CITY OF LAS VEGAS
FIRE DEPARTMENT 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 #1945.
2. Authorized hydrants for this project are:
   A. Kennedy Guardian
   B. Mueller A-423 Centurion
   C. Clow Model 2846 Medallion
3. On any new home or building installation, more than 400 feet from a hydrant, the hydrant must be operational before construction commences and said fire hydrants shall be maintained in an easily accessible water supply.
4. Contractor shall place a blue reflective marker at centerline of street adjacent to fire hydrant as required in Ordinance #1945 to identify fire hydrant locations.
5. Call the Las Vegas Building Department at 229-2101 for underground inspection. Do not cover, backfill or flush until verification of all fire hydrants and fire lines before covering.
6. Painting of the curbs and hydrant and any work necessary for protection of hydrants from physical damage per Ordinance #1945 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 contractors material and test certificate for underground piping lines shall be obtained from the Fire Protection Engineer prior to any work beginning.
8. A flow test must be witnessed by the Fire Department prior to requesting test verification of required on-site water supply.
9. All on-site fire main materials must be U.L. listed and F.M. approved.
10. Fire hydrant spacing:

    Residential - 500 feet unsprinklered, 600 feet sprinklered
    Commercial, including multi-family - 300 feet unsprinklered, 400 feet sprinklered
11. No fire hydrant shall be located within the required radius of a circle such as within 50 feet of the perimeter of the radius of the circle cul-de-sac.
12. No fire hydrant shall be located within 6 feet of any curb return, driveway, power pole, street light or any other obstruction.
13. Not more than 2 hydrants can be out of service due to a single main break.
14. The turning radius for any fire apparatus access road and/or fire lane, public or private shall be not less than 48 feet outside radius and 27 feet inside radius.
15. 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 UBC 901, Section 10.207).
16. All dead end fire apparatus access roads and/or fire lanes, public or private in excess of 150 feet in length shall be provided with an approved turnaround area. See Ordinance #1945.

CITY OF LAS VEGAS GENERAL NOTES

"REQUIRED NOTES - GENERAL ONLY IF APPLICABLE

*1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENTS, CLARK COUNTY AREA (NEVADA)", LATEST ISSUE, THE "UNIFORM STANDARD DRAWING FOR PUBLIC WORKS CONSTRUCTION", CLARK COUNTY AREA (NEVADA), LATEST ISSUE, AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".

2. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE DRAWINGS. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS.

*3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE. CURB, SIDEWALK, AND ALL OTHER IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO SATISFACTION TO THE CITY ENGINEER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

4. THE CONTRACTOR SHALL NOT BACKFILL ANY TRENCHES IN WHICH WATER LINES HAVE BEEN UNCOVERED UNTIL THE WATERLINES HAVE BEEN INSPECTED BY THE LAS VEGAS VALLEY WATER DISTRICT. THE WATER DISTRICT SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF CONSTRUCTION IN THE VICINITY OF WATER LINES.

*5. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS. ANY ALTERATIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.

*6. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGN TO BE APPROVED BY THE QUALITY CONTROL DIVISION PRIOR TO USE ON THE PROJECT.

7. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL OVERHEAD INTERFERENCES WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD OR UNDERGROUND POWER, GAS AND/OR OTHER UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COSTS AND LIABILITY IN CONNECTION THEREWITH.

*8. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.

9. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 200' IN EXTRUDED TYPE CURB.

10. AC PAVEMENT TO BE 1/2" ABOVE LIP OF ALL GUTTERS AFTER COMPACTION.

11. APPLY FOG SEAL ONLY AFTER ALL CORRECTIONS AND ADJUSTMENTS HAVE BEEN MADE.

12. CURB & GUTTER WITH A GRADE OF LESS THAN FOUR TENTHS OF ONE PERCENT SHALL BE CONSTRUCTED AS PARKING. EACH JOINT SHALL BE CHECKED FOR GRADE PRIOR TO CONSTRUCTION AND WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION.

