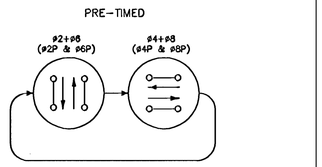
## PHASE DIAGRAM




FLASH OPERATIONS – ALL RED
OPTICOM PREEMPTION – ø2, ø4, ø6, ø8

## STREET NAME SIGN SCHEDULE 10

| POLE | ORDINAL | STREET NAME* | SUFFIX | BLOCK* | DOUBLE SIDED | NEW/ EXISTING |
|---|---|---|---|---|---|---|
| A | S | 1ST | St | 200 | YES | NEW |
| C | S | 1ST | St | 300 | YES | NEW |
| E | E | Bridger | Ave | 0 | YES | NEW |

STREET NAME SIGN (SEE CCAUSD No. 816, 818 AND CLV MODIFIED DETAIL ON SHEET TS-02)

* CONTRACTOR SHALL VERIFY BLOCK NUMBER AND STREET NAME SPELLING BY CONTACTING CLV PLANNING DEPARTMENT PRIOR TO FABRICATION OF SIGN.

SIGNAL TO BE TIME BASED COORDINATION UNTIL FIBER OPTIC IS INSTALLED WITH BRIDGER PROJECT.

## NOTE:

THE CITY OF LAS VEGAS (CLV) SHALL FURNISH THE FOLLOWING EQUIPMENT: ONE (1) CUSTOM XX-A TRAFFIC SIGNAL POLE FOR A POLE-MOUNTED CABINET; ONE (1) POLE MOUNTED TRAFFIC SIGNAL CABINET MOUNTING BRACKET AND STAND; ONE (1) POLE MOUNTED TRAFFIC SIGNAL CABINET MOUNTING BRACKET AND STAND; ONE (1) POLE MOUNTED TRAFFIC SIGNAL CABINET WITH M53 CONTROLLER, MALFUNCTION MANAGEMENT UNIT, LOAD BAY, LOAD SWITCHES, FLASHER AND FLASH TRANSFER RELAY GTT MODEL 760 OPTICOM PREEMPTION RACK WITH MODEL 764 PHASE SELECTOR CARD AND GTT 768 AUXILIARY INTERFACE PANEL. 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 CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE ANCHOR BOLTS, LUMINAIRE, SIGNAL MAST ARM AND LUMINAIRE ARM, AS INDICATED IN THE PLANS AND PAINTED AS SPECIFIED IN SECTION 623 OF THE SPECIAL PROVISIONS.

## WARNING – SHALLOW WATER MAIN

THE PROJECT AREA CONTAINS EXISTING SHALLOW WATER MAINS. DURING CONSTRUCTION THE CONTRACTOR IS REQUIRED TO MAINTAIN MINIMUM COVER OVER THE WATER MAIN, PER UDACS SECTION 2.08.04. IF MINIMUM COVER CANNOT BE MAINTAINED, THE CONTRACTOR IS REQUIRED TO PROTECT THE EXISTING MAIN FROM HEAVY EQUIPMENT OR EXTERNAL LOADS. ANY DAMAGE TO THE EXISTING WATER MAIN, OR APPURTENANCES, MUST BE REPORTED TO LVVWD IMMEDIATELY, AND WILL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

