

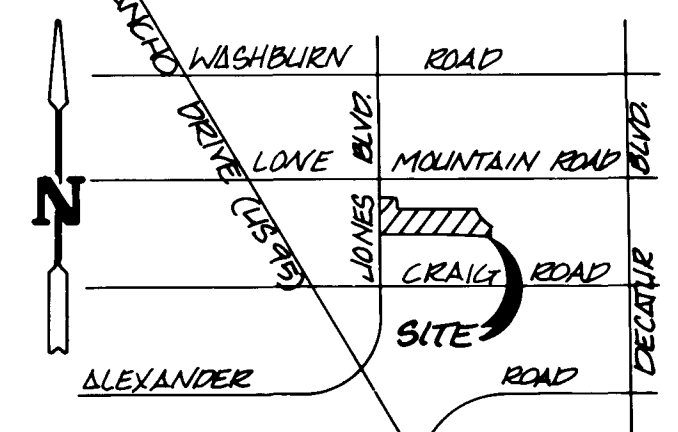
LAS VEGAS FIRE DEPARTMENT
 Fire Flow Requirement is 1500 gallons per minute at 20 pounds per square inch residual.
 Based on:
 Square footage 2181
 Largest area between area separation walls 2181
 Height 25'
 Type of Construction TYPE II - NR
 Exposures N/A (10' MIN. SIDE)
 Sprinkler System NONE
 Occupancy GROUP "R"
 Roof Construction CONCRETE TILE

FUTURE SERVICE LATERALS (3/4" THROUGH 2") LOTS 65-77 BLK 1
 IF ANY OF THE SERVICE LATERALS TO BE INSTALLED FOR FUTURE LOTS ARE INCORRECTLY LOCATED OR ARE NOT USED FOR ANY REASON WHEN THE LOTS ARE DEVELOPED, THE DEVELOPER SHALL ABANDON THE LATERALS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH THE DISTRICT'S STANDARDS AND AT THE DEVELOPER'S EXPENSE.

SERVICE LATERALS FOR LOTS 12-22, BLK. 8, LOTS 49-57, BLK. 1, & LOTS 5-8 BLK. 7, WILL BE TAPPED ON EXIST. MAIN BY OWNER'S CONTRACTOR UNDER DIRECTION OF THE LAS VEGAS VALLEY WATER DISTRICT.

Installation of service laterals (3/4" to 2") only for lots 65-77, BLK. 1 shall include:

