

Call Before You Dig
 1-702-227-2929
 UnderGround
 1-702-455-7511
 CLARK COUNTY TRAFFIC OPERATIONS
 1-702-229-6611
 LAS VEGAS COMMUNITY IMPROVED TRAFFIC SYSTEM

WASTEWATER CALCULATIONS

FACILITY TYPE: SINGLE FAMILY RESIDENTIAL
 TOTAL UNITS AT BUILD OUT: 28 HOUSES

AVERAGE FLOW (MGD) = 0.0069
 PEAK FLOW (MGD) = 0.024

Calculations:
 $AVG\ FLOW = 28 \times \frac{90,000}{365} \times \frac{1}{1,000,000} = 0.0069\ MGD$
 $PEAK\ FLOW = 0.0069 \times 3.5 = 0.024\ MGD$

WATER MAIN JOINT DEFLECTION

(PVC 4" DIA)
 PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MAXIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDAC3 2.07.01 AND 2.07.02.

FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTING SHALL BE USED.

FIRE FLOW CALCULATIONS

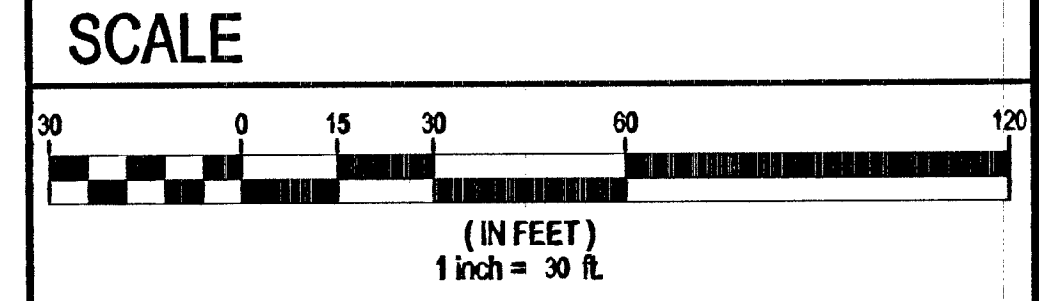
FIRE FLOW REQUIREMENT IS 2,000 GALLONS PER MINUTE AT 20 POUNDS PER SQUARE INCH RESIDUAL BASED ON:
 SQUARE FOOTAGE: 5,100 SQ FT
 HEIGHT: 35 FT
 SPRINKLER SYSTEM: NO
 ROOF CONSTRUCTION: TILE
 HIGH PILED COMBUSTIBLE STORAGE: NO

LARGEST AREA BETWEEN SEPARATE WALLS: NA
 TYPE OF CONSTRUCTION: V-B
 OCCUPANCY: R-3
 STORIES: 2 STORES
 ESFR SYSTEM: NO

- UTILITY NOTES**
- ALL WATER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS" (UDACS), LATEST EDITION.
 - FIRE, WATER, AND SEWER SERVICES, AS APPROVED ON THIS PLAN, ARE INTENDED SPECIFICALLY FOR THE LOT AND USE SHOWN, AND ARE NOT INTENDED TO SERVICE ADDITIONAL PARCELS OR STRUCTURES WHICH MAY BE CREATED IN THE FUTURE. IN THE EVENT THAT THE PARCELS AND/OR LOTS SHOWN ON THIS PLAN ARE FURTHER DIVIDED TO CREATE ADDITIONAL PARCELS OR LOTS, THE OWNER IS REQUIRED TO PROVIDE SEPARATE FIRE, WATER, & SEWER SERVICES TO EACH.
 - WATER AND SEWER LATERALS SHALL BE INSTALLED A MINIMUM OF 48" APART IN SEPARATE TRENCHES. WATER LATERALS SHALL BE A MINIMUM OF 12" ABOVE THE SEWER LATERAL. (REF. UNIFORM PLUMBING CODE)
 - LOCATOR WIRE SHALL BE USED FOR ALL SERVICE LATERALS NOT PERPENDICULAR TO THE MAIN. (TYPICAL)
 - ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS" (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
 - ALL WORK TO BE PERFORMED OUTSIDE OF THE PROJECT BOUNDARY AND ON PRIVATE PROPERTY SHALL NOT BE PERFORMED UNTIL WRITTEN PERMISSION AND EASEMENTS HAVE BEEN OBTAINED FROM THE OFFSITE OWNER AND GIVEN TO CLARK COUNTY.
 - ALL ONSITE STREETS AND DRAINAGE EASEMENTS ARE TO BE PRIVATELY OWNED AND MAINTAINED.
 - INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING. (UDACS PLT. 15)

UTILITY DISCLAIMER NOTE

EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL 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 LOCATIONS. CALL BEFORE YOU DIG: 1-800-227-2929
 CALL BEFORE YOU OVERHEAD: 1-702-227-2929



