C.L.V. FIRE DEPT. NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT "HYDRANT SPECIFICATIONS", "HYDRANT INSTALLATION SPECIFICATIONS" AND ORDINANCE #3944.
2. AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
   A. KENNEDY GUARDIAN
   B. MUELLER A-423 CENTURIAN
   C. CLOW MODEL 2546 MEDALLION
3. ON ANY NEW HOME OR BUILDING INSTALLATION , ACCESSIBLE FIRE HYDRANTS SHALL BE INSTALLED BEFORE COMBUSTIBLE CONSTRUCTION COMMENCES AND SAID FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER WITH AN ADEQUATE WATER SUPPLY.
4. CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT CENTER LINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED IN ORDINANCE #3944 TO IDENTIFY THE FIRE HYDRANT LOCATIONS.
5. CALL THE LAS VEGAS FIRE DEPARTMENT AT 229-2071 FOR UNDERGROUND INSPECTION, PRESSURE AND FLUSH VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE COVERING.
6. PAINTING OF THE CURBS AND HYDRANTS AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE PER ORDINANCE #3944 SHALL BE COMPLETED BEFORE APPROVAL BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
7. A PERMIT IS REQUIRED FROM THE FIRE DEPARTMENT FOR ON-SITE WATER LINE AND FIRE HYDRANT. THE PERMIT AND CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER PRIOR TO ANY WORK BEGINNING.
8. PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED.
9. A FLOW TEST MUST BE WITNESSED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY FOR VERIFICATION OF REQUIRED ON-SITE WATER SUPPLY.
10. ALL ON-SITE FIRE MAIN MATERIALS MUST BE U.L. LISTED AND A.W.W.A. APPROVED.
11. FIRE HYDRANT SPACING:

    RESIDENTIAL - 500 FEET UNSPRINKLERED; 1,000 FEET SPRINKLERED.
    COMMERCIAL, INCLUDING MULTI-FAMILY - 300 FEET UNSPRINKLERED; 600 FEET SPRINKLERED.
12. WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS, WHERE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF STRUCTURES, FIRE HYDRANTS SHALL BE SPACED AT MAXIMUM 1,000 FOOT SPACING TO PROVIDE FOR TRANSPORTATION HAZARDS.
13. NO FIRE HYDRANT SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
15. TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS INSTALLED ON A SINGLE SYSTEM.
16. NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
17. FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET PROVIDED NO PARKING IS ALLOWED, NOT LESS THAN 28 FEET IF PARALLEL PARKING IS ALLOWED ON ONE SIDE, AND NOT LESS THAN 36 FEET IF PARALLEL PARKING IS ALLOWED ON BOTH SIDES. VERTICAL CLEARANCE SHALL BE NOT LESS THAN 13 FEET 6 INCHES.
18. THE TURNING RADIUS FOR ANY FIRE APPARATUS ACCESS ROAD AND/OR FIRE LANE, PUBLIC OR PRIVATE SHALL BE NOT LESS THAN 45 FEET OUTSIDE RADIUS AND 22 FEET INSIDE RADIUS.
19. A FIRE APPARATUS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FEET FROM A FIRE DEPARTMENT VEHICLE ACCESS. (SEE EXCEPTIONS IN UFC 94, SECTION 902.2)
20. ALL DEAD END FIRE APPARATUS ACCESS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVED WITH AN APPROVED TURNAROUND AREA. SEE ORDINANCE #3944.
21. ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FEET ALONG ALL DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FEET OR LESS THAN 6 FEET FROM ROADWAY LEVEL. THE CURBS ALONG OR ON THE PAVEMENT OR CEMENT IF CURB IS NOT PRESENT, SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS.
22. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF LAS VEGAS GUIDELINES FOR AUTOMATIC EMERGENCY VEHICLE ACCESS GATES.

1/96

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENTS IS: AT 20 psi RESIDUAL PRESSURE.	1,500 GALLONS PER MINUTE
BASED ON:	
SQUARE FOOTAGE	2000 ± SF.
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS:	N/A
BUILDING HEIGHT	20' ±
NUMBER OF STORIES	TWO-STORY
TYPE OF CONSTRUCTION	TYPE 5
OCCUPANCY	SINGLE-FAMILY
FULL AUTOMATIC FIRE SPRINKLER SYSTEM	NONE

REVIEWED BY: [signature] DATE: 6-13-97

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, 48 HOUR NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO A LVVWD INSPECTION.

2. ALL WORK SHALL CONFORM THE LVVWD'S STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS AND THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDACS), LATEST EDITION.

3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.

4. A SINGE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.

5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.

6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.

7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVE WAYS, VALLEY AND CURB GUTTERS.

8. THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT A WATER LINE AND SANITARY OR STORM SEWER LINE CROSS:

A MINIMUM EIGHTEEN (18) INCH VERTICAL SEPARATION (OUTSIDE TO OUTSIDE) MUST BE MAINTAINED WHEN THE WATER LINE IS INSTALLED OVER THE SANITARY OR STORM SEWER LINE. IF THE VERTICAL SEPARATION CANNOT BE MAINTAINED OR THE WATER LINE MUST BE PLACED UNDER THE SANITARY OR STORM SEWER LINE, THE SANITARY OR STORM SEWER LINE MUST BE CONSTRUCTED WITH ONE OF THE FOLLOWING OR, AS SHOWN ON THESE PLANS:

a. POTABLE WATER SUPPLY QUALITY MATERIAL,
b. ENCASEMENT, WITH FOUR (4) INCH CONCRETE (MINIMUM)
c. SLEEVING WITH POTABLE WATER SUPPLY QUALITY PIPE.

EACH PROVISION MUST EXTEND ALONG THE SANITARY OR STORM SEWER, ON EITHER SIDE OF THE MAIN, A MINIMUM 10 FOOT DISTANCE PERPENDICULAR TO THE WATER MAIN EXTERIOR.

9. WARNING TAPE SHALL BE REQUIRED OVER ALL MAINS, ALL SIX (6) INCH DIAMETER AND LARGER SERVICE LATERALS, AND ANY SERVICE LATERAL NOT INSTALLED PERPENDICULAR TO THE MAIN IN ACCORDANCE WITH STANDARD PLATE NO. 27.

10. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD'S DISTRIBUTION SYSTEM.

11. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT (48) HOUR PRIOR TO PICKUP.

12. CONSTRUCTION MAY INTERRUPT SERVICE, WITH LVVWD APPROVAL AND PROPER NOTIFICATION, BETWEEN THE HOURS OF 10 P.M. AND 6 A.M., SUNDAY THROUGH THURSDAY. CIRCUMSTANCES MAY REQUIRE TEMPORARY SERVICE FEEDS BE INSTALLED, WITHOUT LVVWD REIMBURSEMENT. ANY TEMPORARY SERVICE FEED MUST HAVE PRIOR LVVWD APPROVAL.

13. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD'S PRE-APPROVED MATERIALS AND MANUFACTURERS LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
LVVWDSTD. - Revised: April 25, 1995

APPROXIMATE QUANTITIES

ITEM	QUANTITY TOTAL
WATER	
1. 12" WATER MAIN	1,649 L.F.
2. 10" PVC WATER MAIN	325 L.F.
3. 8" PVC WATER MAIN	949 L.F.
4. 6" PVC WATER MAIN	408 L.F.
5. 12" GATE VALVES	2 EA.
6. 10" GATE VALVES	1 EA.
7. 8" GATE VALVES	4 EA.
8. 6" GATE VALVES	1 EA.
9. 10" X 8" REDUCER	2 EA.
10. 8" X 6" REDUCER	1 EA.
11. 12" TEE	1 EA.
12. 10" TEE	1 EA.
13. 10"x6" TEE	1 EA.
14. 8" TEE	2 EA.
15. 2" BLOW-OFF ASSEMBLY	4 EA.
16. FIRE HYDRANT ASSEMBLY (8"x6" TEE, 6" G.V., 6" LAT.)	3 EA.
17. 12" 90° BEND	3 EA.
3/4" WATER METER FROM L.V.V.W.D. (UDACS PLATE 1B)	59 EA.
1" WATER SERVICE	59 EA.
SEWER	
1. 48" DIAMETER STANDARD MANHOLE (PUBLIC)	3 EA.
2. 8" PVC SEWER MAIN (PUBLIC)	718 LF.
3. SEWER WYES	59 EA.
4. 4" PVC SERVICE LATERAL (PRIVATE)	2404 LF.

NOTE TO CONTRACTOR:
QUANTITIES SHOWN ARE APPROXIMATIONS ONLY AND ARE INTENDED TO ILLUSTRATE THE SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT QUANTITIES.

BENCHMARK

CLV BM # 1 LV90 21 N6
3" BRASS CAP USC & GS BM #113, 3/4 MILE N OF 1 LV9028NNE6,
50' E OF OLD RAILROAD BED.
ELEV.= 748.2584 (METERS) 2454.91' (NAVD88)

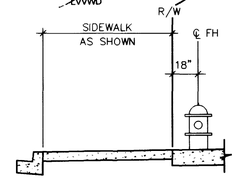
NOTE:
THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 psi. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 psi. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.

