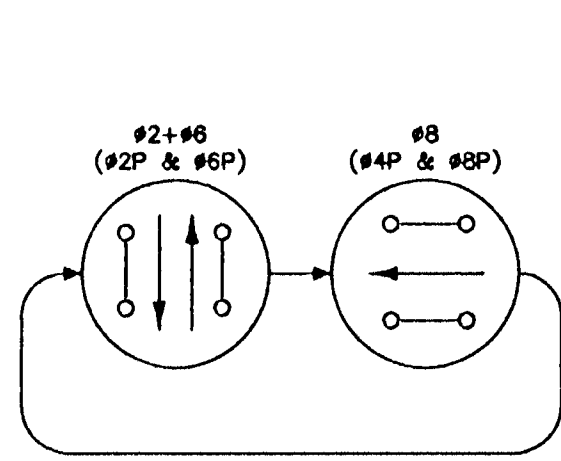


PHASE DIAGRAM



FLASH OPERATIONS - ALL RED
OPTICOM PREEMPTION - #2, #6, #8

NOTE:

FOR THE CLARK 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 M3S CONTROLLER, MALFUNCTION MANAGEMENT UNIT, LOAD BAY, LOAD SWITCHES, FLASHER AND FLASH TRANSFER RELAY, LOOP DETECTOR RACK AND DETECTOR CARDS; ONE (1) 3M MODEL 780 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 THEREOF. 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.

CONDUIT AND WIRE SCHEDULE

WIRE & CABLE	FROM	TO	CONDUIT**														
			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	SERVICE METER	CONTROLLER	•														
2 No. 4 AWG	SERVICE METER	T100 VAULT (INT. LIGHTING)	•														
1-25 COND. No. 14	CONTROLLER	POLE A		•													
1-25 COND. No. 14	CONTROLLER	POLE B		•													
1-25 COND. No. 14	CONTROLLER	POLE C		•													
1-25 COND. No. 14	CONTROLLER	POLE D		•													
2-No. 10 COND.	T100 VAULT (INT. LIGHTING)	POLE A			•												
2-No. 10 COND.	T100 VAULT (INT. LIGHTING)	POLE B			•												
2-No. 10 COND.	T100 VAULT (INT. LIGHTING)	POLE C			•												
2-No. 10 COND.	T100 VAULT (INT. LIGHTING)	POLE D			•												
1-15 COND. No. 14	CONTROLLER	POLE E				•											
1-15 COND. No. 14	CONTROLLER	POLE F				•											
LOOP LEAD-IN CABLE (#2)	CONTROLLER	DET PULLBOX					1										
LOOP LEAD-IN CABLE (#6)	CONTROLLER	DET PULLBOX					1										
LOOP LEAD-IN CABLE (#8)	CONTROLLER	DET PULLBOX					1										
1-No. 8 (GREEN)	T100 VAULT TO POLES						1	2	1	1	1	1	1	1	1	1	1
PULL ROPE	(NUMBER AS SHOWN)						1	1	3	1	4	1	1	3	1	1	1

