

CITY OF LAS VEGAS  
FIRE DEPARTMENT NOTES

- All work shall be done in strict accordance with the City of Las Vegas Fire Department "Hydrant Specifications", "Hydrant Installation Specifications" and Ordinance #3545.
- Authorized hydrants for this project are:
  - Kennedy Guardian
  - Mueller A-21 Centurian
  - Clew Model 2546 Medallion
- 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.
- Contractor shall place a blue reflective marker at centerline of street adjacent to fire hydrant as required in Ordinance #3545 to identify fire hydrant locations.
- Call the Las Vegas Building Department at 799-2071 for underground inspection, pressure and flush verification of all fire hydrants and fire lines before covering.
- Painting of the curbs and hydrant and any work necessary for protection of hydrants from physical damage per Ordinance #3545 shall be completed before approval by the City of Las Vegas Fire Department.
- 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.
- A flow test must be witnessed by the Fire Department prior to occupancy for verification of required on-site water supply.
- All on-site fire main materials must be U.L. listed and F.M. approved.
- Fire hydrant spacing:
  - Residential - 500 feet unsprinklered, 600 feet sprinklered
  - Commercial, including multi-family - 300 feet unsprinklered, 400 feet sprinklered.
- 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.
- No fire hydrant shall be located within 6 feet of any curb, utility, driveway, power pole, street light or any other obstruction.
- Not more than 2 hydrants can be out of service due to a single main break.
- The turning radius for any fire apparatus access road and/or fire line, public or private shall be not less than 45 feet outside radius and 22 feet inside radius.
- 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 LFC 88, Section 10.2007).
- All dead end fire apparatus access roads and/or fire lines public or private in excess of 150 feet in length shall be provided with an approved turnaround area. See Ordinance #3545.

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

- No work shall begin on the water plans until they have been released for construction by the LVWVD. Following approval of the plans, notices shall be given to the LVWVD Customer Service Department (870-4194) 48 hours prior to actual construction, and 24 hours prior to an inspection.
- Call Before You Dig 1-800-227-2600.
- All work shall conform to LVWVD latest standard plates, drawings, and specifications.
- 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.
- 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.
- COPPER SERVICE LATERALS:** All 3/4" to 2" service laterals shall be of copper tubing in accordance with the District's specifications and standard plates.
- 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 "	2.5 "	2.5 "
14 - 16 inch	2.0 "	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 beveled 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.
- All water meter boxes shall be located outside of driveway areas.
- All valves shall be located outside of driveways and valley gutters.
- Detector tape shall be required in accordance with Standard Plate No. 27 where indicated, and as follows:
  - over all mains not installed 6 feet from back of curb;
  - over all service laterals not installed at right angles to main
- All water mains shall be pressure tested at 200 psi for a continuous 120 hour period, in accordance with District Standards.
- All water mains shall be disinfected, flushed, and an acceptable health sample obtained, prior to the connection of the water mains and/or laterals to the District's System.
- Contractor to obtain all meters 2" and smaller from LVWVD Central Stores. Telephone 258-3152 forty-eight (48) hours prior to pickup.

C L V SEWER NOTES

- ALL SANITARY SEWER INSTALLATIONS SHALL CONFORM TO 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 AREA, LATEST EDITION, UNLESS OTHERWISE NOTED.
- CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
- POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, AND INSTALLED WITH SAND BEDDING AND BACKFILL OR TYPE II GRAVEL.
- ALL MANHOLES IN PAVED STREETS 80' R/W AND LARGER, SHALL HAVE CONCRETE COLLARS.
- 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.
- A SEWER MAIN CROSSING OVER A WATER MAIN OR LESS THAN 18" UNDER A WATER MAIN, MUST BE REINFORCED CONCRETE BENCHING FOR A DISTANCE NOT LESS THAN 10 FEET TO EACH SIDE OF THE CENTERLINE OF THE WATER MAIN.

BUILDING AREAS

BLDG. NO. 20 A	= 10,309 S.F.
BLDG. NO. 20 B	= 11,155 S.F.
BLDG. NO. 21	= 7,547 S.F.
BLDG. NO. 22	= 17,447 S.F.
BLDG. NO. 23	= 15,381 S.F.
BLDG. NO. 24	= 12,994 S.F.
BLDG. NO. 25	= 12,505 S.F.

