

1. ALL WORK PERFORMED ON ANY TRAFFIC SIGNAL COMPONENT MUST BE UNDER THE DIRECT SUPERVISION OF AN IMCA CERTIFIED TECHNICIAN. THE LEVEL OF CERTIFICATION REQUIRED SHALL BE LEVEL II EFFECTIVE.

2. IF 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 BE RESPONSIBLE FOR UTILITY CONSIDERS TO VERIFY IN THE FIELD THE CALLS OF THEIR INSTALLATIONS 72 HOURS PRIOR TO CONSTRUCTION.

CALL-BEFORE-YOU-OVERHEAD 1-702-227-2929
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- ALL TRAFFIC SIGNAL INSTALLATIONS SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS SPECIFICATIONS AND SPECIAL PROVISIONS FOR PUBLIC WORKS' CONSTRUCTION OR IMPROVEMENTS FOR WYOMING COUNTY AREA, NEVADA, VOLUMES I AND II, ADOPTED BY THE REGIONAL TRANSPORTATION COMMISSION, APRIL 8, 1997 WITH ALL SUBSEQUENT REVISIONS. BRACKET MOUNTED (SIDE MOUNTED) VEHICLE SIGNAL ASSEMBLIES WITH 2 OR MORE SIGNAL HEADS SHALL HAVE AN ADDITIONAL ELBOW AS SHOWN IN UNIFORM STANDARD DRAWING NUMBER 863 AND SHOWN AS OPTION B IN UNIFORM STANDARD DRAWING NUMBER 844, AND SHALL HAVE A MINERALLARC SUPPORT AS SHOWN IN UNIFORM STANDARD DRAWING NUMBER 863 IF ONE OF THE SIGNAL HEADS CONTAINS 4 OR MORE SIGNAL MODULES.
- SERVICE SHALL HAVE 1-80 AMP SINGLE POLE BREAKER FOR SIGNAL, AND ONE 40 AMP SINGLE POLE BREAKER FOR STREET LIGHTS. SERVICE SHALL BE 200 AMP PADMOUNT.
- LINE SIDE OF METER TO BE WIRED WITH THREE #3 AWG THW LOAD SIDE SHALL BE WIRED WITH FOUR #4 AWG THW (2 BLACK, 2 WHITE AND ONE #6 AWG THW (GREEN).
- LUMINAIRES ON ALL SIGNAL POLES SHALL BE APPROVED LED EQUAL TO A 400 WATT HIGH PRESSURE SODIUM CUTOFF (G.E. MAQOAA) WITH MC-111 DISTRIBUTION PER SECTION 623 T.02.19 OF THE SPECIAL PROVISIONS. EACH LUMINAIRE SHALL HAVE AN INDIVIDUAL SWITCH AT P.E. ON CONTROL WIRE #10 AWG THW COPPER STRANDED WIRE (TYPICAL), IN THE EVENT THERE IS NO LUMINAIRE ON THE TRAFFIC SIGNAL POLE, THE 1000 WATT P.E. CONTROL SHALL BE MOUNTED ON THE POLE CAP.
- CHECK CONDUIT AND CABLE SCHEDULE FOR CONDUIT, CABLE, AND WRE SIZE. VERIFY ALL EXISTING CONDUIT RUNS.
- ALL PULLBOXES SHALL BE IN ACCORDANCE WITH UNIFORM STANDARD DRAWINGS NO. 705, NO. 706, AND NO. 707.
- TRAFFIC SIGNAL CABLE SHALL BE 15 OR 25 CONDUCTOR #14 AWG SOLID (TYPICAL) CABLE AND SHALL CONFORM TO IMSA SPEC. NO. 20-1
- PEDESTRIAN PUSH BUTTONS SHALL ADVANCE ACCESSIBLE "POLARA NAVIGATOR" TYPE (2 WIRE SYSTEM) OR CAMPBELL COMPANY'S ADJUSTABLE ACCESSIBLE PEDESTRIAN SYSTEM. BUTTONS WITH AAPC APC (CONTROLLER) IN ACCORDANCE WITH CITY OF LAS VEGAS SPECIAL PROVISIONS AND SECTION 623 OF THE COA U.S.S. PUSH BUTTON SIGNS SHALL BE R10-34 PR MUTCD, 2009 EDITION WITH FULL MOUNTING BRACKETS.. AS MODIFIED BY THE MANUFACTURER. THE SIGN SHALL BE 10" ABOVE SIDEWALK ED. THE MAXIMUM HORIZONTAL REACH DISTANCE IS TO BE 10". SIDEWALK RAMPS WILL BE ACCORDING TO U.S.D. NO. 235 (1-4) LATEST EDITION. WHEN AN EXISTING SIGNAL WITH EXISTING AUDIBLE-TACTILE PUSH BUTTON IS MODIFIED TO MEET THIS SPECIFICATION, THE EXISTING PEDESTRIAN PUSH BUTTONS OR CABINET EQUIPMENT MATCHES THE MANUFACTURE AND MODEL OF ANY EXISTING EQUIPMENT SCHEDULED TO REMAIN, TO PROVIDE A FULLY FUNCTIONING SYSTEM. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL CABINET EQUIPMENT, INCLUDING THE PEDAL/PUSH BUTTON CONTROL UNIT, INTERFACE PANEL AND ANY REQUIRED HARNESSSES, TO PROVIDE A FULLY FUNCTIONING SYSTEM.

