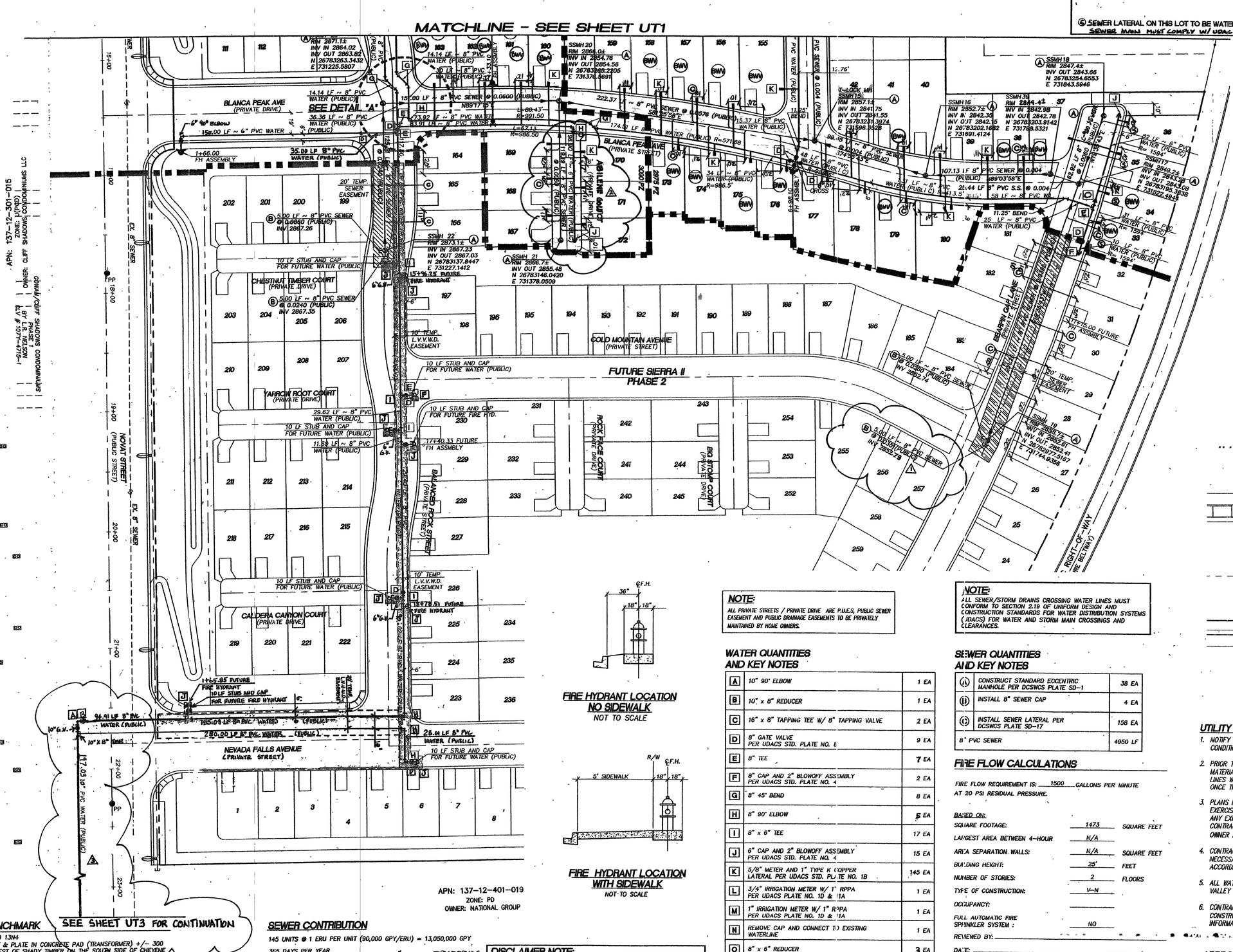

BENCHMARK

9L109 13N4
RIVET & PLATE IN CONCRETE PAD (TRANSFORMER) +/- 300 FT WEST OF SHADY TIMBER ON THE SOUTH SIDE OF CHEYENNE

ELEVATION: 2861.97 FEET
872.3314 METERS

101251

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

Avoid overhead power line contact. Call before you Overhead 1-702-593-6111 (NEVADA POWER ENVIRONMENT SAFETY SERVICES DEPARTMENT)

52866

K1

BASIS OF BEARINGS

NORTH 87°07'11" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 12, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY A MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN BOOK 102 OF SURVEYS, AT PAGE 50.

SEWER CONTRIBUTION

145 UNITS @ 1 ERU PER UNIT (90,000 GPY/ERU) = 13,050,000 GPY

365 DAYS PER YEAR
AVERAGE DAILY FLOW = 35,753 GPD
PEAK FACTOR = 3.3
APPROXIMATE PEAK FLOW = 117,986 GPD

ALL UTILITIES SHOWN ON THIS PAGE HAVE BEEN INSTALLED AS PER PLANS.
FOR PENNEY CONST.
12-15-06

DISCLAIMER NOTE:

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD 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 LOCATIONS.

NOTIFY ENGINEER IMMEDIATELY IF DESCREPENCIES ARE ENCOUNTERED.

FIRE HYDRANT LOCATION
NO SIDEWALK
NOT TO SCALE

FIRE HYDRANT LOCATION
WITH SIDEWALK
NOT TO SCALE

NOTE:

ALL PRIVATE STREETS / PRIVATE DRIVE ARE P.U.E.S, PUBLIC SEWER EASEMENT AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOME OWNERS.

