

DISCLAIMER NOTE:

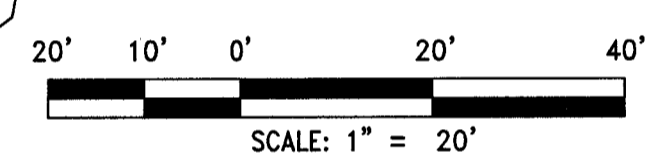
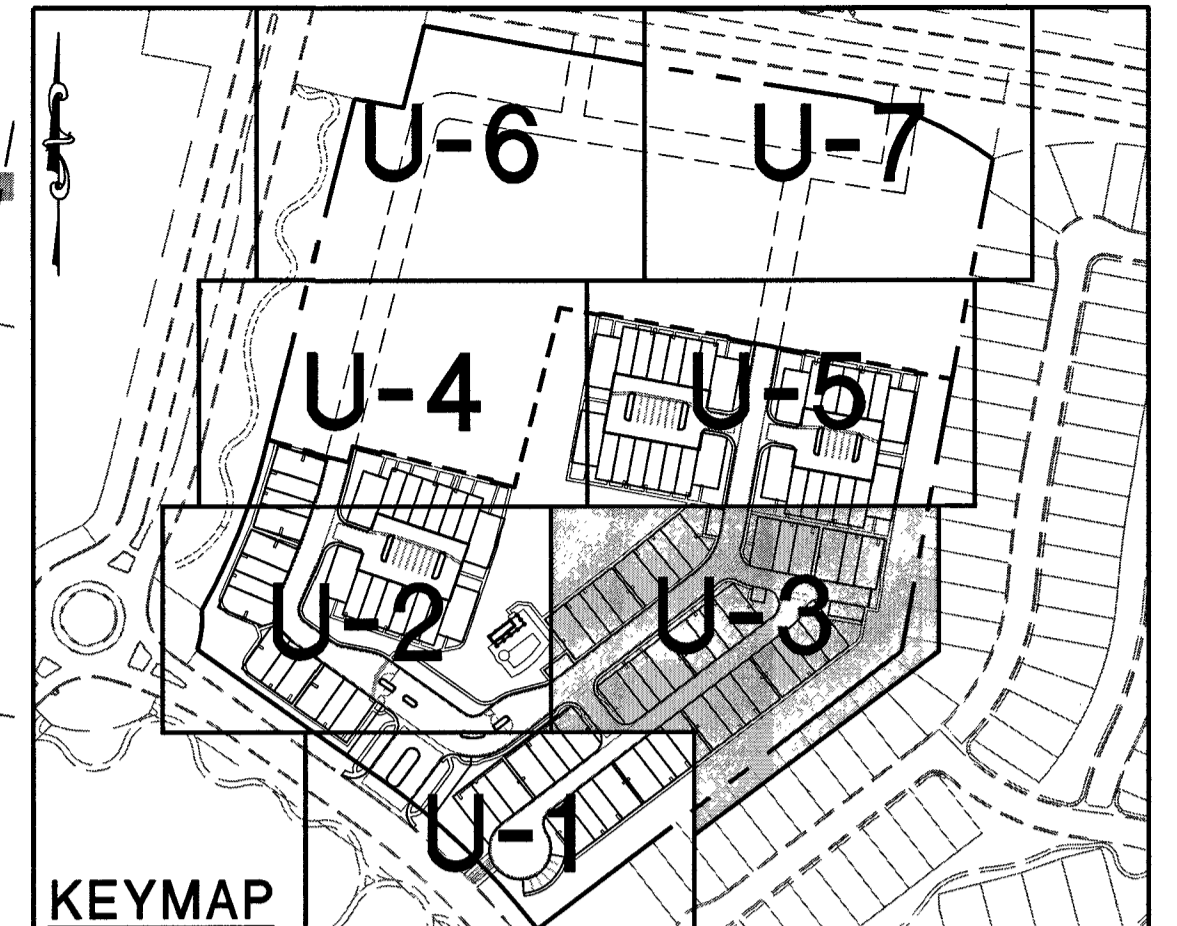
UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND OR OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN 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.