CLV SEWER NOTES

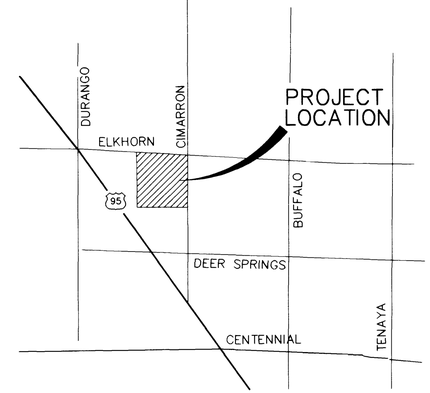
1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFFSITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA AS AMENDED. IN ALL CASES THESE STANDARDS SHALL SUPERSEDE THE UNIFORM STANDARD SPECIFICATIONS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATION BOOKS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CONTROLLING AGENCY.
3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATION, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II GRAVEL.
5. ALL MANHOLES IN PAVED STREETS 80' R/W AND LARGER, SHALL HAVE CONCRETE COLLARS.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO 12" DIA. SIZE, CONNECTIONS TO 15" OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES.
7. A SEWER MAIN CROSSING OVER A WATER MAIN OR LESS THAN 18" UNDER A WATER MAIN MUST BE REINFORCED CONCRETE ENCASED FOR A DISTANCE NOT LESS THAN TEN FEET (10') TO EACH SIDE OF THE CENTERLINE OF THE WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CONTROLLING AGENCY MUST BE CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.10) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REMOVED AND REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY.
10. INSTALLATION OF CURVED SEWER REQUIRES SPECIAL CONSTRUCTION PROCEDURES AND INSPECTIONS. CONTACT CITY OF LAS VEGAS CONSTRUCTION SERVICES PRIOR TO INSTALLATION.

PROJECT NAME: ~~ELKHORN-CIMARRON~~
Estates Unit 1B Pg 3,4 & 10
This project water plan complies with the Las Vegas Valley Water District's technical requirements. However, this water plan is
NOT APPROVED FOR CONSTRUCTION
at this time and this signature does not provide or imply a water commitment.

[signature] 6.26.97
LVVWD DATE



FIRE HYDRANT LOCATION DETAIL



VICINITY MAP

NORTH

UTILITY LEGEND

- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT W/6" G.V.
- GATE VALVE
- REDUCER
- EXISTING SEWER LINE
- PROPOSED SEWER LATERAL
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- STREET NAME SIGN D1-1 SEE STD. DWG. #250
- 36" STOP SIGN
- EXISTING 1-1/4" PVC ST. LT. CONDUIT
- PROPOSED 1-1/4" PVC ST. LT. CONDUIT
- 250W HPS LUMINAIRE W/11 GA. POLE
- 200W HPS LUMINAIRE W/ 11 GA. POLE
- 100W HPS LUMINAIRE W/ 11 GA. POLE
- EXISTING STREET LIGHT
- P.B. PROPOSED NO. 3-1/2 CONCRETE PULL BOX W/ METAL COVER
- CONCRETE DRIVEWAY

APPROVALS

[signature] 6-13-97
CITY OF LAS VEGAS - FIRE MARSHALL DATE

[signature] 6/30/97
LAS VEGAS VALLEY WATER DISTRICT DATE

Juanita Rodriguez 6/16/97
NEVADA POWER COMPANY DATE

THIS APPROVAL IS FOR THE PLACEMENT AND CLEARANCE OF STREET LIGHT AND SIGNAL LIGHT INSTALLATIONS ONLY.

PROJECTED SEWER FLOWS

NO. OF LOTS	= 59
PEAK	= 0.05 MGD
AVERAGE DAILY	= 0.02 MGD

Avoid cutting underground utility lines. It's costly.

Call before you Dig.

1-800-227-2600
UNDERGROUND SERVICE ALERT (USA)

NO.	DESCRIPTION	DATE	APP'D

RECOMMENDED: [signature] 6/10/97
LEINHARD GRODZINSKY P.E. DATE
P. E. # 8200

DATE : 6/10/97
DRAWN BY :
DESIGNED BY :
CHECKED BY :
JOB NO. : 0141.0006
SCALE : NONE

PENTACORE
CIVIL ENGINEERING • LAND SURVEYING • PLANNING
CONSTRUCTION MANAGEMENT • ADA CONSULTING
6763 WEST CHARLESTON BOULEVARD
LAS VEGAS, NEVADA 89102 (702)258-0115

EXECUTIVE DEVELOPMENT CORPORATION
ELKHORN - CIMARRON ESTATES UNIT 1B
UTILITY NOTES

SHEET 3 OF 10

Q:\0141\0006\UNIT1B\COVER\SHT3 Tue Jun 10 16:04:49 1997 J. HIRSHOUER
DISK # 0141\0006\UNIT1B\COVER
SHT3.DWG

6078

307Y-4498-1B

O.L.V. FIRE DEPT. NOTES

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

BENCHMARK

VICINITY MAP

OLV SEWER NOTES

UTILITY LEGEND

APPROVALS

APPROXIMATE QUANTITIES