*13. WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 230. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.

*14. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF TRANSITIONS TO BE AS SHOWN ON PLANS, OR AS DESIGNATED IN THE FIELD BY A CITY INSPECTOR.

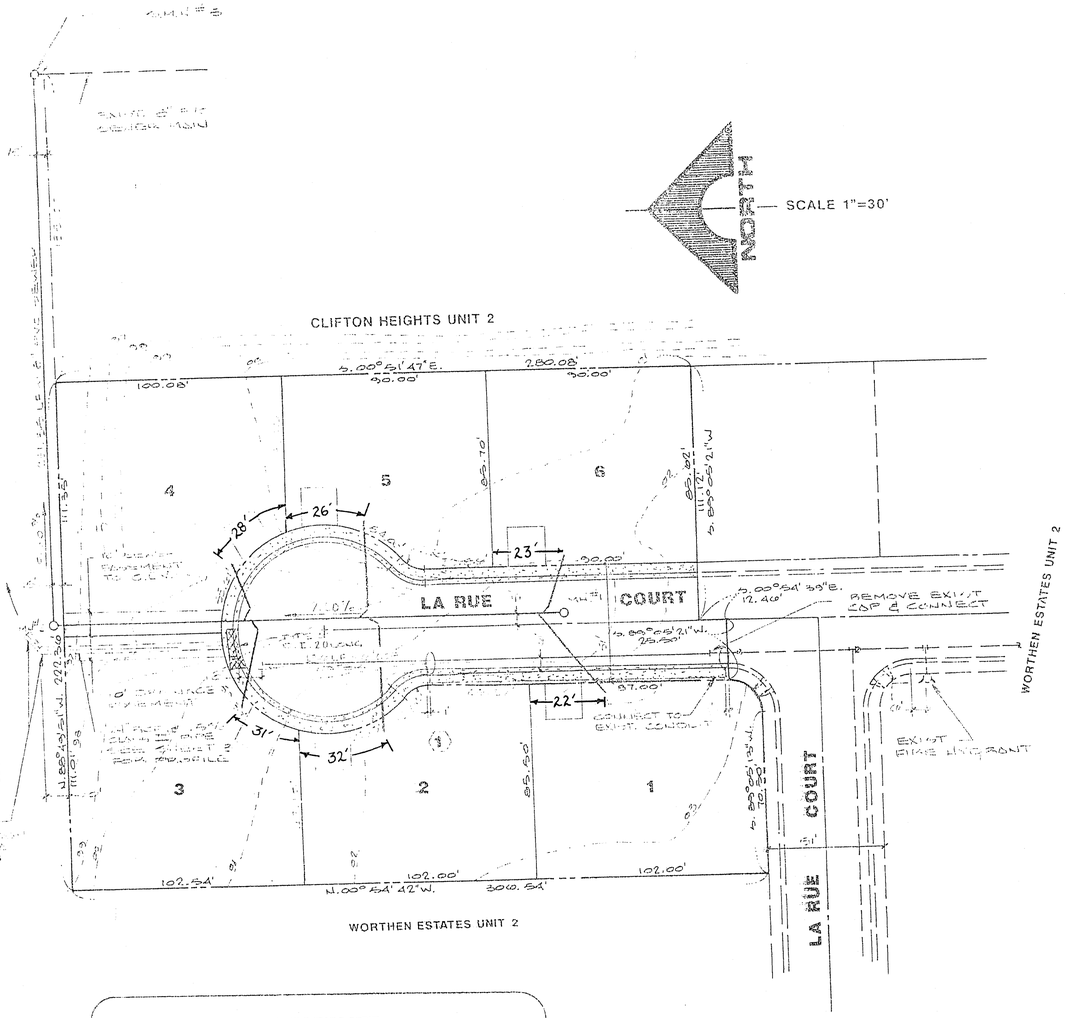
15. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE SOILS ENGINEER AND APPROVED BY THE CITY ENGINEER.

