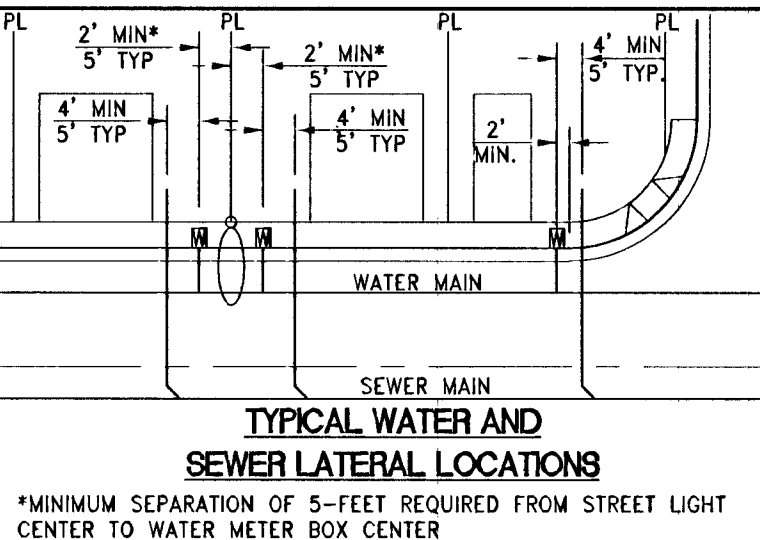
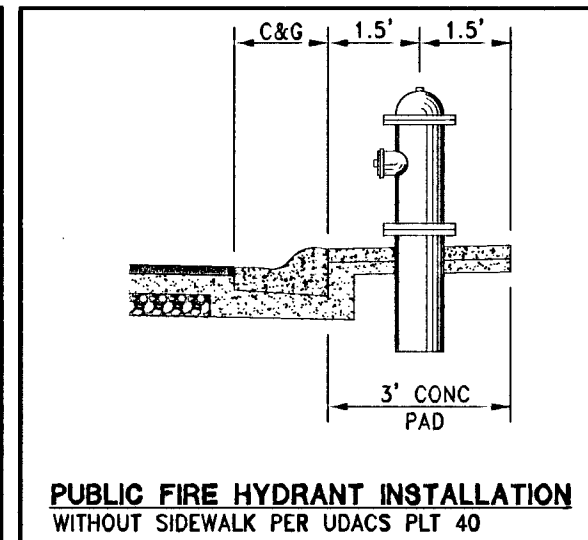


**DISCLAIMER NOTE:**  
 UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND OR OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. CONTRACTOR TO NOTIFY ENGINEER OF ANY CHANGES OR DISCREPANCIES.

Avoid overhead power line contact. It's costly.  
**Call before you Dig**  
 1-702-227-2929  
 Nevada Power Environment and Safety Services Department

Call before you Dig  
 Avoid cutting underground utility lines. It's costly.  
**Call 811**  
 1-800-227-2600  
 CLARK COUNTY PUBLIC OPERATIONS



**REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 1"**  
 APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLIES SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT TO ALLOW THE DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENT SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

- WATER CONSTRUCTION NOTES**
1. INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE No. 40 (INCLUDES 6" GATE VALVE)
  2. REMOVE EXISTING 8" CAP AND 2" BLOWOFF AND CONNECT TO EXISTING 8" WATER MAIN
  3. INSTALL 8" GATE VALVE PER UDACS PLATE No. 30 & No. 39
  4. INSTALL 8" X 6" TEE PER UDACS PLATE No. 31
  5. INSTALL 8" X 8" TEE PER UDACS PLATE No. 31
  6. INSTALL 8" X 6" REDUCER PER UDACS PLATE No. 30
  7. INSTALL 8" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE No. 36
  8. INSTALL 1" COPPER SERVICE LATERAL WITH 3/4" METER PER UDACS PLATE No. 2
  9. INSTALL 8" 5' BEND PER UDACS PLATE No. 31
  10. INSTALL 8" 11.25' BEND PER UDACS PLATE No. 31
  11. INSTALL 6" 11.25' BEND PER UDACS PLATE No. 31
  12. INSTALL 6" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE No. 36
  13. INSTALL 8" 45° VERTICAL BEND PER UDACS PLATE No. 22
  14. INSTALL STEEL CASING PER UDACS PLATE No. 23
  15. INSTALL WATERLINE IN EASEMENT PER DETAIL 1 ON SHEET MU-1
  16. EX 3/4" METER (ACCT # 807416) TO REMAIN IN PLACE FOR SERVICE TO LOT 162
  17. EX 3/4" METER (ACCT # 807416) TO REMAIN IN PLACE W/ 1" RPPA (ACCT #847946)