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 SIGNS TO BE ADJACENT (NO GAP) TO THE M-5 SIGNAL HEAD. WHERE FLASHING YELLOW ARROW LEFT TURN SIGNAL ARE USED, A MAST ARM R10-12F "LEFT TURN YIELD ON FLASHING YELLOW ARROW" SIGN SHALL BE MOUNTED ADJACENT TO THE M-4 SIGNAL HEAD.

14. TRAFFIC SIGNAL CABINET SHALL BE A TYPE UNIT CABINET UNLESS OTHERWISE SPECIFIED IN THE PLANS. THIS IS COMMONLY REFERRED TO AS A "CABINETS". THE CABINET SHALL BE CONFORM WITH THE CITY OF LAS VEGAS SPECIFICATIONS AND THE CITY OF LAS VEGAS SPECIAL PROVISIONS. INSTALL CABINET ON R.O.W. OR SIDEWALK SURFACE MOUNTED. DRAWING SIGNAGE SHALL BE PROVIDED BY THE CONTRACTOR. CONTROLLER CABINET SHALL BE EQUIPPED WITH 16 LOAD BAY POSITIONS. THERE SHALL BE A 48 DETECTOR CHANNEL R. CABINET SHALL INCLUDE TWO (2) RACK-MOUNTED, 12 SLOT, LINE DETECTOR CHANNELS. EACH DETECTOR CHANNEL SHALL HAVE FOUR (4) INPUTS SO THAT ALL CHANNELS ARE AVAILABLE FOR TWO CHANNELS. THE CABLE COMMAND DECODE DETECTION CARDS. THE CABINET SHALL CONTAIN A 764 OPTION PHASE SELECTOR IN A 19" RACK WITH 764 CHANNELS. THE SURFACE PANEL MOUNTED IN THE CABINET AND FULLY WIRED FOR GREEN SEVEN CAPABILITIES.

15. THE CONTRACTOR SHALL SUPPLY A MALFUNCTION MANAGEMENT UNIT (MMU) AND TRAFFIC SIGNAL CONTROLLER TO THE CITY OF LAS VEGAS TRAFFIC SIGNAL REPAIR SHOP A MINIMUM OF 10 BUSINESS DAYS PRIOR TO THE DATE WHEN THE MMU AND CONTROLLER WILL BE REQUIRED. PHASING SCHEMES, FOR TESTING AND PROGRAMMING PURPOSES. THE CONTROLLER SHALL BE A LICENSED AND CERTIFIED TRAFFIC SIGNAL CONTROLLER. THE MMU SHALL BE A LICENSED AND LICENSED APOGEE CONTROLLER SOFTWARE. LATEST VERSION, AND THE MMU SHALL BE A MMU MODEL 18602A MANUFACTURED BY RENO, NV. THE MMU SHALL BE APPROVED EQUAL TO THE CONTRACTOR SHALL DELIVER A MMU TO THE CITY OF LAS VEGAS TRAFFIC SIGNAL CONTROLLER AT 2614 E. CHARLESTON BOULEVARD. THE CONTRACTOR SHALL NOTIFY THE CITY OF LAS VEGAS TRAFFIC SIGNAL CONTROLLER AT 2614 E. CHARLESTON BOULEVARD, CITY, AT ITS DISCRETION, MAY PROVIDE A DIFFERENT MODEL OF MMU OR CONTROLLER FOR INITIAL TROUBLESHOOTING, IN WHICH CASE CITY PERSONNEL WILL SWAP THE CONTROLLER OR MMU AFTER THE PRELIMINARY TESTING IS COMPLETED.

