

ESTIMATE OF UTILITY QUANTITIES (PUBLIC)

STD. F.H. PER UDACS PLATE NO. 7	10 EA.
8" PVC WATER LINE	2,659 LF.
8" PVC WATER LINE	3,374 LF.
1" SERVICE LATERALS	2,349 LF.
8" GATE VALVE	14 EA.
8"x6" REDUCER	4 EA.
2" B.O.	26 EA.
45" BEND	2 EA.
11" BEND	13 EA.
8"x6" TEE	18 EA.
8" CROSS	1 EA.
8" TEE	1 EA.
3/4" METER PER UDACS PLATE 1-B	166 EA.
1" WATER METER PER UDACS. PLATE NO. 1D.	1 EA.
1" RPPA PER UDACS. PLATE NO. 11A.	1 EA.
24"x8" TAPPING TEE W/8" TAPPING VALVE	1 EA.
45" SANITARY SEWER MANHOLE	44 EA.
8" PVC SANITARY SEWER	5,158 LF.
45" BEND	2 EA.
22" BEND	2 EA.
6" IRRIGATION SLEEVE	2 EA.
4" IRRIGATION SLEEVE	4 EA.
8" DIP WATER LINE	106 LF.

ALL LOTS MAY HAVE 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. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVWD FACILITIES.

NOTICE
G.C. WALLACE, INC. ASSUME NO RESPONSIBILITY FOR EXISTING UTILITY SHOWN OR NOT SHOWN. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM RECORD INFORMATION AND ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND DEPTH OF ALL RELEVANT UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. IF A CONFLICT OR DISCREPANCY IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY.

REDUCED PRESSURE PRINCIPLE ASSEMBLY (1)-1"
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. 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.

THE DISTRICT WILL NOT GUARANTEE A WATER-TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE AT ALL TIMES TO REMOVE FUGITIVE WATER WHICH IMPEDES THE CONTRACTOR'S PERFORMANCE IS AVAILABLE AT ALL TIMES. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

ABANDONED VALVE CUT AND CAP
ALL VALVES TO BE ABANDONED SHALL BE ABANDONED IN THE CLOSED POSITION, UNLESS SHOWN OTHERWISE, BY REMOVING A MINIMUM OF THE TOP TWENTY-FOUR (24) INCHES OF THE VALVE BOX, AND THEN FILING THE BOTTOM OF THE BOX WITH A MINIMUM OF EIGHT (8) INCHES OF SAND OR TYPE II AGGREGATE BASE. THE REMAINING PORTION OF THE VALVE BOX SHALL BE FILLED WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST TWO THOUSAND (2,000) PSI. THE LATERAL MUST BE CUT WITHIN THREE (3) FEET OF THE ABANDONED VALVE, AND CAPPED. THE CONTRACTOR SHALL CUT THE EXISTING PIPE WITH A CUTTING TOOL AND INSTALL A CAP COMPLETE WITH THRUST BLOCK, WHERE A JOINT OR COUPLING IN THE EXISTING PIPE IS UNCOVERED AT THE CUT AND CAP LOCATIONS, THE INSTALLATION OF A PLUG MAY BE PERMITTED WITH DISTRICT APPROVAL. A CONCRETE THRUST BLOCK SHALL BE INSTALLED AT ALL CAP OR PLUG LOCATIONS IN ACCORDANCE WITH THE PROVISIONS OF UDACS PLATE 5. ESN.033

