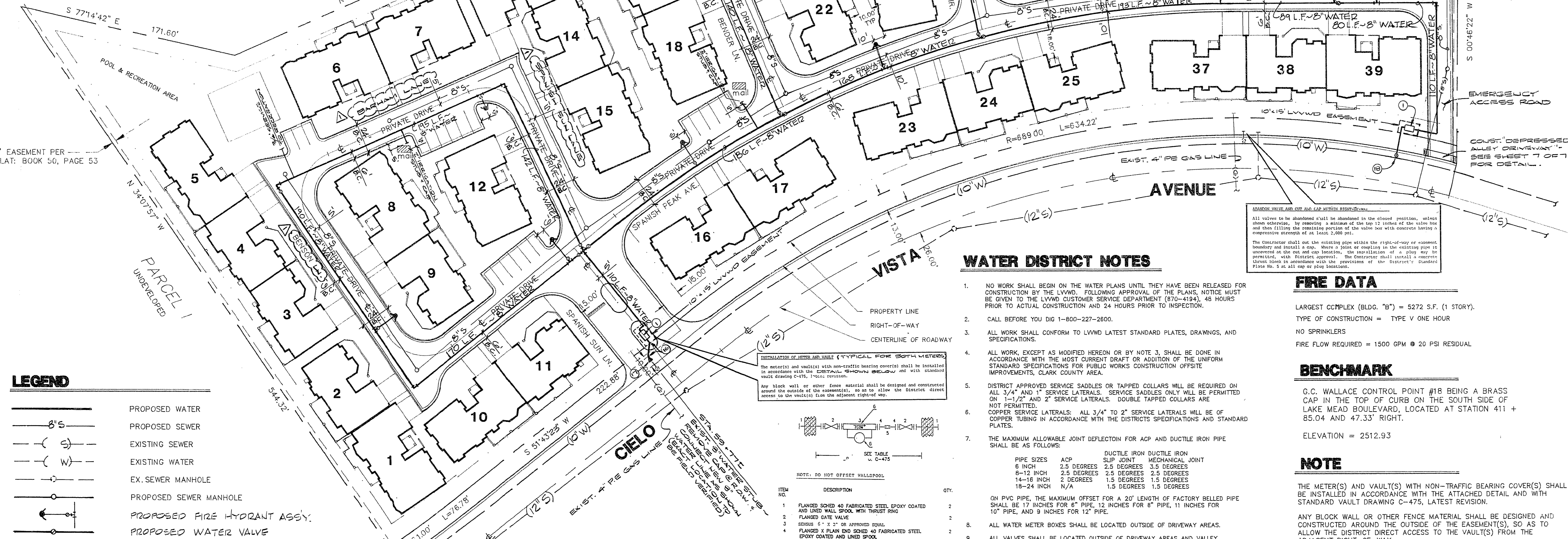
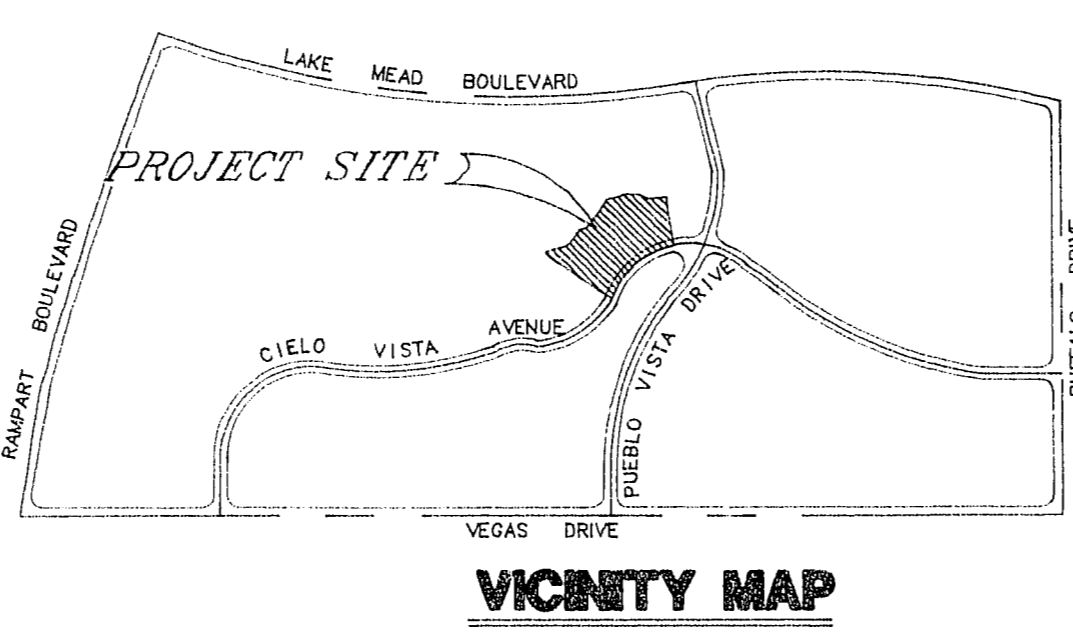