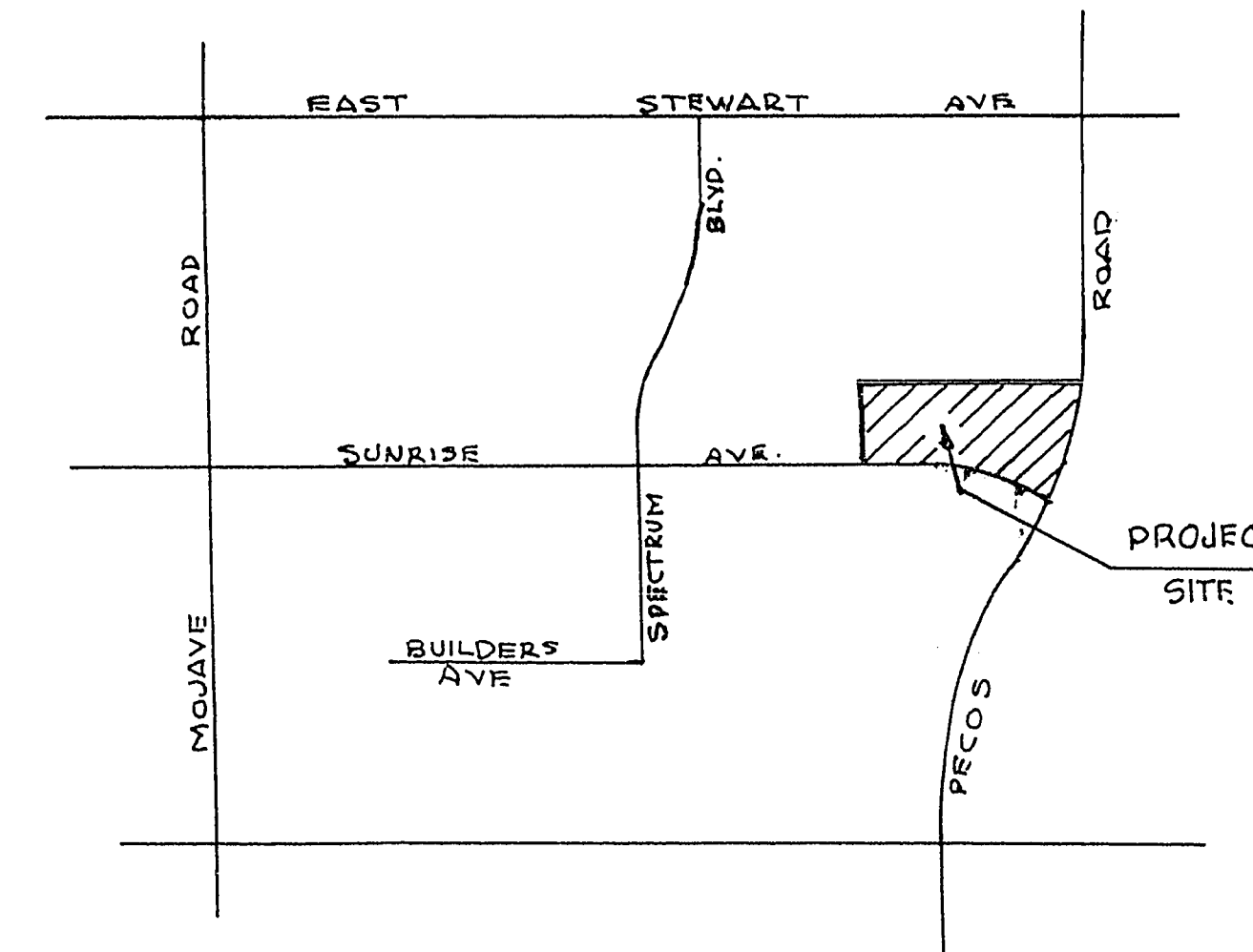
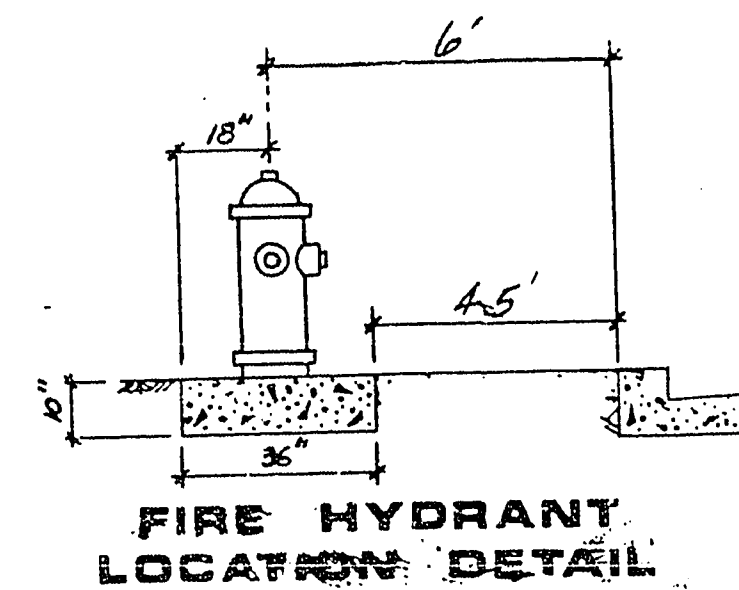
LAS VEGAS FIRE DEPARTMENT  
FIRE FLOW REQUIREMENT 3,000 GALLONS PER MINUTE AT 20 POUNDS PER SQUARE INCH RESIDUAL.