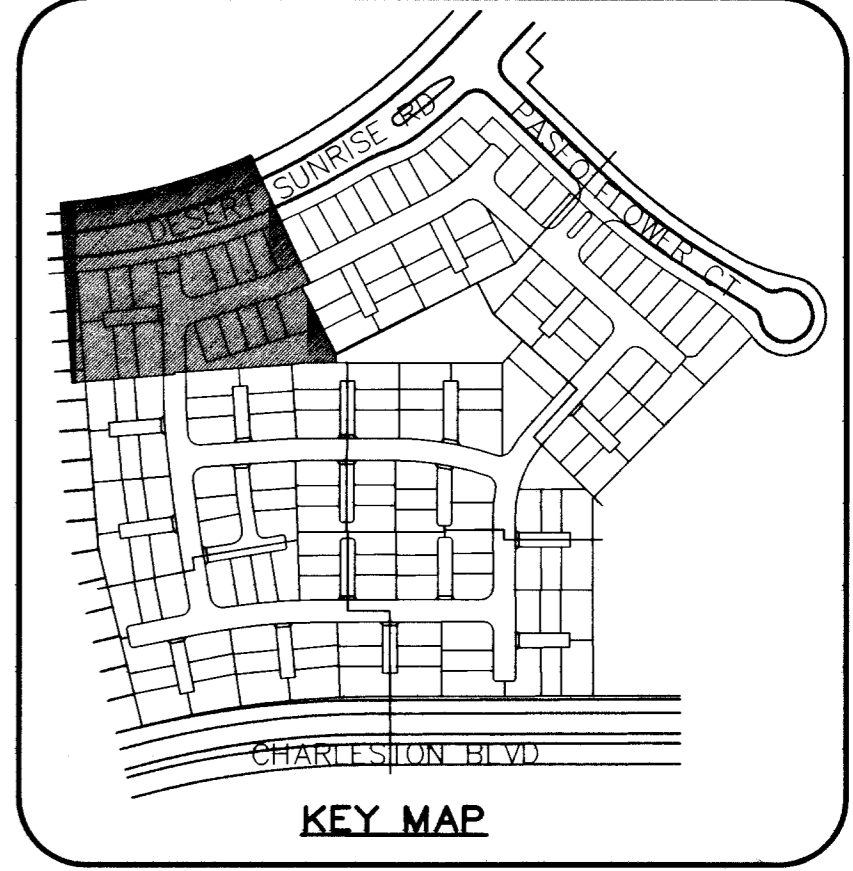
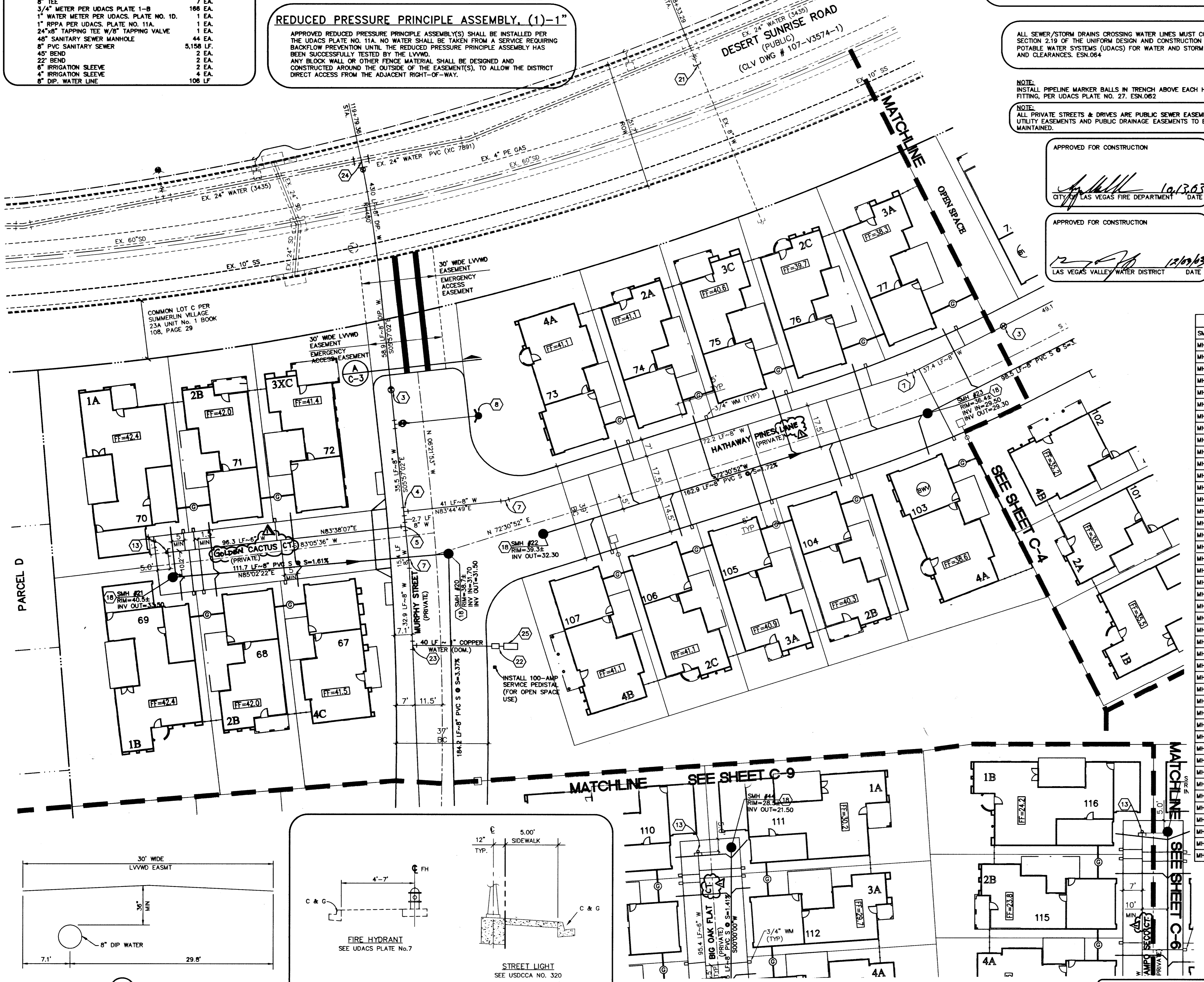
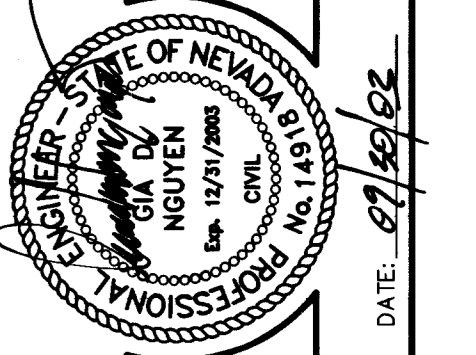
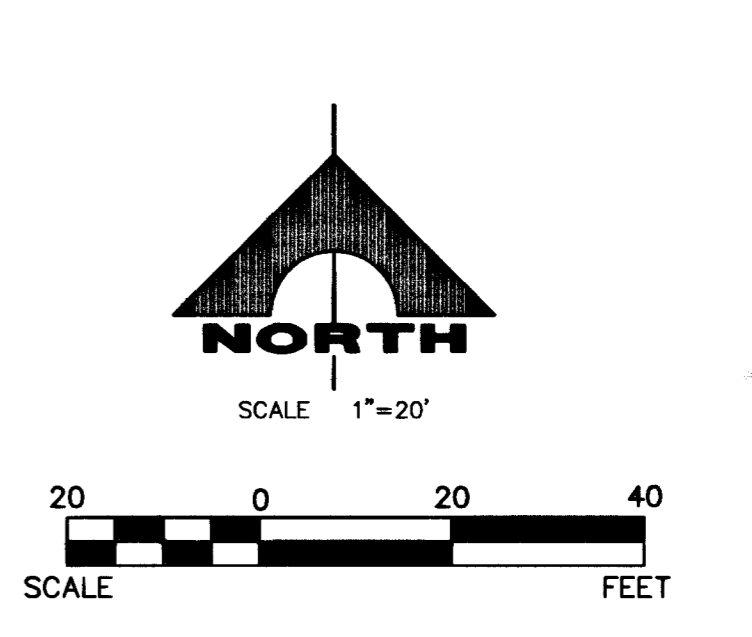
ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.19 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSING AND CLEARANCES. ESN.004