FIRE NOTES

- 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:
A. KENNEDY GUARDIAN
B. MUELLER A-423 CENTURIAN
C. CLOW MODEL 2548 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 CONTRACTORS 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 8 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR 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 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 UFC 88, SECTION 10.207).
- 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 #3545.
- ALL CURBS ALONG PRIVATE DRIVE SHALL BE PAINTED WITH A SUITABLE COAT OF INDUSTRIAL GRADE ENAMEL (SAFETY RED) INDICATED BY SHADOWED CURB ALSO INSTALL "NO PARKING FIRE LANE SIGNS" SEE SHEET G FOR LOCATIONS.

QUANTITY ESTIMATE

①	FMCT(2" x 2")	2 EA.
②	8" x 8" TAPPING TEE & VALVE	1 EA.
③	8" x 6" TAPPING TEE & VALVE	1 EA.
④	6" x 1 1/2" NEPTUNE METER	1 EA.
⑤	STND. FIRE HYDRANT ASSEMBLY	10 EA.
⑥	8" GATE VALE	11 EA.
⑦	6" GATE VALVE	1 EA.
⑧	2" BLOW-OFF ASSEMBLY	2 EA.
⑨	8" 90° BEND	7 EA.
⑩	6" 90° BEND	1 EA.
⑪	8" x 6" TEE	10 EA.
⑫	8" x 6" REDUCER	1 EA.
⑬	3/4" LATERAL	44 EA.
⑭	6" PVC WATER	88 LF.
⑮	8" PVC WATER	2278 LF.
⑯	6" 45° ELL	2 EA.
⑰	10" x 6" REDUCER	1 EA.
⑱	10" x 6" TAPPING TEE W/ 8" TAPPING VALVE	1 EA.



LEGEND

- 8" — PROPOSED WATER
- (S) — PROPOSED SEWER
- (W) — EXISTING WATER
- (C) — EX. SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- ⊕ PROPOSED FIRE HYDRANT ASSY.
- ⊕ PROPOSED WATER VALVE
- ⊕ PROPOSED REDUCER
- ⊕ PROPOSED BLOWOFF
- 25 BUILDING NUMBER
- ① CONSTRUCTION NOTES. (SEE QUANTITY ESTIMATE).

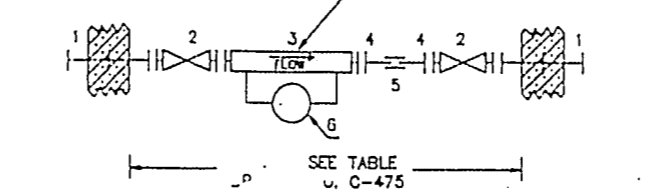
NOTE: FOR BUILDING DIMENSIONS & LOCATIONS REFER TO LA MANCHA SUMMERLIN FINAL MAP.

DISCLAIMER NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF A EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

Avoid cutting underground utility lines. It's costly.
Call before you dig
1-800-227-2600
UNDERGROUND SERVICE (USA)

REGULATION OF METERS AND VALVES (TYPICAL FOR BOTH METERS)
The meter(s) and valve(s) with non-traffic bearing cover(s) shall be installed in accordance with the DISTRICT'S STANDARD SPECIFICATIONS AND WITH STANDARD VULC DRAWING C-475, 1" scale, revision.
Any block wall or other fence material shall be designed and constructed around the outside of the easement(s), so as to allow the District direct access to the valve(s) from the adjacent right-of-way.



NOTE: DO NOT OFFSET WALL/SPOOL

ITEM NO.	DESCRIPTION	QTY.
1	FLANGED SCHED 40 FABRICATED STEEL EPOXY COATED AND LINED WALL SPOOL WITH THURST RING	2
2	FLANGED GATE VALVE	2
3	DESIGNS 6" x 3" OR APPROVED EQUAL	1
4	FLANGED x PLAN END SCHED 40 FABRICATED STEEL EPOXY COATED AND LINED SPOOL	1
5	SLAVE TYPE COUPLING	2
6	INSTALL ADJUSTABLE PIPE SUPPORTS, GRNELL NO. 264 OR APPROVED EQUAL	2