LEGAL DESCRIPTION

PARCEL 7:
 A PORTION OF LOT 4 AS SHOWN AT PAGE 52 IN FILE 22 OF PARCEL MAPS ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE AND A SHOWN ON THAT RECORD OF SURVEY FOR BOUNDARY LINE ADJUSTMENT AT PAGE 25 IN FILE 161 OF SURVEYS, ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE, LIVING WITHIN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 30, TOWNSHIP 19 SOUTH, RANGE 90 EAST, M.D.M., CLARK COUNTY, NEVADA

BASIS OF BEARINGS

NORTH 89°48'21" EAST
 BEING THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 30, T. 19 S., R. 90 E., M.D.M., CLARK COUNTY, NEVADA, ALSO BEING CENTERLINE OF ANN ROAD AS SHOWN UPON PARCEL MAP FILE 97, PAGE 85, CLARK COUNTY, NEVADA OFFICIAL RECORDS.

BENCHMARK

CITY OF LAS VEGAS BM NO. BLV90 3055W - CITY OF LAS VEGAS PIN AND ROUND PLATE IN CONCRETE PAD, NORTHWEST CORNER OF ANN RD AND CONQUISTADOR ST., +/-30' WEST OF CONQUISTADOR ST.
 817.475 METERS (NAVD 88) 2681.99 FEET

APPROVAL BLOCK

[Signature] 05/09/13
 LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER DATE
 (PROJ # 1175-6) LWWD APPROVED FIRE FLOW 2,000 GPM AT 20 PSI RESIDUAL

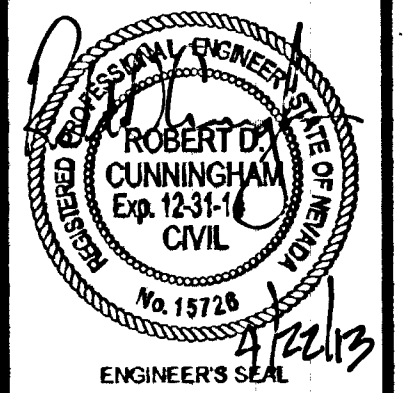
[Signature] 24 APR 13
 CLARK COUNTY FIRE DEPARTMENT DATE
 APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW = 2,000 G.P.M. AT 20 PSI RESIDUAL.
 13-16905
 5 hydrants

NO.	DESCRIPTION	SHTS.	APPR.	DATE

DR. HORTON
 LAS VEGAS, NV 89114
 HENDERSON, NV 89014
 (702) 633-9600 FAX: (800) 684-4621

TANEY ENGINEERING
 6030 S. JONES BLVD STE 100
 LAS VEGAS, NV 89118
 (702) 362-8844 FAX: (702) 362-6523

ANN & HUALAPAI
 A RESIDENTIAL SUBDIVISION
 UTILITY PLAN - SOUTHEAST



DATE: 4/22/2013
 SCALE: 1"=30'
 JOB NO: DRH-12-030
 DESIGNED BY: SF
 CHECKED BY: RDC
 SHEET NAME: UT3
 SHEET: 26 OF 31
 307 V 1064
 HTE#12-48969
 CC (CLV SEWER)

ABANDONMENT NOTE

ALL VALVES TO BE ABANDONED SHALL BE ABANDONED IN THE CLOSED POSITION, UNLESS SHOWN OTHERWISE, BY REMOVING A MINIMUM OF THE TOP TWENTY-FOUR (24) INCHES OF THE VALVE BOX AND THEN FILLING THE BOTTOM OF THE BOX WITH A MINIMUM OF EIGHT (8) INCHES OF SAND OR TYPE II AGGREGATE BASE. THE REMAINING PORTION OF THE VALVE BOX SHALL BE FILLED WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST TWO THOUSAND (2,000) PSI.

CUT AND CAP

THE LATERAL MUST BE CUT WITHIN ONE (1) FOOT OF THE ABANDONED VALVE, OR AS SHOWN ON THE PLANS, AND CAPPED. THE CONTRACTOR SHALL CUT THE EXISTING PIPE WHERE SHOWN ON THE DRAWING, AND INSTALL A CAP COMPLETE WITH THRUST BLOCK, WHERE A JOINT OR COUPLING IN THE EXISTING PIPE IS UNCOVERED AT THE CUT AND CAP LOCATION(S). THE INSTALLATION OF A PLUG MAY BE PERMITTED WITH DISTRICT APPROVAL. A CONCRETE THRUST BLOCK SHALL BE INSTALLED AT ALL CAP OR PLUG LOCATIONS, IN ACCORDANCE WITH THE PROVISIONS OF UDAC3 PLATE 31

BACKWATER VALVE (BWV)

LOTS: 2, 3, 4, 6, 7, 8, 11, 13 & 14
 THESE LOTS HAVE DRAINAGE PIPING FEATURES THAT LOWER THAN THE NEXT UPSTREAM SEWER MANHOLE COVER AND SHALL HAVE BACKWATER VALVES INSTALLED PER DCSWCS SD-29.

FILE NAME: 19 UT1.DWG