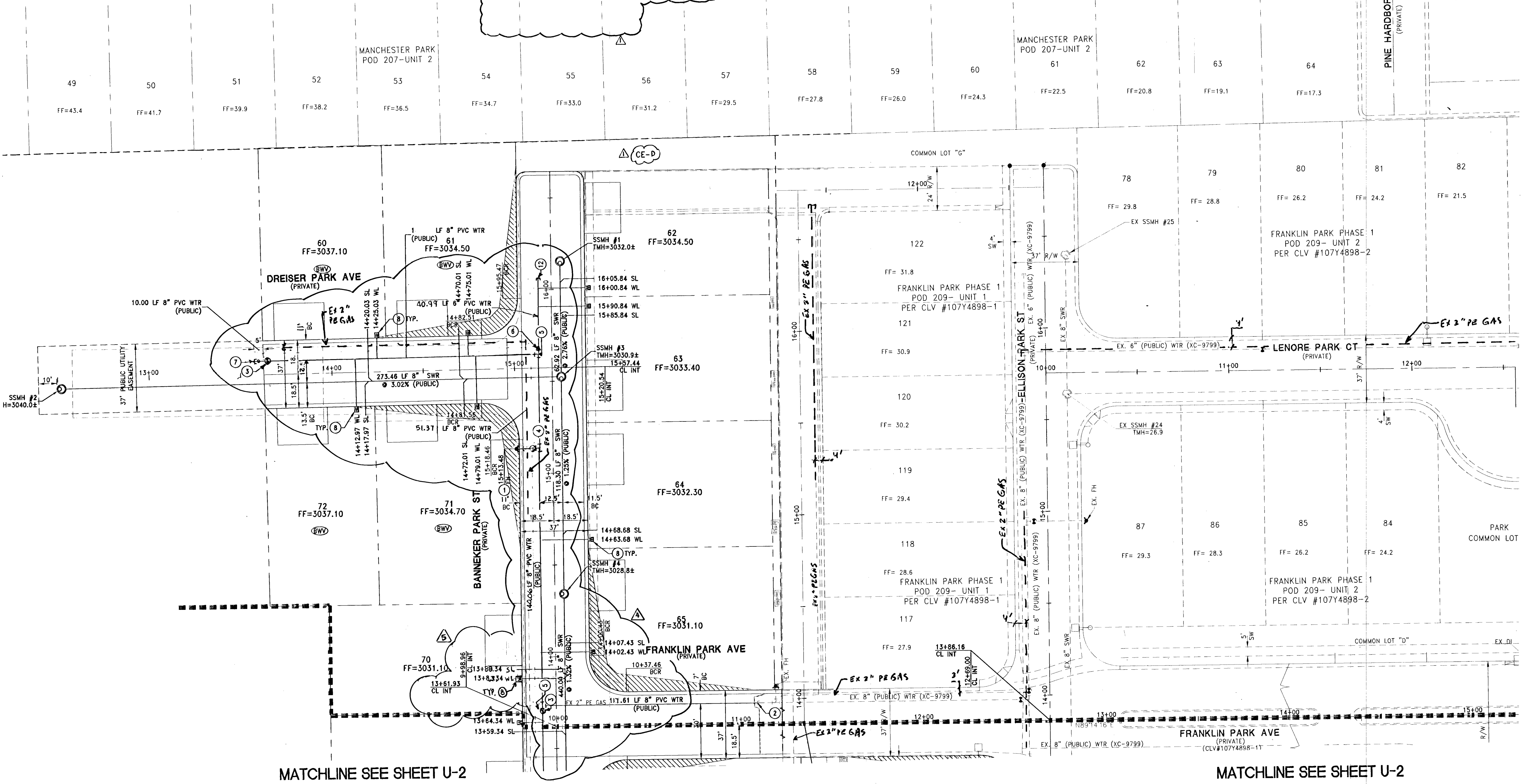
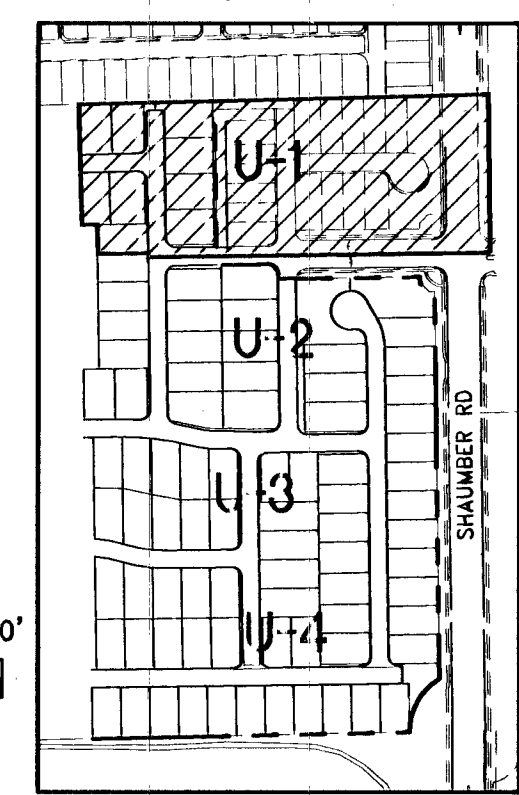
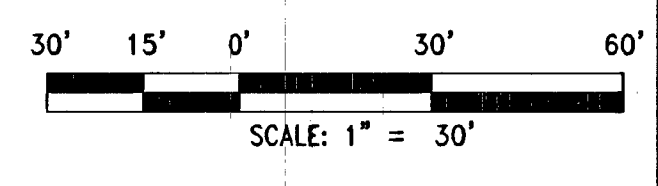
- SEWER CONSTRUCTION NOTES**
21. INSTALL 48" STANDARD MANHOLE (PER DCSWCS STD. No. SD-1A, SD-4, SD-5 & SD-6)
  22. INSTALL 4" SEWER LATERAL (PER DCSWCS STD No. SD-17, SD-22 & SD-23) AND 1 CUI-FT THRUST BLOCK @ CAP
  23. TYPICAL LOCATION FOR SEWER LATERAL AT WATER MAIN CROSSING. ALL SEWER LATERALS MUST MAINTAIN 24" VERTICAL CLEARANCE BELOW WATER MAIN AT CROSSINGS.
  24. REFORM MANHOLE BASE TO PROVIDE SMOOTH FLOW.

