

UTILITY NOTES

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT'S ORDINANCE #5115 "HYDRANT SPECIFICATIONS" AND "HYDRANT INSTALLATION SPECIFICATIONS".
- AUTHORIZED FIRE HYDRANTS FOR THIS PROJECT ARE:
 - KENNEDY - GUARDIAN MODELS KB1A AND KB1D
 - MUELLER - SUPER CENTURION 250 MODEL A-423
 - CLOW - MEDALLION MODEL F-2546 LV
- ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW.
- TO IDENTIFY THE FIRE HYDRANT LOCATIONS, CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF STREET ADJACENT TO THE FIRE HYDRANT AS REQUIRED IN ORDINANCE #5115
- ALL UNDERGROUND INSPECTION, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CALL THE CITY OF LAS VEGAS INSPECTION HOT-LINE AT 229-2071 TO REQUEST AN INSPECTION BY THE LAS VEGAS FIRE DEPARTMENT
- PAINTING OF THE CURBS AND FIRE HYDRANTS AND ALL OTHER WORK NECESSARY AS REQUIRED BY ORDINANCE #5115, FOR THE PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE, SHALL BE COMPLETED BEFORE APPROVAL BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
- A PERMIT IS REQUIRED FROM THE CITY OF LAS VEGAS FIRE DEPARTMENT FOR THE ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT WORK.
- PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED.
- PRIOR TO THE FINAL OCCUPANCY, A FLOW TEST MUST BE WITNESSED BY THE CITY OF LAS VEGAS FIRE DEPARTMENT TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW.
- ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A. APPROVED, AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE.
- FIRE HYDRANTS SPACING SHALL BE:
 - RESIDENTIAL - 500 FEET UNSPRINKLERED;
 - 1,000 FEET SPRINKLERED.
 - COMMERCIAL - 300 FEET UNSPRINKLERED;
 - 600 FEET UNSPRINKLERED.
- WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS, WHERE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM 1,000 FOOT SPACING TO PROVIDE FOR TRANSPORTATION HAZARDS.
- NO FIRE HYDRANTS 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 HYDRANTS SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
- THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FEET.
- THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FEET, AS MEASURED BY AN APPROVED ROUTE.
- TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-IN'S ARE INSTALLED ON A SINGLE SYSTEM.
- SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN.
- ALL FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET (FLOW LINE TO THE FLOW LINE) PROVIDED NO PARKING IS ALLOWED ON EITHER SIDE; 28 FEET (FLOW LINE TO THE FLOW LINE) IF PARALLEL PARKING IS ALLOWED ON ONE SIDE ONLY; AND 36 FEET (FLOW LINE TO THE FLOW LINE) IF PARALLEL PARKING IS ALLOWED ON BOTH SIDES. VERTICAL CLEARANCE SHALL NOT BE LESS THAN 13 FEET 6 INCHES.
- ALL FIRE APPARATUS ACCESS ROAD SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS.
- THE GRADIENT FOR A FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLE OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FEET PRIOR TO OR AFTER THE GRADE CHANGE.
- THE TURNING RADIUS FOR A FIRE APPARATUS ACCESS ROAD SHALL BE NO LESS THAN 45 FEET OUTSIDE AND 22 FEET INSIDE TURNING RADIUS.
- A FIRE APPARATUS ACCESS ROADS 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 97, 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 TURN AROUND AREA HAVING A MINIMUM DIAMETER OF 81 FEET OF THE CURB TO THE BACK OF THE CURB).
- ALL FIRE APPARATUS 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 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 PROVIDED 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.

LAS VEGAS VALLEY WATER DISTRICT NOTES

- NO WORK SHALL BEGIN ON 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 (890-4194), AND 24 HOURS PRIOR TO INSPECTION.
- CALL BEFORE YOU DIG 1-800-227-2600.
- ALL WORK SHALL CONFORM TO LVVWD 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 OFF-SITE 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 LATERAL SHALL BE COPPER TUBING IN ACCORDANCE WITH THE DISTRICTS SPECIFICATION AND STANDARD PLATES.
- THE MAXIMUM ALLOWABLE JOINT DEFLECTION IN DEGREES FOR ACP AND DUCTILE IRON (DI) PIPE SHALL BE AS FOLLOWS:

6 INCH	ACP - 2.5
	DI SLIP JOINT - 2.5
	DI MECHANICAL JOINT - 3.5
8 - 12 INCH	ACP - 2.5
	DI SLIP JOINT - 2.5
	DI MECHANICAL JOINT - 2.5
14 - 16 INCH	ACP - 2.0
	DI SLIP JOINT - 1.5
	DI MECHANICAL JOINT - 1.5
18 - 24 INCH	ACP - N/A
	DI SLIP JOINT - 1.5
	DI MECHANICAL JOINT - 1.5

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

IF THESE OFFSETS CONFLICT WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS, 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 THE MAIN.
- ALL WATER MAINS SHALL BE PRESSURE TESTED AT 200 PSI FOR A CONTINUOUS TWO 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 MAIN(S) AND/OR LATERAL(S) TO THE DISTRICTS SYSTEM.
- CONTRACTOR TO OBTAIN ALL METERS 2" & SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.

