

LAS VEGAS VALLEY WATER DISTRICT NOTES:

- No work shall begin until the water plans have been released for construction the LVVWD. Following water plan approval, 48 hour notice shall be given to the LVVWD Customer Service Department (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.
- All work shall conform to LVVWD Standard Plates, Drawings, and Specifications, latest edition.
- 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.
- A single pipe material shall be used throughout the project unless otherwise approved by the LVVWD.
- All service laterals (two (2) inches in diameter and smaller) shall be copper tubing with LVVWD approved services saddles.
- All water meter boxes shall be located outside of driveway areas.
- All valves shall be located outside of driveways, valley and curb gutters.
- 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:

- Palatable Water supply quality material, Encasement, with four (4) inch concrete (minimum)
- 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.

- 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.
- 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.
- The contractor must obtain all meters two (2) inches and smaller from LVVWD Central Stores. Telephone 258-3152 forty-eight (48) hours prior to pickup.
- Construction may interrupt service, with LVVWD approval and proper notification, between the hours of 10 PM and 6 AM, Sunday through Thursday. Circumstances may require temporary service feeds be installed, without LVVWD reimbursement. Any temporary service feed must have prior LVVWD approval.
- All water facility construction materials used must be as listed on the LVVWD's Approved Materials and Manufacturers Listing for New Facilities, latest revision, or specifically approved on these plans.

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES:

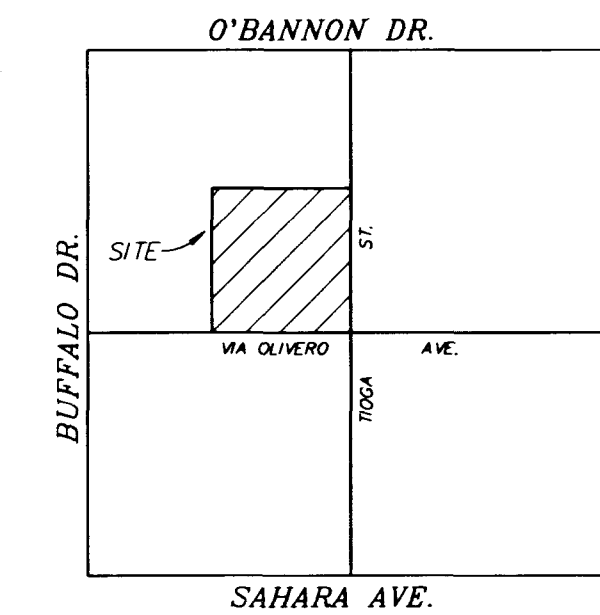
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT "HYDRANT SPECIFICATIONS" "HYDRANT INSTALLATION SPECIFICATIONS" AND ORDINANCE #3944.
- AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
A. KENNEDY GUARDIAN
B. MUELLER A-423 CENTURION
C. CLOW MODEL 2546 MEDALLION
- ON ANY 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 #3944 TO IDENTIFY FIRE HYDRANT LOCATIONS.
- 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.
- PAINTING OF THE CURBS AND HYDRANT AND ANY WORK NECESSARY FOR PROTECTION HYDRANTS FROM PHYSICAL DAMAGE PER ORDINANCE #3944 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 CONTRACTORS MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER PRIOR TO ANY WORK BEGINNING.
- PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED.
- 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 A.W.W.A. APPROVED.
- FIRE HYDRANT SPACING:
RESIDENTIAL - 500 FEET UNSPRINKLERED, 1000 FEET SPRINKLERED
COMMERCIAL, INCLUDING MULTI-FAMILY - 300 FEET UNSPRINKLERED, 600 SPRINKLERED
- 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.
- 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 RETURN, DRIVEWAY, POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
- TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS INSTALLED.
- NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
- FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET PROVIDED NO PARKING 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.
- 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.
- 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 UFG 34, SECTION 902.2)
- 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 #3944.
- 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.
- 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.

FIRE FLOW REQUIREMENT IS 1,500 GAL PER MIN. AT 20 POUNDS PER SQUARE INCH RESIDUAL PRESSURE.