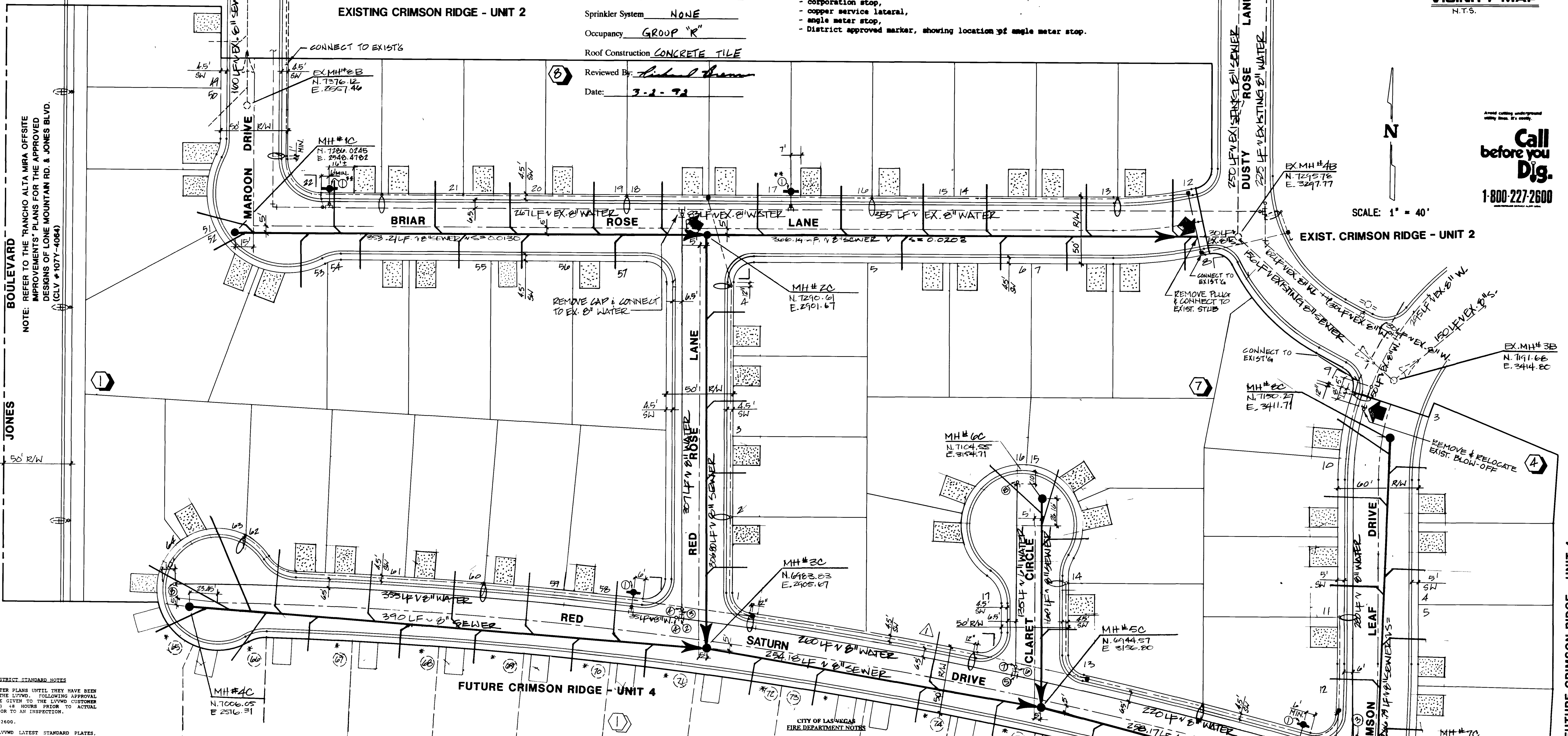
- District approved service saddles or tapping collars,
- corporation stop,
- copper service lateral,
- angle meter stop,
- District approved marker, showing location of angle meter stop.



VICINITY MAP
N.T.S.

Call before you Dig.
 1-800-227-2600

SCALE: 1" = 40'



EXIST. HIGH COUNTRY ESTATES
BOULEVARD
JONES
 NOTE: REFER TO THE RANCHO ALTA MIRA OFFSITE IMPROVEMENTS' PLANS FOR THE APPROVED DESIGNS OF LONE MOUNTAIN RD. & JONES BLVD. (C/LY # 1074-1084)

ESTIMATE OF QUANTITIES

WATER:

- 1 FIRE HYDRANT ASSEMBLY (TO INCLUDE PIPE, RISER, VALVE & TEE) ** 1 EA.
- 2 6" TEE 2 EA.
- 3 6" 11/4" BEND 2 EA.
- 4 6" GATE VALVE 4 EA.
- 5 6" 1/2" TEE 1 EA.
- 6 6" 11/4" BEND 1 EA.
- 7 6" GATE VALVE 1 EA.
- 8 2" BLOW-OFF ASSEMBLY & PLUG 2 EA.
- 9 1/2" WATER MAIN (5) 150 LF.
- 10 1/2" WATER MAIN 195 LF.
- 11 3/4" SERVICE 62 EA.
- 12 3/8" METER BY LVVWP (8 INCLUDES 13 FOR FUTURE USE) 8 EA.