WATER QUANTITIES AND KEY NOTES

A	10" 90° ELBOW	1 EA
B	10" x 8" REDUCER	1 EA
C	16" x 8" TAPPING TEE W/ 8" TAPPING VALVE	2 EA
D	8" GATE VALVE PER UDACS STD. PLATE NO. 8	9 EA
E	8" TEE	7 EA
F	8" CAP AND 2" BLOWOFF ASSEMBLY PER UDACS STD. PLATE NO. 4	2 EA
G	8" 45° BEND	8 EA
H	8" 90° ELBOW	5 EA
I	8" x 6" TEE	17 EA
J	6" CAP AND 2" BLOWOFF ASSEMBLY PER UDACS STD. PLATE NO. 4	15 EA
K	5/8" METER AND 1" TYPE K COPPER LATERAL PER UDACS STD. PLATE NO. 1B	145 EA
L	3/4" IRRIGATION METER W/ 1" RPPA PER UDACS PLATE NO. 1D & 11A	1 EA
M	1" IRRIGATION METER W/ 1" RPPA PER UDACS PLATE NO. 1D & 11A	1 EA
N	REMOVE CAP AND CONNECT TO EXISTING WATERLINE	1 EA
O	8" x 6" REDUCER	3 EA
	FIRE HYDRANT ASSEMBLY PER UDACS STD. PLATE NO. 7	7 EA
	10" PVC WATERLINE	730 LF
	8" PVC WATERLINE	3327 LF
	6" PVC WATERLINE	1998 LF

NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.19 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

SEWER QUANTITIES AND KEY NOTES

Ⓐ	CONSTRUCT STANDARD ECCENTRIC MANHOLE PER DCSWCS PLATE SD-1	38 EA
Ⓑ	INSTALL 8" SEWER CAP	4 EA
Ⓒ	INSTALL SEWER LATERAL PER DCSWCS PLATE SD-17	158 EA
	8" PVC SEWER	4950 LF

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENT IS: 1500 GALLONS PER MINUTE AT 20 PSI RESIDUAL PRESSURE.

BASED ON:

SQUARE FOOTAGE:	1473	SQUARE FEET
LARGEST AREA BETWEEN 4-HOUR	N/A	
AREA SEPARATION WALLS:	N/A	SQUARE FEET
BUILDING HEIGHT:	25'	FEET
NUMBER OF STORIES:	2	FLOORS
TYPE OF CONSTRUCTION:	V-N	
OCCUPANCY:		
FULL AUTOMATIC FIRE SPRINKLER SYSTEM :	NO	

REVIEWED BY: _____

DATE: _____

LVVWD NOTE:

INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER MANUFACTURER INSTRUCTIONS.

LOTS 107-114, 143-150, 160-164, 167-172
THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.

APPROVALS

1st appd 7/2/03

LAS VEGAS VALLEY WATER DISTRICT — DATE 8/12/03

CITY OF LAS VEGAS FIRE DEPARTMENT — DATE 4/25/03

UTILITY NOTE

1. NOTIFY TETRA TECH, INC. IMMEDIATELY OF ANY DISCREPANCIES IN THE PLANS OR CONDITIONS IN THE FIELD.
2. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL LOCATE AND VERIFY SIZE, MATERIAL DEPTH, CONDITION, PRESSURE AND LOCATION OF ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. TETRA TECH, INC. SHALL BE CONTACTED ONCE THE UTILITY IS LOCATED.
3. PLANS MAY NOT INDICATE ALL EXISTING UTILITY LINES. CONTRACTOR IS TO EXERCISE EXTREME CAUTION DURING EXCAVATION IN ORDER TO AVOID DAMAGING ANY EXISTING UTILITY LINES. IF THE UTILITY LINES ARE DAMAGED BY THE CONTRACTOR, SUCH DAMAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
4. CONTRACTOR TO SAWCUT AND REMOVE EXISTING ASPHALT AND CONCRETE AS NECESSARY FOR UTILITY TRENCHES. BACKFILL AND PATCH ALL TRENCHES ACCORDING TO CITY OF LAS VEGAS STANDARDS.
5. ALL WATER SERVICE LINES AND METERS SHALL BE INSTALLED PER LAS VEGAS VALLEY WATER DISTRICT STANDARDS AND SPECIFICATIONS.
6. CONTRACTOR TO FIELD VERIFY LOCATION AND INVERT OF MANHOLE PRIOR TO CONSTRUCTION. TETRA TECH, INC. SHALL BE CONTACTED ONCE THIS INFORMATION HAS BEEN OBTAINED.

— SEWER AS BUILT —

REV.	DATE	BY	REVISION
1	01/15/03	ENG	ADDED OFFSITE WATERLINE
2	01/16/03	ENG	REVISE STREETNAME
3	01/29/03	ENG	REVISE INV. ELEV.

04/29/03 08:47:09 AM
P:\P02243\0003\Engineering\Maps\Unit 1\1-NEW-UTILITY.dwg

RICHMOND AMERICAN
7250 WEST PEAK DRIVE, SUITE 212
LAS VEGAS, NEVADA
(702) 240-5676

TETRA TECH, INC.
INFRASTRUCTURE SOUTHWEST GROUP
401 N. Buffalo Dr. Suite 100, Las Vegas, Nevada. 89145 (702) 242-4200

SHEET: UTILITY PLAN

TITLE: SIERRA II - PHASE 1
CITY OF LAS VEGAS

DRAWN BY: | DESIGNED BY: | CHECKED BY: | QUALITY CONTROL BY: | QUALITY CONTROL BY: | SCALE: | PROJECT NO. P02243-0005

SEAL
REGISTERED PROFESSIONAL ENGINEER
JOSEPH D. THOMASON
No. 11907
CIVIL
STATE OF NEVADA
4-25-03

SHEET UT2
6 OF 23

DRAWING NO. 1674751-1