BASED ON:
SQUARE FOOTAGE 3,200 S.F. (LARGEST BLDG.)
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS 3,200 (4500)
BUILDING HEIGHT 27'
NUMBER OF STORIES 2
TYPE OF CONSTRUCTION V - NON RATED
OCCUPANCY RESIDENTIAL
FULL AUTOMATIC FIRE SPRINKLER SYSTEM NO

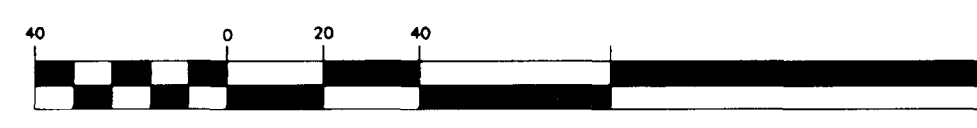
GRADING NOTES:

- CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITION BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND INGRESS AND EGRESS TO SAID CONSTRUCTION. EXTENT OF TRANSITIONS TO BE DETERMINED BY THE CITY ENGINEER.
- EXISTING UTILITIES ARE LOCATED ON THE PLANS PER THE CITY OF LAS VEGAS REQUIREMENTS. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR THE UTILITIES NOT SHOWN ON THE PLANS, AND SHALL CONTACT THE APPROPRIATE UTILITY OR GOVERNMENT FOR THE EXACT LOCATION OF ALL UTILITIES.
- CONSTRUCTION TO BE PER UNIFORM STANDARD SPECIFICATIONS AND DRAWINGS, CLARK COUNTY AREA, NEVADA.
- CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- ALL GRADING AND PAVING SHALL CONFORM TO THE SOILS REPORT PREPARED BY WESTERN TECHNOLOGY, DATED 3/22/97 AND ANY ADDENDA THERETO, JOB NO. 4127 JACO
- POWER POLES AND/OR OTHER EXISTING FACILITIES NOT IN PROPER LOCATION BASED ON PROPOSED IMPROVEMENTS SHOWN HEREON WILL BE RELOCATED AT NO EXPENSE TO THE CITY OF LAS VEGAS.
- PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.



VICINITY MAP

GRAPHIC SCALE



LEGEND:

PROPOSED	EXISTING	
●	GV	GATE VALVE
●	CO	CLEAN OUT
●	FH	FIRE HYDRANT
●	MH	MANHOLE
---	G---	GAS LINE
---	E---	ELECTRICAL LINE
---	SS---	SANITARY SEWER
---	W---	WATER LINE
---	---	PROPERTY LINE
---	---	RIGHT-OF-WAY LINE
---	---	CENTER LINE OF ROADWAY
---	---	RIGHT-OF-WAY
---	SSCO	SAN. SEWER CLEAN OUT
---	SSMH	SAN. SEWER MANHOLE
---	ESMT	EASEMENT
---	250W HPS	
---	200W HPS	
---	T.C.	TOP OF CURB
---	F.L.	FLOW LINE
---	F.G.	FINISH GRADE
---	B/C	BACK OF CURB
---	V.G.	VALLEY GUTTER
---	E/P	EDGE OF PAVEMENT

C.S.A.
ENGINEERING SERVICES
604 S. EASTERN AVE. SUITE 404
LAS VEGAS, NV 89101
(702) 877-1401

VIA OLIVERO/ TIOGA
CITY OF LAS VEGAS NEVADA

IMPROVEMENT PLANS
UTILITY

SCALE(H): 1"= 40'
SCALE(V): 1"= 40'
DESIGN BY: JCS
DRAWN BY: DLV
CHK BY:
DATE: 07/96
PROJECT NO.
1026
FILE NO.
SHEET 6
OF 6

ESTIMATED QUANTITIES

	PUBLIC	PRIVATE
8" P.V.C. SEWER	50 L.F.	
S.S.M.H.	1 EA.	
5" CONCRETE SIDEWALK	3050 S.F.	
TYPE "L" CURB & GUTTER	571 L.F.	
VALLEY CUTTER	27.5 S.F.	
5" A.C. PAVEMENT	1650 SY	
TYPE I AGGR. BASE	415 CY	
TYPE II AGGR. BASE	220 CY	
1" COPPER SERV. LATERAL		1 EA.

PROJECT BENCHMARK:

THE BENCHMARK FOR THIS TOPOGRAPHY IS C.C.E.D. BENCH NO. 7C10-35WS, BEING A 2" X 2" PLATE IN FIRE HYDRANT BASE, ON SAHARA AVE. 150' EAST OF BUFFALO DR. NORTH SIDE
E.L. = (NAVD83) 7670.354 M (2516.52 FT.)

BASIS OF BEARING:

N87°56'27"E SOUTH LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 3, TOWNSHIP 21 SOUTH, RANGE 60 EAST, M.D.M. CLARK COUNTY, NEVADA PER P.M. FILE 62, PAGE 57.

CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	BEARING	DELTA
R/W C1	15.00'	24.14'	15.58'	S42°05'18"W	92°11'29"
B/C C2	20.00'	31.10'	20.10'	S42°05'18"W	92°11'29"

APPROVALS

10-30-96
LAS VEGAS VALLEY WATER DISTRICT
DATE
10-30-96
DATE