SEWER:

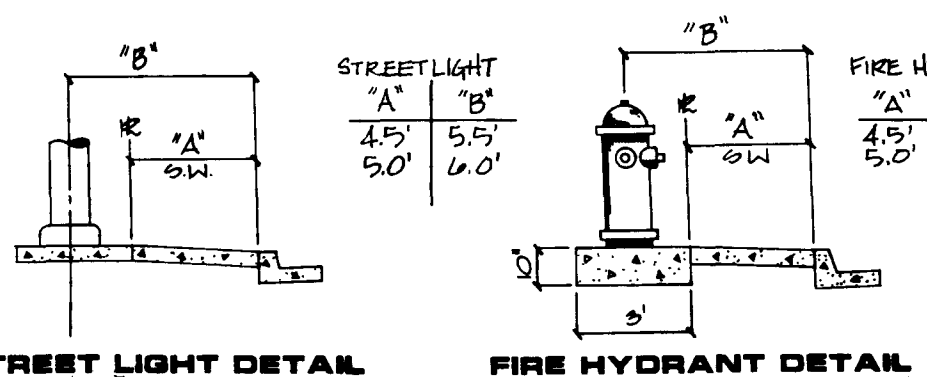
- 1 STANDARD MANHOLE 8 EA.
- 2 8" SEWER MAIN 2932 LF.
- 3 4" SEWER LATERALS (INCLUDES 63 LF FOR FUTURE USE) 3140 LF.
- 4 NYES (INCLUDES 22 FOR FUTURE USE) 22 EA.
- 5 SEWER LATERALS TO BE INSTALLED WITH THIS UNIT ** HYDRANTS ALONG BRIAR ROSE LANE TO BE CONNECTED TO EXIST. TEE & VALVE.

STREETLIGHTS:

- 1 100 WATT LUMINAIRE 10 EA.
- 2 1/4" COMP. 3300 LF.
- 3 3/8" PULL BOX 6 EA.
- 4 STREET NAME SIGN 7 EA.
- 5 DRIVEWAY LOCATION (SCHEMATIC)
- 6 POINT OF CONNECTION

OFF-SITE SEWER:

- 1 STANDARD MANHOLE 2 EA.
- 2 8" SEWER MAIN 1000 LF.



- LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES**
- NO WORK SHALL BEGIN ON THE WATER PLANS UNTIL THEY HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVWD. FOLLOWING APPROVAL OF THE PLANS, NOTICE SHALL BE GIVEN TO THE LVWD CUSTOMER SERVICE DEPARTMENT (870-4194) 14 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 LVWD LATEST STANDARD DETAILS, DRAWINGS AND SPECIFICATIONS.
 - ALL WORK, EXCEPT AS NOTIFIED HEREON OR BY NOTE 1, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR ADDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (UNIFORM SPECIFICATIONS), CLARK COUNTY AREA.
 - DISTRICT APPROVED SERVICE SADDLES OR TAPPING 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 TYPING 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	AGE	DUCTILE IRON	DUCTILE IRON	DUCTILE IRON
		SLIP JOINT	SLIP JOINT	MECHANICAL JOINT
6" - 12" INCH	2.5 DEGREES	2.5 DEGREES	2.5 DEGREES	2.5 DEGREES
14" - 16" INCH	2.0 "	1.5 "	1.5 "	1.5 "
18" - 24" INCH	1.5 "	1.5 "	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 MANUFACTURER'S 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 CREEKS.
 - DETENTION TANK 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 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 WATER MAIN(S) AND/OR LATERAL(S) TO THE DISTRICT'S SYSTEM.
 - CONTRACTOR TO OBTAIN ALL UTILITY (USE SMALLER FROM LVWD, CENTRAL UTILITY) DEEPENING 128-1152, FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.

