEWAY COUPLET PHASE 1 IMPROVEMENT PLANS

SHEET: TRAFFIC SIGNAL BONNEVILLE AVE AND 3RD ST

CITY OF LAS VEGAS NEVADA

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

SHEET NO TS-09
SHEET 68 OF 91
DRAWING NO. 107V5201

BID# 09.1730.37 REV 3

Jun 21, 2010 – 1:57pm – USER petar.mayerholler
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