Call before you Dig
AVOID HITTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

Call 811
OR
1-800-227-2600

FAST
Call before you UnderGround
1-702-432-5300
FREWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD



FOR ALL DRY UTILITY CROSSINGS FOR WATER

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING.
- MAINTAIN MINIMUM 3" PARALLEL SEPARATION.
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OR COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

EXISTING UTILITY NOTES:

- 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:

ANY LOTS WITH A FINISH FLOOR ELEVATION BELOW 3,365.39 FT WILL REQUIRE AN INDIVIDUAL, ON-SITE (PRIVATE) PRESSURE REDUCING VALVE.

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

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL "SLV0233N4", BEING A RIVET AND PLATE IN TOP OF CONCRETE FENCE BENEATH ±25 MILE SOUTH OF LAKE MEAD & WEST OF CC215

ELEVATION: 3230.46 (US SURVEY FEET)
ELEVATION: 984.647 (METERS)

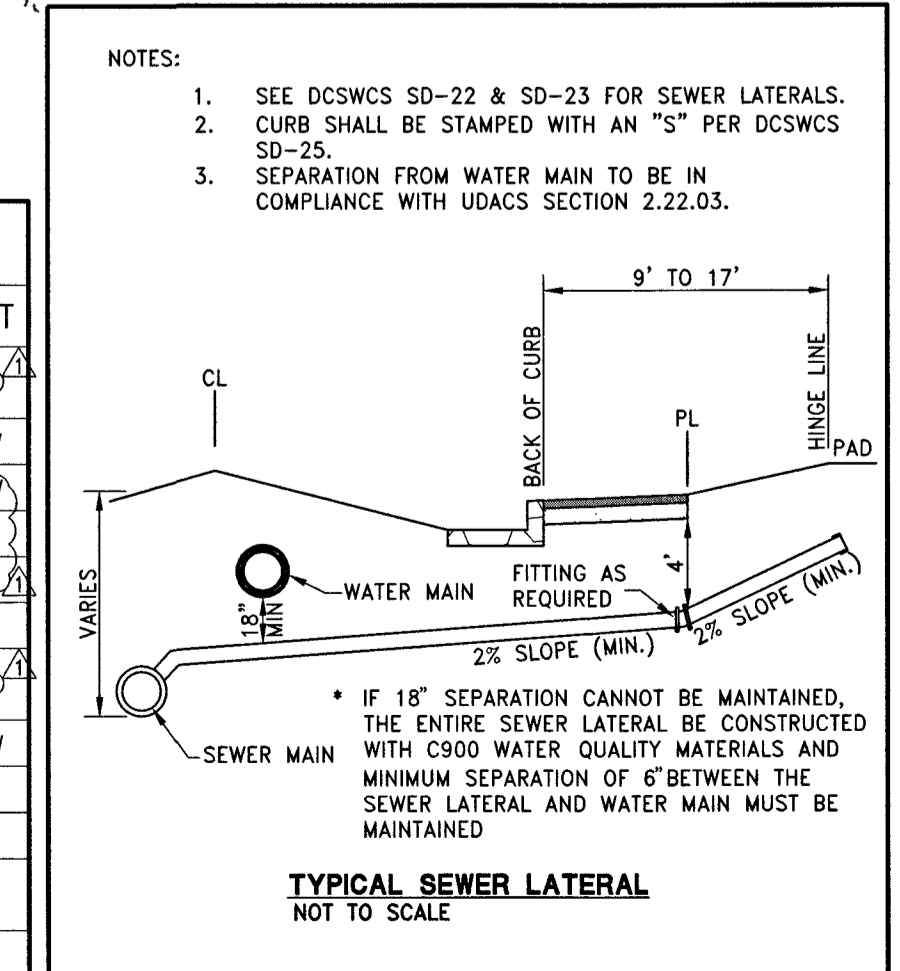
CITY OF LAS VEGAS VERTICAL CONTROL 2008 ADJUSTMENT (UPDATED 05/24/2010) BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

BASIS OF BEARINGS

NORTH 89°46'41" EAST BEING THE NORTH LINE OF SECTION 27, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., AS SHOWN IN FILE 118 AT PAGE 100 OF PARCEL MAPS OFFICIAL RECORDS CLARK COUNTY, NEVADA