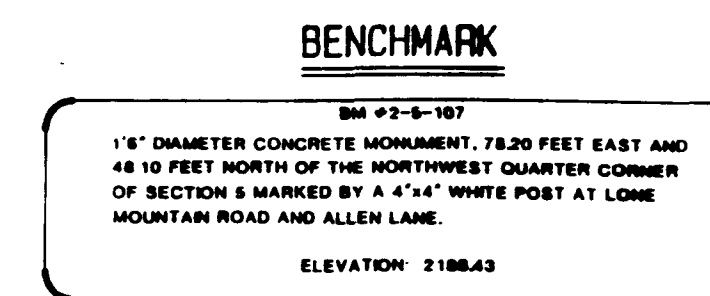
- All work shall be done in strict accordance with the City of Las Vegas Fire Department Hydrant Specifications, "Hydrant Installation Specifications" and Ordinance #345.
- Authorized hydrant for this project are:
 - Kennedy Hydrant
 - Meter A-423 Concrete
 - Clow Model 256 Steel
- On any new kind of building installation, suitable fire hydrants shall be installed before combustible construction commences and laid fire hydrants shall be in good working order with an adequate water supply.
- Contractor shall place a blue reflective marker at intersection of sewer adjacent to fire hydrant as required in Ordinance #345 to identify fire hydrant location.
- Call the Las Vegas Building Department at 799-3073 for underground inspection, pressure and flush verification of all fire hydrants and fire lines before covering.
- Painting of the curb and hydrant and any work necessary for protection of hydrants from physical damage per Ordinance #345 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 Ordinance material and fee certificate for underground piping form shall be obtained from the Fire Department 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.S. listed and F.M. approved.
- Fire hydrant spacing:
 - Residential - 500 feet unimpervious, 600 feet impervious
 - Commercial (including under family) - 300 feet unimpervious, 400 feet impervious.
- No fire hydrant shall be located within the required radius of a cul-de-sac or within 30 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, power pole, street light or any other obstruction.
- No 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 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 fire area is located more than 150 feet from a fire department vehicle access. (See ordinance in LVWC Manual, Section 16.2.07)
- 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 #345.

PRODUCT NAME: CRIMSON RIDGE UNIT 3
 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 stipulation does not provide or imply a water commitment.

STREET LIGHT NOTE
 All street light 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.

SEWER NOTES

- ALL SANITARY SEWER INSTALLATION 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.
- COVERS 18" OR 24" IN CIRCUM DIAMETER SHALL BE 18" OR 24" UNDER THE CURB.
- POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL MEET ASTM D-3034 FOR 15" SPECIFICATIONS, AND INSTALLED WITH SAND BEDDING AND BACKFILL OR TYPE II GRAVEL.
- ALL MANHOLES IN PAVED STREETS 30" R/W AND LARGER, SHALL HAVE 18" DIAMETER CONCRETE MONUMENTS.
- 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 ENCASED PIPE FOR A DISTANCE NOT LESS THAN 120 FEET (15') TO EACH SIDE OF THE CENTERLINE OF THE WATER MAIN.



APPROVALS:
 [Signature] 7-2-92
 CITY LAS VEGAS FIRE MARSHALL DATE

[Signature] 4/20/92
 LAS VEGAS VALLEY WATER DISTRICT DATE

[Signature] 2/12/92
 NEVADA POWER COMPANY DATE
 NEVADA POWER COMPANY APPROVAL IS ONLY FOR THE PLACEMENT & CLEARANCE OF STREET LIGHT & SIGNAL LIGHT INSTALLATION

R/S. DEVELOPMENT
CITY OF LAS VEGAS

APPROVED
 DATE: 3-2-95
 BY: S.Y.P. MORGAN
 KEY TO REFLECT SERVICES OFF OF RECORD

REVISION

PLANNERS & LAND SURVEYORS
CONSULTING ENGINEERS
 2727 SOUTH RAINBOW BOULEVARD
 LAS VEGAS, NEVADA 89102-5148 PHONE (702) 873-7550 FAX (702) 362-2597

MASTER UTILITY PLAN
CRIMSON RIDGE - UNIT 3
 (RANCHO ALTA MIRA LOT 7)

PROJECT

NO. 3890-3

BY RPF/GAT

DATE NOV. 1991

SCALE 1"=40'

SHEET 6
 OF 10 SHEETS

6543

3074-4085-3