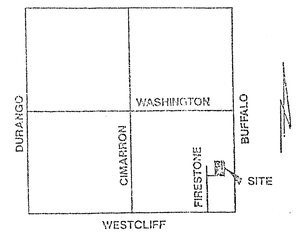
16. EXACT LOCATION OF ALL SANITARY SEWER LINES MAY BE DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS INSPECTOR IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATION.

*17. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DESTROYED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.190.

*18. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC. SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND VALLEY GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY.

REVISED 02/92





VICINITY MAP

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

1. NO WORK SHALL BEGIN ON THE WATER PLANS UNTIL THEY HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING APPROVAL OF THE PLANS, NOTICE SHALL BE GIVEN TO THE LVVWD CUSTOMER SERVICE DEPARTMENT (870-4194) 48 HOURS PRIOR TO ACTUAL CONSTRUCTION, AND 24 HOURS PRIOR TO AN INSPECTION.
2. CALL BEFORE YOU DIG 1-800-227-2600.
3. ALL WORK SHALL CONFORM TO LVVWD LATEST STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS.
4. ALL WORK, EXCEPT AS MODIFIED HEREON OR BY NOTE 3, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OR ADDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENTS, CLARK COUNTY AREA.
5. DISTRICT APPROVED SERVICE SADDLES OR TAPPED COLLARS SHALL BE REQUIRED ON ALL 3/4" AND 1" SERVICE LATERALS. SERVICE SADDLES ONLY SHALL BE PERMITTED ON 1-1/2" AND 2" SERVICE LATERALS. DOUBLE TAPPED COLLARS ARE NOT PERMITTED.
6. COPPER SERVICE LATERALS: ALL 3/4" TO 2" SERVICE LATERALS SHALL BE OF COPPER TUBING IN ACCORDANCE WITH THE DISTRICT'S SPECIFICATION.
7. THE MAXIMUM ALLOWABLE JOINT DEFLECTION FOR ACP AND DUCTILE IRON PIPE SHALL BE AS FOLLOWS:

PIPE SIZES	ACP	DUCTILE IRON SLIP JOINT	DUCTILE IRON MECHANICAL JOINT
6 INCH	2.5 DEGREES	2.5 DEGREES	3.5 DEGREES
8 - 12 INCH	" "	" "	2.5 "
14 - 16 INCH	2 DEGREES	1.5 "	1.5 "
18 - 24 INCH	N/A	1.5 "	1.5 "

ON PVC PIPE, THE MAXIMUM OFFSET FOR A 20' LENGTH OF FACTORY BELLED PIPE SHALL BE 16 INCHES FOR 6" PIPE, 12 INCHES FOR 8" PIPE, AND 9 INCHES FOR 10" AND 12" PIPE.

IF THESE OFFSETS CONFLICT WITH THE PIPE MANUFACTURERS RECOMMENDATION, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

8. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
9. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS AND VALLEY GUTTERS.
10. DETECTOR TAPE SHALL BE REQUIRED IN ACCORDANCE WITH STANDARD PLATE NO. 27 WHERE INDICATED, AS FOLLOWS:
    A) OVER ALL MAINS NOT INSTALLED 6 FEET FROM BACK OF CURB.
    B) OVER ALL SERVICE LATERALS NOT INSTALLED AT RIGHT ANGLE TO MAIN.
11. ALL WATER MAINS SHALL BE PRESSURE TESTED AT 200 PSI FOR A CONTINUOUS TWO HOUR PERIOD, IN ACCORDANCE WITH DISTRICT STANDARDS.
12. ALL WATER MAINS SHALL BE DISINFECTED, FLUSHED, AND AN ACCEPTABLE HEALTH SAMPLE OBTAINED, PRIOR TO THE CONNECTION OF THE WATER MAIN(S) AND/OR LATERAL(S) TO THE DISTRICT'S SYSTEM.
13. CONTRACTOR TO OBTAIN ALL METERS 2" AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.