CITY OF LAS VEGAS SEWER NOTES

- 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 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.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLAN. ANY ADDITIONS, DELETIONS OR CHANGES SHALL FIRST MEET WITH APPROVAL OF THE CONTROLLING AGENCY.
- CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
- POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II GRAVEL.
- ALL MANHOLES IN PAVED STREETS 80 FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS.
- TEE SADDLES SHALL BE USED TO CONSTRUCT SEWER LATERAL TO EXISTING MAIN LINE UP TO 12 INCHES IN DIAMETER IN SIZE. CONNECTIONS TO 15 INCH OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES.
- A SEWER MAIN CROSSING OVER A WATER MAIN OR LESS THAN 18 INCHES UNDER A WATER MAIN, MUST BE REINFORCED CONCRETE ENCASED FOR A DISTANCE OF NOT LESS THAN 10 FEET TO EACH SIDE OF THE CENTERLINE OF THE WATER MAIN.
- ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CONTROLLING AGENCY MUST BE CLASS "A" CONTRACTORS.
- THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED AND REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY.

LEGEND

	EXISTING	NEW OR RELOCATED
CABLE LINE	— C —	
TELEPHONE LINE	— T —	
POWER LINE	— E —	
STREET LIGHT	•	•
AREA LIGHT	•	•
STORM DRAIN	— SD —	SD
SANITARY SEWER	— SS —	SS
SEWER MANHOLE	⊙	⊙ MH
CATCH BASIN	□	□ CB
WATER LINE	— W —	— WL —
FIRE HYDRANT	⊗	⊗
WATER METER		⊗
WATER VALVE DOMESTIC		⊗
GAS LINE	— G —	G
SPOT ELEVATION	X	
GRADE BREAK		G.B.
GRADE SLOPE		0.47%
AREA DRAIN AND TOP OF GRATE ELEVATION		
INVERT ELEVATION		
FINISHED PAVEMENT ELEVATION		
FINISHED GRADE ELEVATION		
TOP OF CONCRETE ELEVATION		
TOP OF CURB ELEVATION		
FINAL BUILDING OUTLINE		
CONTOUR LINE		



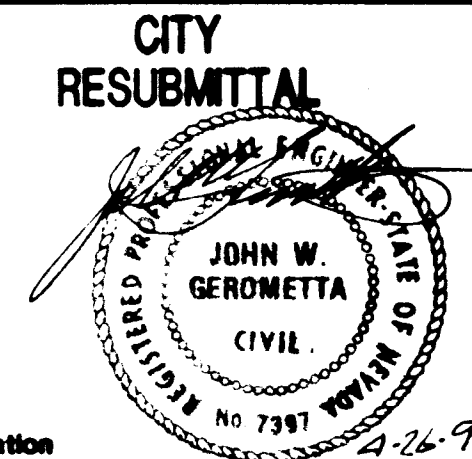
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CLARK COUNTY DEPARTMENT OF FAMILY AND YOUTH SERVICES

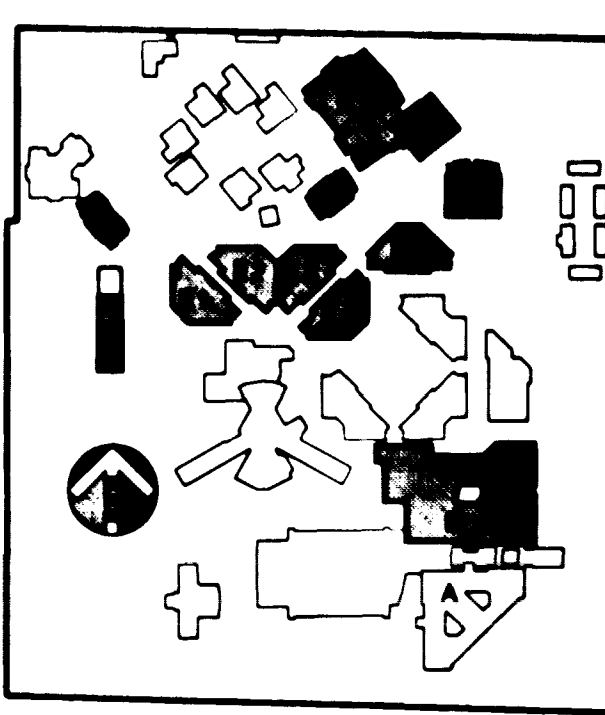
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Kirby L. Burgess- Director
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Registration

Revisions	No.	Description
△	11-09-98	ADENDUM #1
△	12/15/98	CITY REVISION
△	04/06/99	CITY REVISION
△	04/26/99	CITY REVISION ✓

Date: FEBRUARY 12, 1999
Drawn By: SMS/SAS
DMJM Job No.: 6745.03



UTILITY NOTES LEGEND

CITY FIRE MARSHAL
[Signature]
Date: 2-27-99

C-0.2