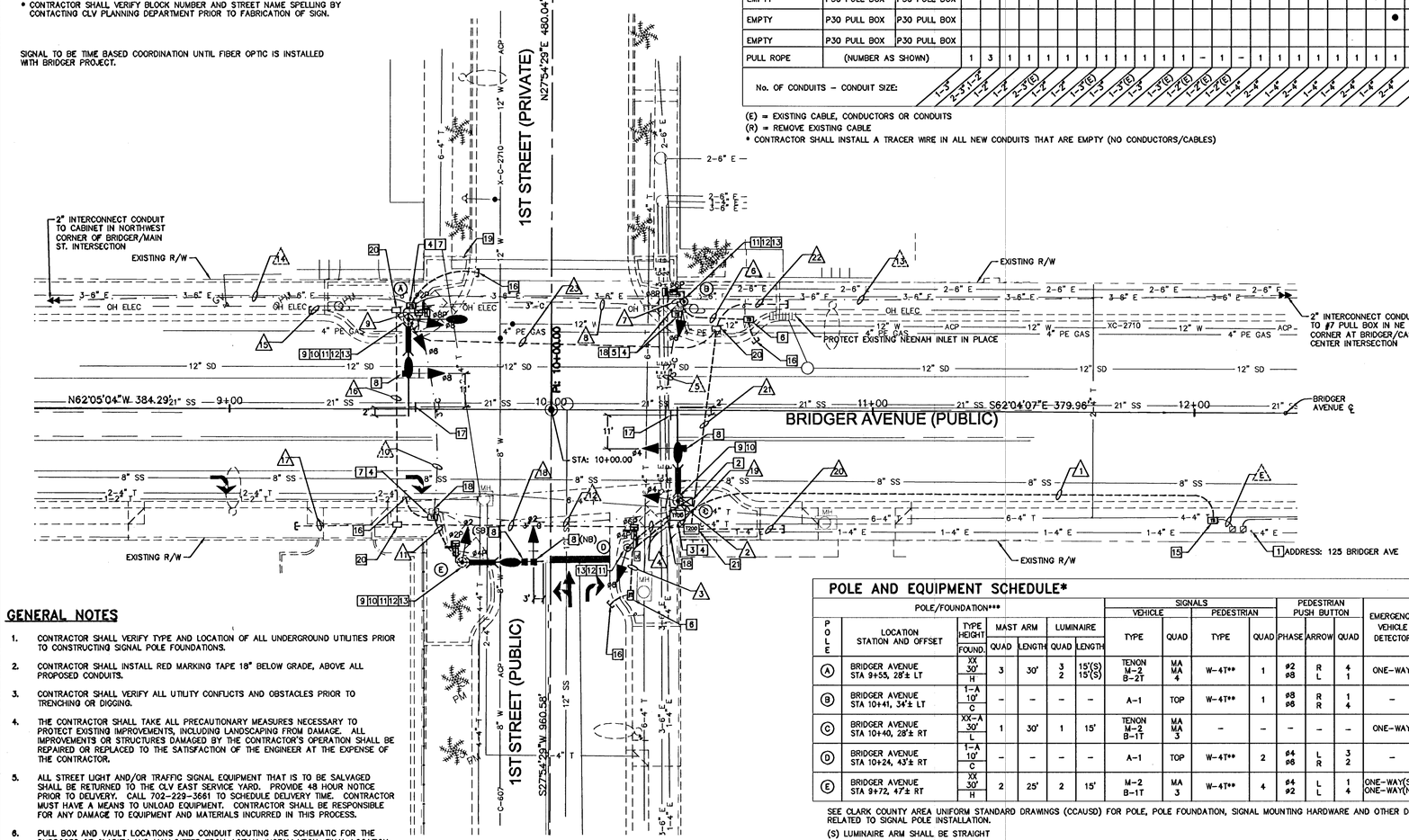
## CONDUIT AND WIRE SCHEDULE

| WIRE & CABLE | FROM | TO | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | E | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-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 1-No. 8 AWG | CONTROLLER | POLE A | | ● | | | ● | | | ● | ● | | | | | | | | | | | | | | | |
| 1-25 COND. No. 14 1-No. 8 AWG | CONTROLLER | POLE B | | ● | | | ● | | ● | | | | | | | | | | | | | | | | | |
| 1-25 COND. No. 14 1-OPTICOM CABLE 1-No. 8 AWG | CONTROLLER | POLE C | CABLES AND CONDUCTORS INSTALLED IN POLE | | | | | | | | | | | | | | | | | | | | | | | |
| 1-25 COND. No. 14 1-No. 8 AWG | CONTROLLER | POLE D | | ● | | ● | | | | | | | | | | | | | | | | | | | | |
| 1-25 COND. No. 14 2-OPTICOM CABLE 1-No. 8 AWG | CONTROLLER | POLE E | | ● | | | | | | | | | ● | ● | | | | | | | | | | | | |
| 4-No. 10 COND. | T100 VAULT | POLE A (INT LIGHTING) | | | | | ● | | | ● | ● | | | | | | | | | | | | | | | |
| 2-No. 10 COND. | T100 VAULT | POLE C (INT LIGHTING) | | ● | | | | | | | | | | | | | | | | | | | | | | |
| 2-No. 10 COND. | T100 VAULT | POLE E (INT LIGHTING) | | | | | | | | | | | ● | ● | | | | | | | | | | | | |
| EXISTING 12 PAIR SIC | CONTROLLER (CASINO CENTER) | CONTROLLER (MAIN ST) | | (E) | | | | | | | | (E) | | (E) | (E) | (E) | | | | | | | | | | |