NOTE: INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 27. ESN.062

NOTE: ALL PRIVATE STREETS & DRIVES ARE PUBLIC SEWER EASEMENTS, PUBLIC UTILITY EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

APPROVED FOR CONSTRUCTION
[Signature] 10/13/03
CITY OF LAS VEGAS FIRE DEPARTMENT DATE

APPROVED FOR CONSTRUCTION
[Signature] 12/09/03
LAS VEGAS VALLEY WATER DISTRICT DATE

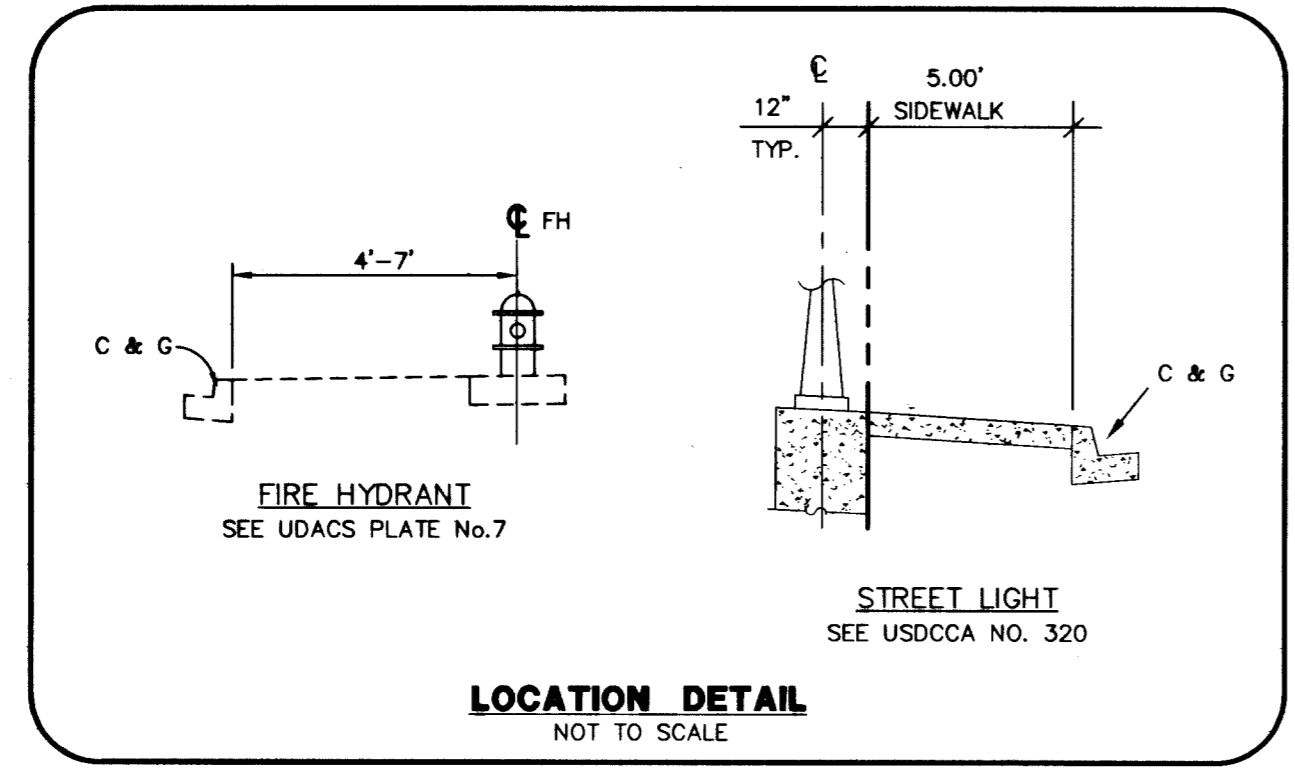
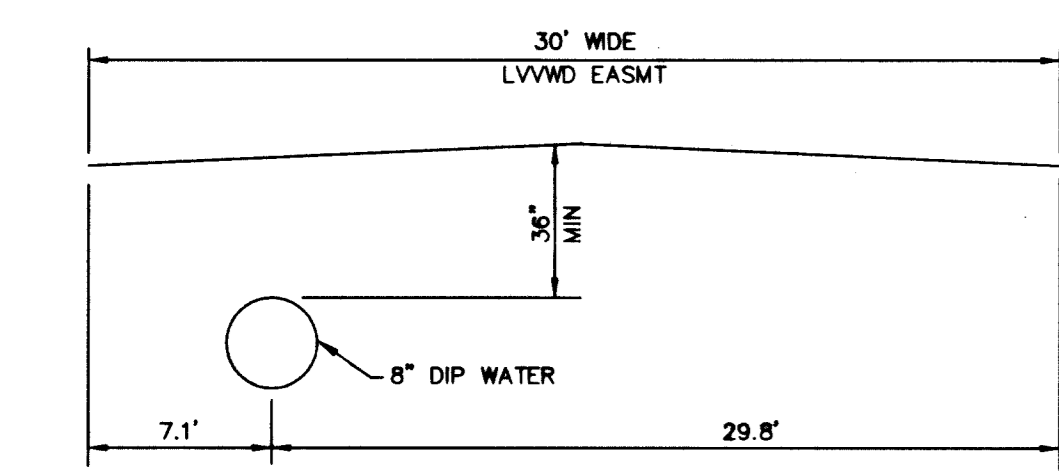