16. CONTRACTOR SHALL POTHOLE SIGNAL POLE LOCATIONS PRIOR TO ORDERING OF POLES.
17. ALL MAST ARMS TO BE HOT-DIP 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 DRAWING. THE CONTRACTOR SHALL OBTAIN HIS OWN AUTHORIZED REPRESENTATIVE. FOR TENON FABRICATION DETAILS SEE CLARK COUNTY AREA U.S.D. NO. 808 SHEET 2. ALL WELDING SHALL CONFORM TO AWS D2.0. SPECIFICATION FOR WELDED HIGHWAYS AND RAILWAY BRIDGES, AND TO ANY ADDITIONAL REQUIREMENTS OF THE AISC CODE OF SPECIFICATIONS FOR STRUCTURAL STEEL. ALL BED BED PAINTED AS PROVIDED FOR REPAIRING DAMAGED GALVANIZED SURFACES.

18. ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL HAVE LIGHT EMITTING DIODE (LED) TYPE INDICATIONS, IN CONFORMANCE TO CITY OF LAS VEGAS SPECIAL PROVISIONS AND TO SECTION 623 OF THE CCA USS. ALL PEDESTRIAN SIGNAL FACES SHALL PROVIDE "WALKING PERSON", "HAND", AND "COUNTDOWN" MESSAGES AS PROVIDED BY DURALIGHT MODEL 4004-MODEL 4005, OR EQUIVALENT, #430, #4770, 100%, OR APPROVED EQUAL. THE "COUNTDOWN" MESSAGE SHALL NOT FLASH. WHERE EXISTING SIGNALS ARE MODIFIED, THE CONTRACTOR SHALL VERIFY THAT LED PEDESTRIAN INDICATIONS FOR A SPECIFIC PHASE ARE OF THE SAME MANUFACTURE SO THAT THEY FUNCTION CORRECTLY, OR SHALL REPLACE ALL COUNTDOWN PEDESTRIAN INDICATIONS FOR THAT PHASE.

19. VIDEO DETECTION SYSTEMS WILL BE EITHER ITERTIS EDGE 2 WITH EDECONNECT PAK, (IP ADDRESSABLE); PEEK VIDEOTRAK I (WITH ETHERNET PORT); OR TRAFICON VP WITH WEMCOM (IP ADDRESSABLE). WHEN VIDEO DETECTION IS SPECIFIED ON THE TRAFFIC SIGNAL, ALL VIDEO DETECTION STATIONS SHALL BE SUPPLIED WITH THE NECESSARY EQUIPMENT TO PROGRAM THE VIDEO DETECTION SYSTEM. A PROGRAMMING "MOUSE", KEYPAD OR LAPTOP COMPUTER (IF REQUIRED FOR PROGRAMMING THE VIDEO DETECTION SYSTEM) AND APPROPRIATE SOFTWARE WILL BE SUPPLIED WITH EACH VIDEO DETECTION PERSONAL CONTROLS (PC) MAY NOT BE SUBSTITUTED FOR THE VIDEO DETECTION MONITOR (COLOR FLAT SCREEN) WILL BE SUPPLIED WITH EACH VIDEO DETECTION SYSTEM. EACH VIDEO CAMERA WILL HAVE POWER AND VIDEO CABLE DIRECTLY FROM THE CABINET. COAXIAL CABLE WILL BE TYPE 8281 (SOLID CENTER CONDUCTOR). CAMERAS THAT USE A PREFABRICATED CABLE INTEGRATING P,OWER AND COAXIAL CABLE INTO A SINGLE CABLE (E.G. CATV) WILL NOT BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TERMINATION OF COAXIAL CABLES. CAMERAS WILL BE MOUNTED PER MANUFACTURER'S RECOMMENDATIONS AND PER CLV TRAFFIC ENGINEER APPROVAL. VIDEO CAMERAS SHALL BE COLOR AND SHALL BE MOUNTED ON A MINIMUM 6 FOOT RISER ON THE SIGNAL MAST OR ON A 6' EXTENSION ARM. THE VIDEO DETECTION CAMERA SHALL BE LOCATED AT THE TOP OF THE CAMERA ON THE MAST ARM SHALL BE APPROVE BY THE TRAFFIC SIGNAL SUPERVISOR. A VIDEO FILTER (XC66-BNYC OR EQUIVALENT) WILL BE INSTALLED IN THE SIGNAL CABINET FOR EACH CAMERA VIDEO INPUT. VIDEO DETECTION PROCESSORS AND DETECTION INFORMATION SHALL BE PROVIDED BY THE CONTRACTOR TO THE TRAFFIC SIGNAL MANUFACTURER'S SOFTWARE. THE CONTRACTOR SHALL AIM CAMERAS AND PROGRAM AND CONFIGURE THE VIDEO DETECTION PROCESSORS TO PROVIDE A FULLY FUNCTIONING SYSTEM