| EMPTY | P30 PULL BOX | P30 PULL BOX | | | | | | | | | | | | | | | | ● | | | | | | | | |
| EMPTY | P30 PULL BOX | P30 PULL BOX | | | | | | | | | | | | | | | | | ● | | | | | | | |
| EMPTY | P30 PULL BOX | P30 PULL BOX | | | | | | | | | | | | | | | | | | ● | | | | | | |
| EMPTY | P30 PULL BOX | P30 PULL BOX | | | | | | | | | | | | | | | | | | | ● | | | | | |
| EMPTY | P30 PULL BOX | T100 VAULT | | | | | | | | | | | | | | | | | | | | ● | | | | |
| EMPTY | P30 PULL BOX | P30 PULL BOX | | | | | | | | | | | | | | | | | | | | | ● | | | |
| EMPTY | P30 PULL BOX | P30 PULL BOX | | | | | | | | | | | | | | | | | | | | | | ● | | |
| EMPTY | P30 PULL BOX | P30 PULL BOX | | | | | | | | | | | | | | | | | | | | | | | ● | |
| EMPTY | P30 PULL BOX | P30 PULL BOX | | | | | | | | | | | | | | | | | | | | | | | | ● |
| PULL ROPE | (NUMBER AS SHOWN) | | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | – | 1 | – | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| No. OF CONDUITS – CONDUIT SIZE: | | | 1-3" | 2-3"/1-2" | 1-2" | 1-2" | 2-3"(E) | 1-2" | 1-3"(E) | 1-3" | 1-2"(E) | 1-3" | 1-2"(E) | 1-2"(E) | 1-2"(E) | 1-2"(E) | 1-4" | 2-4" | 1-4" | 2-4" | 1-4" | 1-4" | 2-4" | 1-4" | 2-4" | 2-4" |

(E) = EXISTING CABLE, CONDUCTORS OR CONDUITS
(R) = REMOVE EXISTING CABLE
* CONTRACTOR SHALL INSTALL A TRACER WIRE IN ALL NEW CONDUITS THAT ARE EMPTY (NO CONDUCTORS/CABLES)