SEWER MANHOLE TABLE

SMH#	RIM	INV. IN	INV. OUT	NORTHING	EASTING
MH1	08.0±	93.81	93.61	513182.35	567438.85
MH2	08.7±	-	01.70	513182.69	567544.01
MH3	08.7±	97.98	97.78	513231.98	567438.68
MH4	10.3±	03.30	03.10	513231.68	567347.82
MH5	13.0±	06.00	05.80	513231.36	567255.39
MH6	13.8±	-	06.80	513134.11	567255.88
MH7	15.0±	08.00	07.80	513231.13	567186.16
MH8	18.0±	11.00	10.80	513230.78	567082.99
MH9	18.9±	-	11.90	513127.20	567083.33
MH10	21.8±	14.80	14.60	513209.50	566947.85
MH11	23.0±	16.00	15.80	513202.34	566902.35
MH12	24.0±	-	17.00	513106.13	566917.50
MH13	25.1±	-	18.10	513190.39	566826.47
MH14	24.4±	17.40	17.20	513319.92	566928.07
MH15	25.5±	18.50	18.30	513336.01	567024.58
MH16	26.5±	19.50	19.30	513379.18	566918.95
MH17	28.1±	-	21.10	513364.60	566811.53
MH18	32.3±	25.30	25.10	513541.64	566899.25
MH19	33.9±	-	26.90	513532.81	566790.40
MH20	38.7±	31.70	31.50	513725.80	566894.71
MH21	40.5±	-	33.50	513716.15	566783.43
MH22	39.3±	-	32.30	513733.89	566932.91
MH23	36.4±	29.50	29.30	513782.85	567088.32
MH24	32.9±	26.10	25.90	513827.66	567175.99
MH25	33.7±	-	26.90	513735.70	567223.00
MH26	27.0±	20.40	20.20	513903.57	567324.50
MH27	27.7±	-	21.10	513809.47	567372.60
MH28	24.1±	16.90	16.70	513940.26	567396.26
MH29	25.8±	-	19.10	513344.13	567073.27
MH30	15.9±	08.90	08.70	513774.37	567580.29
MH31	16.6±	-	09.60	513697.39	567510.85
MH32	12.7±	05.70	05.50	513702.38	567660.15
MH33	13.1±	-	06.30	513647.39	567721.16
MH34	11.7±	04.70	04.50	513579.45	567549.34
MH35	12.2±	-	05.80	513509.37	567619.59
MH36	10.8±	03.80	03.60	513455.85	567437.93
MH37	10.1±	03.12	02.92	513349.54	567438.29
MH38	10.8±	-	03.80	513349.90	567547.21
MH39	14.9±	07.45	07.25	513486.59	567346.84
MH40	14.8±	07.80	07.60	513497.40	567356.97
MH41	16.7±	-	09.70	513616.34	567356.99
MH42	22.5±	-	15.50	513613.67	567185.50
MH43	26.9±	19.90	19.70	513493.71	567009.29
MH44	28.5±	-	21.50	513607.16	567009.29