20. WHERE NEW LOOPS WILL BE OVERLaid WITH NEW PAVEMENT, LOOP DETECTORS SHALL BE PREPARED FOR BY MANUFACTURERS BY EITHER A NEW OR EXISTING DETECTOR SYSTEMS, AND ALL LOOPS SHALL BE INSTALLED IN THE ROADWAY PRIOR TO PLACEMENT OF THE FINAL PAVEMENT LIFT. WHERE NEW LOOPS ARE INSTALLED THAT ARE NOT OVERLaid WITH NEW PAVEMENT, THE DETECTOR SHALL BE INSTALLED TO SECTION 632T.02.04.C OF THE CITY OF LAS VEGAS SPECIAL PROVISIONS. LOOP LEAD-IN CABLE SHALL BE INSTALLED IN 18 AWG MULTIPLE CONDUCTOR CABLE AS SPECIFIED IN SECTION 632T.02.04 OF THE CLV SPECIAL PROVISIONS. ALL WIRING HARNESSSES, RACK POSITIONS, AND LOOP LEAD-IN CABLE SHALL BE CLEAR OF THE TRAFFIC SIGNAL EQUIPMENT AND SHALL NOT BE LOCATED TO WHICH IT BELONGS AS SHOWN ON THE TRAFFIC SIGNAL PLANS. LOOPS SHALL BE LOCATED AS SHOWN ON THE TRAFFIC SIGNAL PLANS AND APPROVED BY THE CITY CLV.02.04 OF THE CLV SPECIAL DIVISION SHALL BE INSTALLED TO SECTION 632T.02.04 OF THE CLV SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.

21. OPTICAL PREEMPTION UNITS WILL BE GLOBAL TRAFFIC TECHNOLOGIES (ENCODING CAPABLE), MODEL 764 OPTICOM PHASE SELECTOR INSTALLED IN A MODEL 760 RACK WITH A MODEL 761 TRAFFIC SIGNAL CONTROLLER CABINET (AP) MOUNTED IN THE CABINET. AIR FUELED FOR GREEN SENSE CAPABILITY. OPTICOM WILL PROVIDE THE UNIT WITH ONE (1) YEAR WARRANTY PER DESCRIPTION, UNLESS SHOWN OTHERWISE IN THE PLANS, AND WILL BE INTERFACED TO THE TRAFFIC SIGNAL CONTROLLER CABINET WITH M-138 CABLE. THE SOUTHBOUND OPTICOM DETECTOR UNIT WILL BE INSTALLED IN THE SOUTHBOUND CHANNEL 1 OPTICOM PHASE SELECTOR, EASTBOUND ON CHANNEL 2, NORTHBOUND ON CHANNEL 3, AND WESTBOUND ON CHANNEL 4. UNLESS VARIATIONS ARE APPROVED BY THE TRAFFIC SIGNAL SUPERVISOR. THE PHASE SELECTOR UNITS ARE TO BE WIRELESSLY CAPABLE WITHOUT A 768 AIR. THE CONTRACTOR SHALL INSTALL AND WIRE A NEW 768 AIR.

22. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY CONSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESORTED OR REPLACE AT THE CONTRACTORS EXPENSE T50 THE SATISFACTION OF THE CITY.

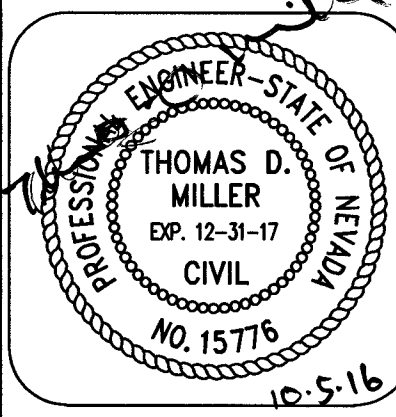
23. INTERCONNECT CABLE SHALL BE AS SHOWN IN THE WIRE SCHEDULE.

24. THE CONTRACTOR SHALL INSTALL CROSSWALKS, STOP BARS, STRIPING AND SIGNS AS IDENTIFIED ON THE PLANS.
25. WHERE THE PLANS CALL FOR REMOVAL AND SALVAGE OF EXISTING TRAFFIC SIGNAL EQUIPMENT, THE CONTRACTOR SHALL CONTACT KARL KELLEY, THE TRAFFIC SIGNAL SUPERVISOR, AT 702-229-4086 TO ARRANGE FOR DELIVERY TIMES AND LOCATIONS.

26. THE CONTRACTOR SHALL MAINTAIN EXISTING SIGNALS THROUGH THE LIFE OF THE PROJECT PER SECTION 623 G.03.01N OF THE CLV SPECIAL PROVISIONS.

1. NEW CONDUITS SHALL BE INSTALLED IN THE TRENCH SUCH THAT TOP OF CONDUIT SHALL HAVE A MINIMUM COVER OF 30" (36" WITHIN NDOT R/W) BELOW ADJACENT EDGE OF PAVEMENT OR ORIGINAL GROUND, WHICHEVER IS LOWER. RADIUS BENDS AND INSTALLATION PER CCA USG 623.
2. ALL WORK WITHIN NDOT R/W MUST CONFORM TO CONDITIONS OF NDOT ENCROACHMENT PERMIT.
3. ALL STATIONING AND OFFSETS OF TRAFFIC SIGNAL EQUIPMENT ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATIONS WITH CLV INSPECTOR PRIOR TO PLACEMENT.
4. A #8 GREEN GROUND WIRE SHALL BE RUN FROM GROUND LUG OF EACH SIGNAL POLE TO THE CONTROLLER CABINET AND FROM CONTROLLER CABINET TO THE SERVICE PEDESTAL.
5. EXISTING LOOP DETECTOR CABLE (NOT CURRENTLY USED) SHALL BE ABANDONED IN PLACE.
6. SEE SIGNING AND STRIPPING SHEETS FOR FIBER PULLBOXES AND CONDUIT RUNS ALONG PROJECT FRONTAGE.
7. MANUAL TRAFFIC CONTROL TO BE PROVIDED DURING PERIODS OF SIGNAL SHUTDOWN USING UNIFORMED TRAFFIC CONTROL OFFICERS.
8. CONDUIT LOCATIONS AS SHOWN ON THE DRAWINGS ARE FOR CLARITY OF RUNS ONLY.

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IMPROVEMENT PLANS FOR DC PLAZA
APN:125-17-601-007,010,013,020 AND 021

TRAFFIC NOTES AND SIGNALS

8451 FARM ROAD
 LAS VEGAS, NEVADA

[illegible]

CEI PROJECT: 4136

DESIGN BY: JDM SR

DRAWN BY: JDM SR

CHECKED BY: TDM P.E.

DATE: 02/12/12

SCALE:

SHEET NUMBER

C7.01

SHEET 33 OF 46

107V6734 H#64486