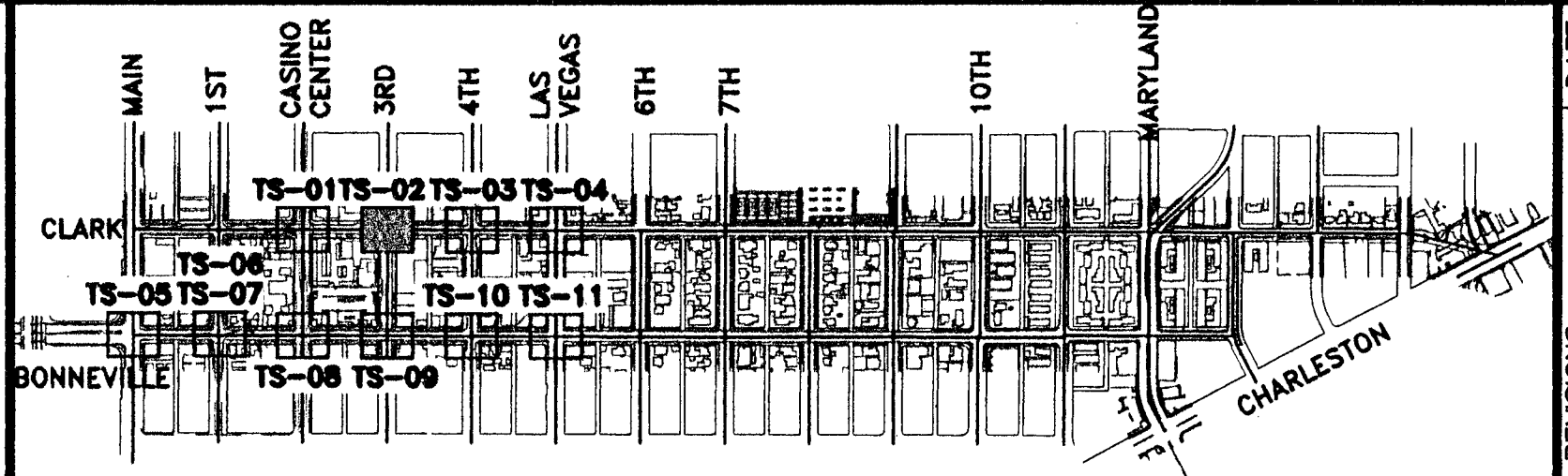
No. OF CONDUITS - CONDUIT SIZE:
 * CONTRACTOR SHALL COORDINATE WITH NV ENERGY TO CONNECT PROPOSED SERVICE PEDESTAL TO SERVICE POINT.
 ** CONTRACTOR SHALL INSTALL A TRACER WIRE IN ALL CONDUITS THAT ARE EMPTY (NO CONDUCTORS/CABLING)

STREET NAME SIGN SCHEDULE

ORDINAL	STREET NAME	SUFFIX	BLOCK*	DOUBLE SIDED	NEW/EXISTING
S	3RD	ST	400	NO	NEW
E	CLARK AVE	AVE	300	YES	NEW
E	CLARK AVE	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.



KEY MAP

NTS

CONSTRUCTION NOTES (TS SHEETS ONLY)

- 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.
- 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, OPTIC, FLASHERS, AREA WIDE COMPUTER CONTROL, ET. 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.
- TYPE 200 VAULT MARKED "FIBER OPTIC" (SEE SL SHEETS FOR INTERCONNECT AND STREET LIGHTING EQUIPMENT AND DETAILS).
- FURNISH AND INSTALL No. 3 1/2 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CAUSED No. 404.110, 404.140, AND 404.511.
- FURNISH AND INSTALL No. 7 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CAUSED No. 404.130 AND 404.140.
- FURNISH AND INSTALL TYPE 100 VAULT MARKED "TRAFFIC SIGNAL". SEE SPECIFICATIONS FOR DETAILS AND VENDOR CONTACT.
- FURNISH AND INSTALL No. 5 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CAUSED No. 404.120 AND 404.140.
- ALL VEHICLE SIGNAL INDICATIONS AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE SUPPLIED AND INSTALLED WITH LIGHT EMITTING DIODE (LED) SIGNAL MODULES.
- FURNISH AND INSTALL 8'x8" MULTIPLE LOOP SYSTEM (SEE SHEET TS-13 FOR LOOP LAYOUT AND DETAILS).
- FURNISH AND INSTALL 3M MODEL 721 OPTIC SENSORS ON THE TRAFFIC SIGNAL HEAD(S) IDENTIFIED ON PLAN. RUN OPTIC 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) 3M MODEL 750 OPTICOM PRE-EMPTION RACK IN CABINET.
- FURNISH AND INSTALL 400 WATT HIGH PRESSURE SODIUM INTERSECTION LIGHTING WITH M3S DISTRIBUTION COMPLETE WITH 120V MAGNETIC REGULATOR TYPE BALLAST (GRACE CAB-1-3-400HS-120-OCR-RAL6012 MF PC OR APPROVED EQUAL) AND AREA LIGHTING RESEARCH ELECTRONIC PHOTOCCELL (#2190VP3) AS INDICATED ON PLANS.
- FURNISH AND INSTALL INTERNALLY-ILLUMINATED STREET NAME SIGN ON MAST ARM. SEE STREET NAME SIGN SCHEDULE (THIS SHEET).
- FURNISH AND INSTALL INTERNALLY-ILLUMINATED "ONE WAY" SIGN ON MAST ARM. SEE "ONE WAY" SIGN DETAIL (SHEET TS-13) AND SIGN SCHEDULE (THIS SHEET) FOR DETAILS.
- PEDESTRIAN PUSH BUTTONS SHALL BE AUDIBLE/TACTILE TYPE.
- PEDESTRIAN SIGNAL HEADS SHALL BE COUNTDOWN TYPE.
- INSTALL NEW CONNECTION TO EXISTING NV ENERGY PAD-MOUNTED TRANSFORMER IN ACCORDANCE WITH NV ENERGY REQUIREMENTS. COIL CONDUCTORS FOR NV ENERGY CONNECTION. SEE NV ENERGY DESIGN PLANS.