- UTILITY NOTES**
- REMOVE CAP AND BLOW OFF PER UDACS PLATE NO. 4A. NOTE NO. 1, AND CONNECT TO EXISTING MAIN. INSTALL 8" CROSS.
 - INSTALL 8" GATE VALVE.
 - INSTALL 8" TEE.
 - INSTALL 8"x6" TEE.
 - NOT USED.
 - INSTALL 8"-11 1/4" BEND.
 - INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 7. (INCLUDING 8" GATE VALVE)
 - INSTALL 8"x6" REDUCER.
 - INSTALL 45" BEND.
 - INSTALL 22 1/2" BEND - SEE PLAN FOR SIZE.
 - NOT USED.
 - INSTALL CAP & 2" BLOW-OFF ASSEMBLY. PER UDACS PLATE 4A.
 - NOT USED.
 - INSTALL 8" TEE.
 - REMOVE EXISTING CAP AND CONNECT TO EXISTING SEWER LINE.
 - CONTRACTOR TO VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - INSTALL 48" DIA. SEWER MANHOLE PER SANITATION DISTRICT STANDARDS.
 - INSTALL SEWER WYE PER SANITARY DISTRICT STANDARDS.
 - INSTALL IRRIGATION SLEEVES UNDER DRIVEWAYS PER SUMMERLIN DWG NO. U-18 (4-6", 2-4" SCH. 40 PVC) (VERIFY ALL IRRIGATION CROSSINGS WITH LANDSCAPE PLANS)
 - CUT AND CAP EX. 8" WATER AND ABANDON VALVE PER ABANDONMENT NOTE HEREON.
 - INSTALL 1" WATER METER PER UDACS PLATE NO. 1D.
 - INSTALL 8"x1" SERVICE SADDLE.
 - INSTALL 24"x8" TAPPING TEE AND 8" TAPPING VALVE.
 - INSTALL 1" RPPA PER UDACS PLATE NO. 11A.
 - INSTALL WATER AND SEWER CLEARANCE PER UDACS 2.19.01 SECTION B.

SEWER CONTRIBUTION
AVERAGE FLOW = 186 SINGLE FAMILY DWELLING x 1 ERU x 250 GPD / ERU = 41,500 GPD = 0.0415 MGD
PEAK FLOW = 0.0415 x 3.522 = 0.146 MGD



59331 61406 64694

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UNDERGROUND SERVICE (USA)



DESIGN: DR. WALLACE
CHECK: G. WALLACE
ISSUE DATE: 10/13/03
PLOT DATE: 09-25-03
PLOT TIME: 12:54:06
REV: 1
DATE: 07/29/02

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CALAVERA
RICHMOND AMERICAN HOMES
UTILITY PLAN I
SHEET C-3
3 OF 41 SHITS