LAS VEGAS FIRE DEPARTMENT

FIRE FLOW REQUIREMENTS IS 1500 GALLONS PER MINUTE AT 20 POUNDS PER SQUARE INCH RESIDUAL.

BASED:

SQUARE FOOTAGE 2,200

LARGEST AREA BETWEEN AREA SEPARATION WALLS --

HEIGHT 2 STORY

TYPE OF CONSTRUCTION V

EXPOSURES FRONT - 30' LEFT - 40' BACK - 30' RIGHT - 40'

SPRINKLER SYSTEM NO

OCCUPANCY SINGLE FAMILY

ROOF CONSTRUCTION TILE

BENCH MARK

ALUM. PLATE IN TOP OF CURB AT THE NORTHEAST CORNER OF RAINBOW AND ALTA. CLARK COUNTY B.M. #7C0034E6 ELEV. 2404.05

CITY OF LAS VEGAS SEWER NOTES

1. All construction and materials shall be in accordance with the latest edition of the Design & Construction Standards For Wastewater Collection Systems and the Uniform Standard Specifications for Public Works Construction Off-Site 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 be done 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 specifications, 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.

CLV - STREET LIGHTING NOTE

ALL STREET LIGHTING INSTALLATIONS SHALL CONFORM TO THE LATEST ISSUE OF THE STANDARD DETAILS AND SPECIFICATIONS OF THE CITY OF LAS VEGAS, AND SHALL ALSO CONFORM TO THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OF OFF-SITE IMPROVEMENTS", CLARK COUNTY, NEVADA AREA, UNLESS OTHERWISE NOTED. REFER TO CLARK COUNTY STANDARD DRAWING NO. 318.

QUANTITY ESTIMATE

WATER

(1)	6" ACP WATER LINE	190 LF
(4)	6" CAP W/2" BLOW OFF	1 EA
	3/4" WATER SERVICE	
	3/4" WATER METER (PER L.V.V.W.D)	
	3/4" METER SERVICE	

SEWER

STD. SEWER MANHOLE	3 EA
8" PVC SEWER MAIN	477 LF
SERVICE WYE	6 EA
4" SERVICE LATERAL	228 LF

STORM

24" HDPE CONN. III	95 LF
24" - 45° ELL	1 EA
24" END SECT. (4 PVC CONDUIT)	1 EA
TYPE "A" DROP INLET (20')	1 EA
CONCRETE SPLASH PAD	5 C.Y.
15'LONG x 6'HIGH WROUGHT IRON FENCE	1 EA

STREET LIGHTS

	1 1/4" ST. LT. CONDUIT	130 LF
O-o	100 WATT H.P.S. ST. LT.	2 EA
O-o	EXIST ST. LT.	
	EXIST STREET SIGN	

NOTE:
SEWER LATERAL DIMENSIONS ARE MEASURED AT BACK OF CURB.

Randall K. Marshall
9/4/91

APPROVALS:

CLV ENGINEER — DATE
DENNIS ANDERSON P.E.

David Bowman — 12/11/91
CLV FIRE MARSHALL — DATE

LAS VEGAS VALLEY WATER DISTRICT — DATE

(DATE)

by
NEVADA POWER COMPANY

DATE	REV BY	REVISION
10/4/94		SEWER AS-BUILT DIMENSIONS

PREPARED FOR:
STEVE TERRY & MARGARET TERRY

DATE 10-4-94
DESIGN
DRAWN
CHECK
SCALE

SEWER LATERAL AS-BUILT DIMENSIONS

MASTER UTILITY PLAN
WORTHEN ESTATES UNIT 3

SHEET 1 OF 4

7-G_1 "As Built" 3079'-3365-3