## CONSTRUCTION NOTES

1. EXISTING 120/240 VAC, 125A PAD MOUNTED TS AND SL SERVICE PEDESTAL.
2. 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 ENGINEER.
3. FURNISH AND INSTALL TYPE 100 VAULT MARKED "TRAFFIC SIGNAL". SEE SPECIFICATIONS FOR DETAILS AND VENDOR CONTACT.
4. REMOVE EXISTING PULL BOX AND REPLACE WITH NEW PULL BOX.
5. FURNISH AND INSTALL No. 5 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CCAUSD No. 708 AND 709.
6. FURNISH AND INSTALL No. 3 1/2 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CCAUSD No. 705, 709, AND 827.
7. FURNISH AND INSTALL No. 7 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CCAUSD No. 707 AND 709.
8. FURNISH AND INSTALL GTT 721 OPTICOM SENSORS ON THE TRAFFIC SIGNAL HEAD(S) IDENTIFIED ON PLAN. FURNISH AND INSTALL ALL EQUIPMENT TO MAKE SYSTEM OPERATIONAL. RUN OPTICOM DETECTOR CABLE, 3M MODEL 138 FROM THE CONTROLLER TO THE SENSORS INDICATED ON PLANS AS SHOWN IN THE CONDUIT AND WIRE SCHEDULE. WIRE CONTROLLER AND PROVIDE ONE (1) GTT MODEL 764 PHASE SELECTOR.
9. FURNISH AND INSTALL 400 WATT HIGH PRESSURE SODIUM INTERSECTION LIGHTING AS INDICATED ON PLANS AND SECTION 623 OF THE SPECIAL PROVISIONS. LIGHTING SHALL CONFORM TO CITY OF LAS VEGAS STANDARDS.
10. FURNISH AND INSTALL INTERNALLY-ILLUMINATED STREET NAME SIGN ON MAST ARM. SEE STREET NAME SIGN SCHEDULE (THIS SHEET).
11. PEDESTRIAN PUSH BUTTONS SHALL BE AUDIBLE/TACTILE TYPE. THE CONTRACTOR SHALL PROVIDE AN AUDIBLE-TACTILE PEDESTRIAN PUSH BUTTON CONTROL UNIT, INTERFACE PANEL AND ANY REQUIRED HARNESSES TO MATCH THE TYPE OF AUDIBLE-TACTILE PEDESTRIAN PUSH BUTTONS THAT ARE INSTALLED ON THE SIGNAL POLES. THE CONTRACTOR SHALL INSTALL AND WIRE THE AUDIBLE-TACTILE PEDESTRIAN PUSH BUTTON EQUIPMENT IN THE CABINET TO PROVIDE A FULLY FUNCTIONING SYSTEM.
12. ALL VEHICLE SIGNAL INDICATIONS AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE SUPPLIED AND INSTALLED WITH LIGHT EMITTING DIODE (LED) SIGNAL MODULES.
13. PEDESTRIAN SIGNAL HEADS SHALL BE COUNTDOWN TYPE.
14. NOT USED
15. INTERCEPT EXISTING 1 1/4" CONDUIT STUB FROM SERVICE PEDESTAL AND INSTALL No. 3 1/2 PULL BOX MARKED "TRAFFIC SIGNAL" IN ACCORDANCE WITH CCAUSD No. 705, 709, AND 827.
16. FURNISH AND INSTALL 1-2" CONDUIT STUB OUT WITH CAP FROM NEW PULL BOX TO EDGE OF PAVEMENT FOR FUTURE LOOP DETECTOR INSTALLATION.
17. FURNISH AND INSTALL TENON ON MAST ARM.
18. EXTEND EXISTING CONDUITS TO TERMINATE IN NEW PULL BOX OR VAULT INSTALLATION.
19. REMOVE AND SALVAGE EXISTING SIGN AND POST
20. FURNISH AND INSTALL P30 PULL BOX MARKED "FIBER OPTIC" IN ACCORDANCE WITH CCAUSD NO. 761, 764, AND 765
21. FURNISH AND INSTALL T200 PULL BOX MARKED "FIBER OPTIC" IN ACCORDANCE WITH CCAUSD NO. 762, AND 765




## BASIS OF BEARING

THE BASIS OF BEARINGS FOR THIS MAP IS SOUTH 62°04'07" EAST, BEING THE CENTERLINE OF BRIDGER AVENUE, BETWEEN FIRST STREET AND CASINO CENTER BOULEVARD, AS SHOWN ON THAT MAP ON FILE WITH THE CLARK COUNTY RECORDER IN FILE 168, PAGE 30 OF SURVEYS.

## BENCHMARK

THE ELEVATION DATA SHOWN HEREON ARE U.S. SURVEY FEET REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, CITY OF LAS VEGAS (UPDATED 05/24/2010), BASED UPON BENCHMARK No. 1LV01, STATION "34NW6" BEING A 3-INCH NDOT BRASS CAP IN TOP OF CURB AT SOUTHEAST CORNER OF MAIN AND BRIDER.