GENERAL NOTES

- CONTRACTOR SHALL VERIFY TYPE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTING SIGNAL POLE FOUNDATIONS.
- CONTRACTOR SHALL INSTALL RED MARKING TAPE 18" BELOW GRADE, ABOVE ALL PROPOSED CONDUITS.
- CONTRACTOR SHALL VERIFY ALL UTILITY CONFLICTS AND OBSTACLES PRIOR TO TRENCHING OR DIGGING.
- 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.
- 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.
- SEE SL SHEETS FOR SERVICE PEDESTAL, STREET LIGHTING AND INTERCONNECT DESIGN.
- 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.
- 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.
- 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 TENSORS OR OTHER EQUIPMENT. ALL ADJUSTMENTS SHALL BE APPROVED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
- 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 FOUND	VEHICLE SIGNALS				PEDESTRIAN		PEDESTRIAN PUSH BUTTON		EMERGENCY VEHICLE DETECTOR	REMARKS			
			MAST ARM QUAD	LUMINAIRE QUAD	LENGTH	TYPE	QUAD	TYPE	QUAD	PHASE			ARROW	QUAD	
															QUAD
A	3RD STREET STA 15+18, 50'± LT ***	XX-A 30'	3	55'	3	15'	(3) M-2 B-1T	MA 1	-	-	-	-	ONE-WAY	12 14 19 16	
B	3RD STREET STA 15+27, 38'± RT ***	XX-A 30'	4	30'	4	15'	M-2 B-1T	MA 2	-	-	-	-	ONE-WAY	5 12 14 19 16 7	
C	3RD STREET STA 14+50, 35'± RT ***	XX 30'	-	-	1	15'	-	-	W-4T**	3	#4	L 3	-	12 13 23 21	
D	3RD STREET STA 14+45, 41'± LT ***	XX 30'	2	30'	2	15'	M-2 B-1T	MA 4	W-4T**	4	#2 #4	R 2	1	ONE-WAY	12 14 19 18 17 20 21
E	3RD STREET STA 15+28, 37'± LT ***	1-B 7'	-	-	-	-	-	-	W-2T	TOP	#2 #8	L 2	3	-	12 23 21
F	3RD STREET STA 15+13, 36'± RT ***	1-B 7'	-	-	-	-	-	-	W-2T	TOP	#2 #8	L 2	1	-	12 23 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 LUMINAIRES 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.

SIGN SCHEDULE	
CONSTRUCTION NOTE	17
SIGN ILLUSTRATION	
SIGN DESIGNATION	SPECIAL (RIGHT) 72"x17.5"
POLE*	D
SIGN ILLUSTRATION	
SIGN DESIGNATION	SPECIAL (LEFT) 72"x17.5"
POLE*	B

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

TAND, INC. AS-BUILT

DATE: _____ DANIEL MEYER

GRAPHIC SCALE (IN FEET)

1 2 3 4 5 6 7 8 9 10 11 12

ARM, SIGNAL, PED BUTTON (TOP VIEW)

811 SAFETY ALERT

Call Before you Dig

Under Ground

1-702-432-5300

RENT AN UNDERGROUND UTILITY LOCATOR

DATE	REVISIONS	SHEET REPLACEMENT
6/27/10		

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

BONNEVILLE/CLARK ONEWAY COUPLET PHASE 1 IMPROVEMENT PLANS

TRAFFIC SIGNAL CLARK AVE AND 3RD ST

PROFESSIONAL SEAL

RANDY W. CARROLL

Exp. 12/31/10

CIVIL ENGINEER

STATE OF NEVADA

SHEET 61 OF 91

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