BASED ON:  
SQUARE FOOTAGE 12,994 S.F. BLDG. 24  
LARGEST AREA BETWEEN AREA SEPARATION WALLS  
HEIGHT 22'  
TYPE OF CONSTR. V.N.  
EXPOSURES  
SPRINKLER SYSTEM NO.  
OCCUPANCY B.2  
ROOF CONSTR. PANELIZED GLUE-LAM BEAM CLASS B COVER - 3 PLY

REVIEWED BY:  
DATE:

REVISION BLOCK

NO.	DATE	BY	DESCRIPTION	C.L.V. APPROVAL



NOTE:  
EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE INFORMATION AT THE TIME THESE PLANS WERE PREPARED. THESE EXISTING UTILITIES ARE SHOWN ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES.

APPROVALS:

365 SHT No. 1  
CITY OF LAS VEGAS DATE

*Debra Jackson* 3-06-91  
MEXADA POWER CO. DATE

*Richard J. Brown* 6-20-91  
365 SHT No. 4  
LAS VEGAS VALLEY WATER DISTRICT DATE

*Richard J. Brown* 3/28/91  
C.L.V. FIRE DEPT. DATE

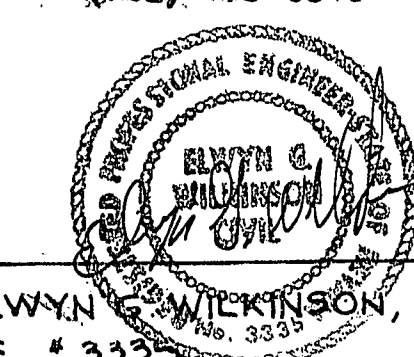
LEGEND AND QUANTITIES

- WATER SYSTEM
- NEW FIRE HYDRANT ASSEMBLY = 3 EA.
  - NEW 6" DETECTOR CHECK & VAULT PER L.V.W.V.D. STD. DWG. C-475 REV. 3 AND STD. PLATE 19 = 2 EA.
  - NEW 3-1/2" WATER METERS w/METER BOXES = 2 EA.
  - NEW 8" GATE VALVE w/VALVE BOX = 3 EA.
  - 8" 90° BEND = 3 EA.
  - 8" 45° BEND = 1 EA.
  - 8" 22 1/2° BEND = 1 EA.
  - 8" x 8" x 8" TEE = 1 EA.
  - 8" PVC WATER MAIN = 887 L.F.
  - 12" x 6" REDUCER = 1 EA.
  - 8" x 6" REDUCER = 3 EA.
- SANITARY SEWER SYSTEM
- 8" PVC SANITARY SEWER MAIN = 362 L.F.
  - 6" PVC SANITARY SEWER MAIN = 652 L.F.
  - 6" PVC SANITARY SEWER LATERAL = 278 L.F.
  - SANITARY SEWER CLEANOUT = 14 EA.
  - SANITARY SEWER MANHOLE = 1 EA.
  - ADJUST RIM ELEV. OF EXISTING MANHOLE = 1 EA.

THE SPECTRUM  
OF LAS VEGAS  
PHASE V

MASTER UTILITY PLAN

**B E Engineering Corporation**  
71 North Pecos Road, Suite 107  
Las Vegas, Nevada 89101  
(702) 438-0315



ELWYN G. WILKINSON, P.E.  
P.E. # 3335  
1-16-91  
JAN 16, 1991  
DATE

107Y-4042-5  
25  
SHT. No. 3 OF 5