SEWER MANHOLE TABLE

MANHOLE #	TMH	INV IN	INV OUT
8	RIM = 3419.02 3408.01 SW 3407.81 SE	3408.01 SW	3407.81 SE
9	RIM = 3415.54	3409.04 SW	
10	RIM = 3419.12	3407.22 NW	3407.02 NE
16	RIM = 3418.52	3408.71 NE	
17	RIM = 3413.52	3406.29 SW	3406.09 N
18	RIM = 3410.44	3406.68 W	
19	RIM = 3413.12	3405.82 S 3405.79 E	3405.55 W
20	RIM = 3414.34	3405.17 E	3404.97 NW
21	RIM = 3415.31	3405.95 NE	
22	RIM = 3414.52	3405.22 SW	3405.02 NE
23	RIM = 3414.02	3404.76 SE 3404.76 SW	3404.56 NE
24	RIM = 3413.72	3404.35 S	3404.15 N



BACKWATER VALVE

(BWV) ALL LOTS WITH THIS SYMBOL REQUIRE A BACKWATER VALVE PER UDACS PLATE NO. 29

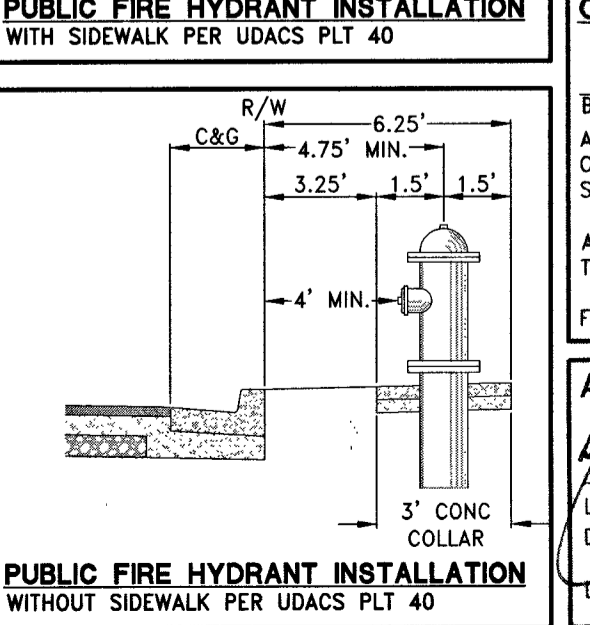
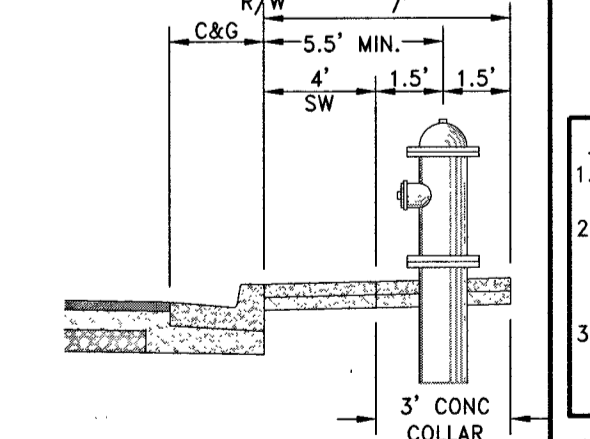
PRESSURE REDUCING VALVE

(PRV) ALL LOTS WITH THIS SYMBOL REQUIRE A PRESSURE REDUCING VALVE

WASTEWATER FLOW CALCULATION

CALCULATIONS:
105 ERU (105 LOTS) * 250 GPD = 0.026 MGD
= 0.026 * 3.5 = 0.091 MGD PEAK

DESIGN FLOW (25X WET WEATHER ALLOWANCE)
DESIGN FLOW = 0.091 (1.25) = 0.114 MGD

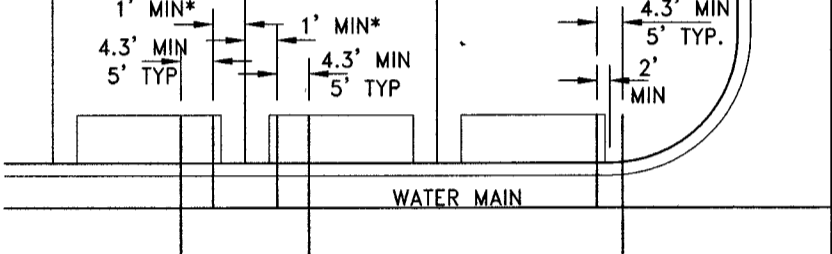


REDUCED PRESSURE PRINCIPLE ASSEMBLY (2) 8"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY (S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 59. NO WATER SHALL BE TAKEN FROM THE SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY LVVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

WATER SERVICE NOTES:

- FSM III - MUST BE MASTER METER OCTAVE AS APPROVED
- ONSITE BOOSTER PUMPS TO BE INSTALLED WHERE MINIMUM RESIDENTIAL PRESSURE IS NOT MET.