ELEVATION 617.329 METERS – PUBLISHED

ELEVATION 2025.35 U.S. SURVEY FEET – COMPUTED

## 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 ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
5. ALL STREET LIGHT AND/OR TRAFFIC SIGNAL EQUIPMENT THAT IS TO BE SALVAGED SHALL BE RETURNED TO THE CLV EAST SERVICE YARD. PROVIDE 48 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.
6. PULL BOX AND VAULT LOCATIONS AND CONDUIT ROUTING ARE SCHEMATIC FOR THE PURPOSES 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 | POLE/FOUNDATION*** TYPE HEIGHT FOUND. | MAST ARM QUAD | MAST ARM LENGTH | LUMINAIRE QUAD | LUMINAIRE LENGTH | SIGNALS VEHICLE TYPE | VEHICLE QUAD | PEDESTRIAN TYPE | PEDESTRIAN QUAD | PEDESTRIAN PUSH BUTTON PHASE | ARROW | QUAD | EMERGENCY VEHICLE DETECTOR | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | BRIDGER AVENUE STA 9+55, 28'± LT | XX 30' H | 3 | 30' | 3 2 | 15'(S) 15'(S) | TENON M-2 B-2T | MA MA 4 | W-4T** | 1 | ø2 ø8 | R L | 4 1 | ONE-WAY | 8 9 10 11 12 13 17 |
| B | BRIDGER AVENUE STA 10+41, 34'± LT | 1-A 10' C | – | – | – | – | A-1 | TOP | W-4T** | 1 | ø8 ø6 | R R | 1 4 | – | 11 12 13 |
| C | BRIDGER AVENUE STA 10+40, 28'± RT | XX-A 30' L | 1 | 30' | 1 | 15' | TENON M-2 B-1T | MA MA 3 | – | – | – | – | – | ONE-WAY | 2 8 9 10 17 |
| D | BRIDGER AVENUE STA 10+24, 43'± RT | 1-A 10' C | – | – | – | – | A-1 | TOP | W-4T** | 2 | ø4 ø6 | L R | 3 2 | – | 11 12 13 |
| E | BRIDGER AVENUE STA 9+72, 47'± RT | XX 30' H | 2 | 25' | 2 | 15' | M-2 B-1T | MA 3 | W-4T** | 4 | ø4 ø2 | L L | 1 4 | ONE-WAY(SB) ONE-WAY(NB) | 8 9 10 11 12 13 |

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

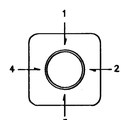
(S) LUMINAIRE ARM SHALL BE STRAIGHT
(SB) SOUTHBOUND APPROACH
(NB) NORTHBOUND APPROACH

* ALL POLES, MAST ARMS, AND LUMINARIES SHALL CONFORM TO THE CITY OF LAS VEGAS DOWNTOWN CENTENNIAL STANDARDS. (BLACK GREEN RAL-6012.)
** SEE SHEET TS-02 FOR PEDESTRIAN SIGNAL ASSEMBLY DETAIL.
*** CONTRACTOR SHALL STAKE POLE FOUNDATION LOCATIONS FOR APPROVAL BY CITY OF LAS VEGAS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL POTHOLE NEW FOUNDATION LOCATIONS PRIOR TO CONSTRUCTION TO IDENTIFY ALL SUBSURFACE CONFLICTS. IF CONFLICTS ARE IDENTIFIED THE CONTRACTOR SHALL WORK WITH THE CITY OF LAS VEGAS TO DETERMINE AN ALTERNATE FOUNDATION LOCATION. FINAL POLE LOCATIONS SHALL BE IDENTIFIED PRIOR TO LOCATING/INSTALLING TENONS ON MAST ARMS.

APPROVED FOR CONSTRUCTION
Y. DISHARI FOR DOA MEADE
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE 8/14/13 PROJECT No. 116875 ESN 018

NO IMPACT TO LVVWD FACILITIES

GRAPHIC SCALE
20 0 10 20 40
( IN FEET )




QUADRANT
ARM, SIGNAL, PED BUTTON
(TOP VIEW)

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

SAFETY ALERT Call Before You Overhead

Call before you UnderGround 1-702-432-5300

REVISIONS | DATE

SCALE (V): N/A | DATE: JANUARY 2013
SCALE (H): 1"=20' | DESIGNED BY: RWC | CHECKED BY: RWC
DRAWN BY: RWF

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Engineering, Planning, and Environmental Consultants
6671 Las Vegas Boulevard, South, Suite 320, Las Vegas, NV 89119
PH. (702) 734-5656

DEPARTMENT OF PUBLIC WORKS

PROJECT: BRIDGER / 1ST STREET TRAFFIC SIGNAL

SHEET: TRAFFIC SIGNAL PLAN SHEET

PROFESSIONAL ENGINEER SHANNON R. AHARTZ Exp: 12/31/14 CIVIL No. 021213 STATE OF NEVADA
4/4/13

SHEET NO. TS-01
SHEET 4 OF 5
DRAWING NO. 208-587

BID# 13.41180

Apr 04, 2013 – 12:06pm – USER Michael.Mosley
K:\LAV_PublicTrans\092256\022 Bridger-1st Signal Design\CADD\256022ts-01_02.dwg