**BENCHMARK**  
 CITY OF LAS VEGAS BENCHMARK 6LV99 24NNW6  
 RIVET & PLATE CONCRETE PAD (ELECTRIC) 200'+/- SW OF P.I. OF ELKHORN RD & SCHAUMBER RD (LANSFORD ST)  
 ELEVATION = 914.637 METERS (2008 ADJUSTMENT)  
 ELEVATION = 3000.77 U.S. SURVEY FEET (2008 ADJUSTMENT)

**BASIS OF BEARINGS**  
 NORTH 00°45'09" EAST BEING THE BEARING OF THE EAST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 13, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY'S RECORDER'S OFFICE IN BOOK 118, PAGE 88 OF PLATS.

**BACKWATER VALVE**  
 ALL LOTS WITH THIS SYMBOL REQUIRE A BACKWATER VALVE

**PRESSURE REDUCING VALVE**  
 ALL LOTS WITH THIS SYMBOL REQUIRE A PRESSURE REDUCING VALVE



**WATER NOTE**  
 LOTS: 1-3, 5-23, 121-123, 145-155  
 THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRR'S ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD OFFICIALS.

**WATER MAIN JOINT DEFLECTION (PVC 4"-24")**  
 PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET. PER UDACS 2.07.01 AND 2.07.02 FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.  
**NOTE:**  
 INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15

**EXISTING UTILITY NOTE**  
 1. EXISTING UTILITIES AS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY BOTH VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. ENGINEER ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN INCORRECTLY OR OTHERWISE NOT SHOWN.

**NOTES**  
 1. ADJUST WATER VALVE BOXES TO FINISH GRADE PER UDACS PLATE NO.39. VALVES SHALL BE ACCESSIBLE AT ALL TIMES.  
 2. ALL SEWER/STORM DRAINS CROSSING WATERLINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSING AND CLEARANCES.  
 3. ALL WATER PIPE DIMENSIONS SHOWN ARE GIVEN FROM FITTING TO FITTING AND ARE FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL DIMENSION PRIOR TO CONSTRUCTION.

**UTILITY LATERAL NOTE**  
 WATER AND SEWER LATERAL STATIONS SHOWN ON THIS PLAN SET ARE CALCULATED AT THE BACK OF CURB

**WASTEWATER FLOW CALCULATION**  
 CALCULATIONS:  
 87 ERU (87 LOTS) \* 250 GPD = 0.0218 MGD  
 = 0.0218 \* 3.5 = 0.0763 MGD PEAK

**BUILDING INFORMATION**  
 TYPE OF CONSTRUCTION: V-B  
 TOTAL LIVING AREA: < 4,800 S.F.  
 TOTAL SF UNDER ROOF: < 4,800 S.F.  
 NUMBER OF STORIES: 2  
 BUILDING USE: SINGLE FAMILY RESIDENTIAL  
 SPRINKLERED: NO  
 NUMBER OF FIRE HYDRANTS: 9  
 FIRE FLOW: 1,250 GPM AT 20 PSI RESIDUAL

**CITY OF LAS VEGAS FIRE DEPARTMENT APPROVAL**  
 2/6/14  
 APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR ANY APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS.  
 APPROVED BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVVWD.  
 FIRE FLOW 1,250 GPM AT 20 PSI RESIDUAL

**APPROVED FOR CONSTRUCTION**  
 LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER  
 DATE: 2/6/14 PROJECT: 122409  
 LVVWD APPROVED FIRE FLOW 1,250 GPM AT 20 PSI RESIDUAL

DATE: February 05, 2014  
 HORIZ. SCALE: 1"=50'  
 VERT. SCALE: N/A  
 DRAWN BY: JLS  
 CHECKED BY: JLS  
 DESIGNED BY: JLS  
 APPROVED BY: JLS  
 PROJECT #: 3110.0003

REV. DATE DESCRIPTION  
 1 02/05/14

TOLL NORTH, LLC  
 1140 TOWN CENTER DRIVE SUITE 250  
 LAS VEGAS, NV 89144  
 PHONE: 702-243-9900 FAX: 702-243-9810

**RCI Engineering**  
 3281 S. HIGHLAND DRIVE SUITE 210, Las Vegas, NV 89109  
 PH: 702-243-0800 FAX: 702-243-0801

NEVADA  
 PROFESSIONAL ENGINEER  
 JOHN I. LAND  
 Exp. 12/31/2015  
 No. 16441  
 CIVIL

2/6/2014  
 DRAWING  
**U-1**  
 SHEET 13 OF 38  
 CLV DRAWING NUMBER  
 107Y4898-2A  
 CLV DRAWING