WATER CONSTRUCTION NOTES

- INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 40 (INCLUDES 6" GATE VALVE)
- INSTALL 1" COPPER SERVICE LATERAL PER UDACS PLATE NO. 2
- INSTALL (2) 3" SCHEDULE 40 PVC IRRIGATION SLEEVES
- INSTALL 8" 5' BEND PER UDACS PLATE NO. 31
- INSTALL 8" 11.25' BEND PER UDACS PLATE NO. 31
- INSTALL 8" 22.5' BEND PER UDACS PLATE NO. 31
- INSTALL 8" 45' BEND PER UDACS PLATE NO. 31
- INSTALL 8" 90' BEND PER UDACS PLATE NO. 31
- INSTALL 8" 45' VERTICAL BEND PER UDACS PLATE NO. 31
- INSTALL 8" X 8" CROSS PER UDACS PLATE NO. 31
- INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31
- INSTALL 8" X 6" TEE PER UDACS PLATE NO. 31
- INSTALL 8" GATE VALVE PER UDACS PLATE NO. 30 & NO. 39
- INSTALL 8" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36
- REMOVE EXISTING CAP AND CONNECT TO EXISTING WATER MAIN PER UDACS PLATE NO. 36
- INSTALL 1" COPPER SERVICE LATERAL WITH 1" WATER METER (FOR IRRIGATION) WITH 1" RPPA PER UDACS PLATE NO. S 4 & 8 (1" BRASS WATERLINE BETWEEN RPPA AND RPPA)
- INSTALL 6" GATE VALVE PER UDACS PLATE NO. 30 & NO. 39
- INSTALL 6" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36 FOR FUTURE FIRE HYDRANT
- INSTALL 6" FSM III - MUST BE MASTER METER OCTAVE AS APPROVED PER UDACS PLATE 52
- INSTALL 8" RPPA, WILKINS 475/475V, PER UDACS PLATE 59

SEWER CONSTRUCTION NOTES

- INSTALL 48" STANDARD MANHOLE (PER DCSWCS STD. NO. SD-1A, SD-1B, SD-4, & SD-5) SINGLE LID 24" (PUBLIC)
- INSTALL 48" STANDARD MANHOLE (PER DCSWCS STD. NO. SD-17, SD-22, SD-23 & SD-25) (PRIVATE)
- REMOVE EXISTING SEWER CAP AND 1 CU-FT THRUST BLOCK, AND CONNECT TO EXISTING SEWER.
- INSTALL LATERAL CLEANOUT (PER DCSWCS STD. NO. SD-26 (TRAFFIC RATED LID) (PRIVATE)
- INSTALL 48" SPECIAL MANHOLE "B" PER DCSWCS SD-13 (PUBLIC)
- USE FULL-STRENGTH GROUT AND WATER TIGHT JOINTS USING AGENCY-APPROVED SEALS AT MANHOLE SECTIONS AND GRADE RINGS PER DCSWCS STANDARDS

NOTES (WATER):

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

CITY OF LAS VEGAS FIRE DEPARTMENT APPROVAL

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.

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVVWD.

FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL WITH RESIDENTIAL FIRE SPRINKLERS.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 12/29/16 PROJECT: 124976

LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

CITY OF LAS VEGAS
Prof: 124976 Agr: 116101 QS: 137-27 NE/SE
Prof: 124976 Agr: 116101 QS: 137-27 NE/SE

RYLAND HOMES
8925 WEST RUSSELL ROAD
LAS VEGAS, NV 89148
(702) 360-7500 (702) 360-7005

RCI Engineering
4325 Dean Martin Drive, Suite 300, Las Vegas, NV 89103
Prof: 124976 Agr: 116101 QS: 137-27 NE/SE

IMPROVEMENT PLANS FOR
SANTA ROSA UNIT 1
VILLAGE 23B, PARCEL A-A AT SUMMERLIN
A SINGLE FAMILY RESIDENTIAL
UTILITY PLAN
(SHEET 3 OF 8)

CITY OF LAS VEGAS
12/29/16

APPROVED FOR CONSTRUCTION
DATE: 12/29/16 PROJECT: 124976

U-3
SHEET 18 OF 45
CLV DRAWING NUMBER
1075048-1
CLV PROJECT # 66716