WATER DISTRICT 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 MUST BE GIVEN TO THE LVWD CUSTOMER SERVICE DEPARTMENT (870-4194), 48 HOURS PRIOR TO ACTUAL CONSTRUCTION AND 24 HOURS PRIOR TO INSPECTION.
- CALL BEFORE YOU DIG 1-800-227-2600.
- ALL WORK SHALL CONFORM TO LVWD 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 WILL BE REQUIRED ON ALL 3/4" AND 1" SERVICE LATERALS. SERVICE SADDLES ONLY WILL 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 WILL 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 DEGREES	2.5 DEGREES	2.5 DEGREES
14-18 INCH	2 DEGREES	1.5 DEGREES	1.5 DEGREES
18-24 INCH	N/A	1.5 DEGREES	1.5 DEGREES
- ON PVC PIPE, THE MAXIMUM OFFSET FOR A 20' LENGTH OF FACTORY BELLED PIPE SHALL BE 17 INCHES FOR 6" PIPE, 12 INCHES FOR 8" PIPE, 11 INCHES FOR 10" PIPE, AND 9 INCHES FOR 12" PIPE.
- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
- ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS AND VALLEY VALVES.
- DETECTOR TAPE IS REQUIRED IN ACCORDANCE WITH STANDARD PLATE NO. 27 WHERE INDICATED, AND AS FOLLOWS:
A. OVER ALL MAINS NOT INSTALLED 6 FEET FROM BACK OF CURB.
B. OVER ALL SERVICE LATERALS NOT INSTALLED AT RIGHT ANGLES TO MAIN.
- ALL WATER MAINS ARE TO BE PRESSURE TESTED AT 200 PSI FOR A CONTINUOUS TWO HOUR PERIOD.
- ALL WATER MAINS AND LATERALS SHALL BE DISINFECTED AND FLUSHED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO ACCEPTANCE BY THE DISTRICT.
- THE CONTRACTOR IS TO OBTAIN ALL METERS 2" AND SMALLER FROM LVWD CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICK-UP.

FIRE DATA

LARGEST COMPLEX (BLDG. "B") = 5272 S.F. (1 STORY).
TYPE OF CONSTRUCTION = TYPE V ONE HOUR
NO SPRINKLERS
FIRE FLOW REQUIRED = 1500 GPM @ 20 PSI RESIDUAL

BENCHMARK

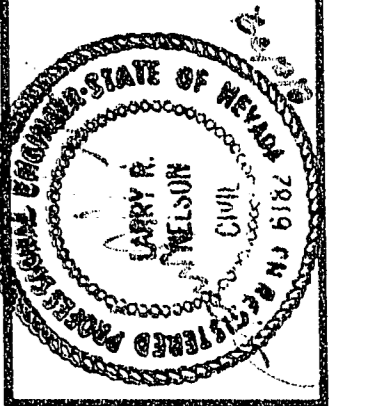
G.C. WALLACE CONTROL POINT #18 BEING A BRASS CAP IN THE TOP OF CURB ON THE SOUTH SIDE OF LAKE MEAD BOULEVARD, LOCATED AT STATION 411 + 85.04 AND 47.33' RIGHT.
ELEVATION = 2512.93

NOTE

THE METER(S) AND VALVE(S) WITH NON-TRAFFIC BEARING COVER(S) SHALL BE INSTALLED IN ACCORDANCE WITH THE ATTACHED DETAIL AND WITH STANDARD VULC DRAWING C-475, LATEST REVISION.
ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S), SO AS TO ALLOW THE DISTRICT DIRECT ACCESS TO THE VALVE(S) FROM THE ADJACENT RIGHT-OF-WAY.

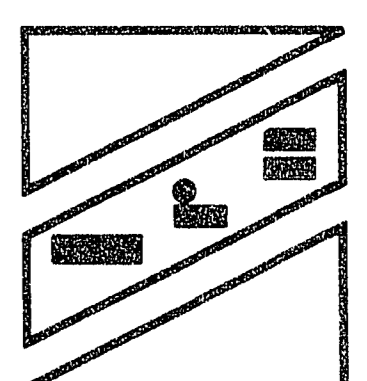
APPROVALS

David Brennan 11/23/92
C.L.V. FIRE DEPT. DATE
11/25/92
LAS VEGAS VALLEY WATER DISTRICT DATE



PROJECT MANAGED BY: L.R. NELSON	DATE: JUNE 1992
DESIGNED BY: L.R. NELSON	DATE: JUNE 1992
DRAWN BY: L.R. NELSON	DATE: JUNE 1992
CHECKED BY: L.R. NELSON	DATE: JUNE 1992
REVISIONS: SEE SHEET J UNLESS AS INDICATED	

L.R. NELSON
CONSULTING ENGINEERS
6075 SOUTH EASTERN AVENUE 89119
LAS VEGAS, NEVADA
(702) 798-7978



MASTER WATER PLAN
LA MANCHA SUMMERLIN
STANTON CONSTRUCTION, INC.
CITY OF LAS VEGAS, NEVADA

SHEET NUMBER
4
OF 7 SHEETS

10-25-96 5674-4234