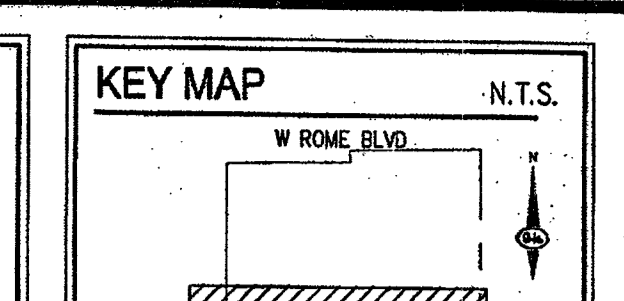


WATER MAIN JOINT DEFLECTION (4"-24")
 PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
 FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

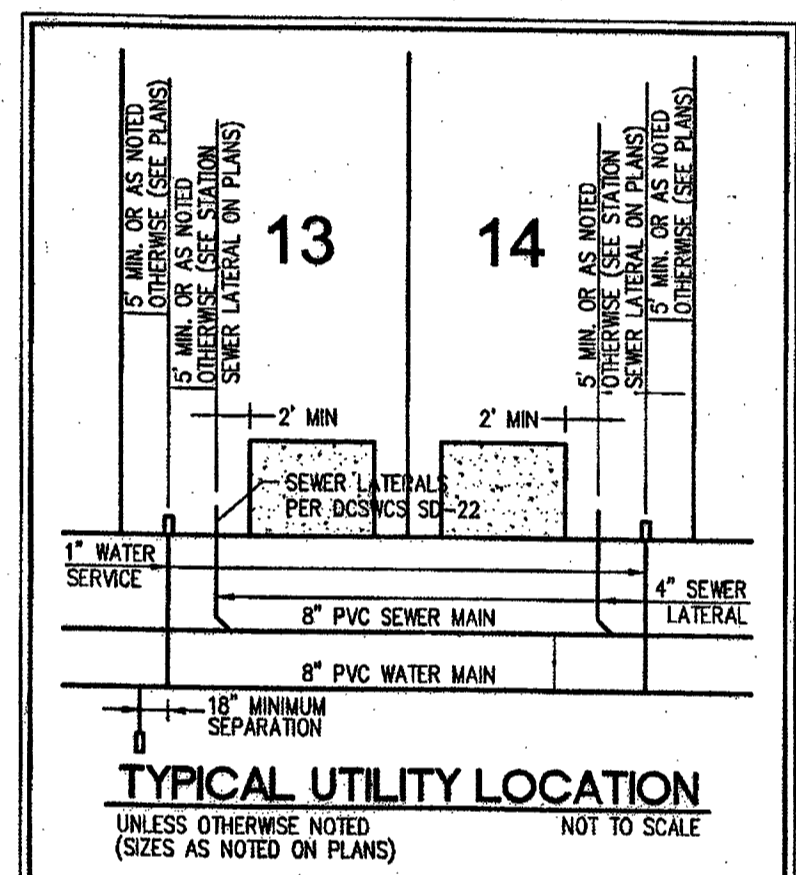
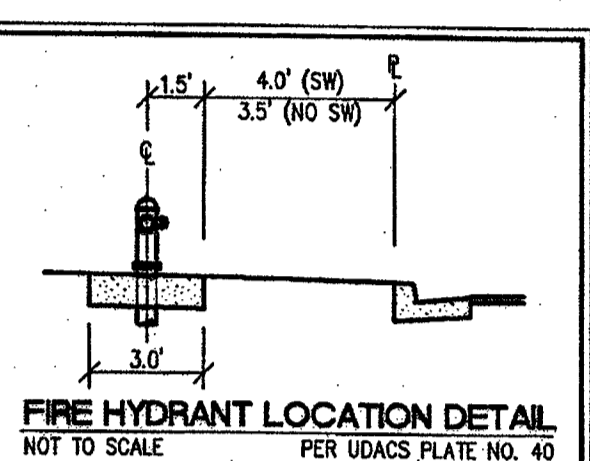
GENERAL NOTES
 1. REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS) UNDER CLARK COUNTY'S JURISDICTION THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITIES TO CLARK COUNTY'S SATISFACTION. ALL MATERIAL USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS OR WILL BE AN APPROVED EQUIVALENT.
 2. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN INSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.6.01.02.
 3. ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
 4. THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SEWER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
 5. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.



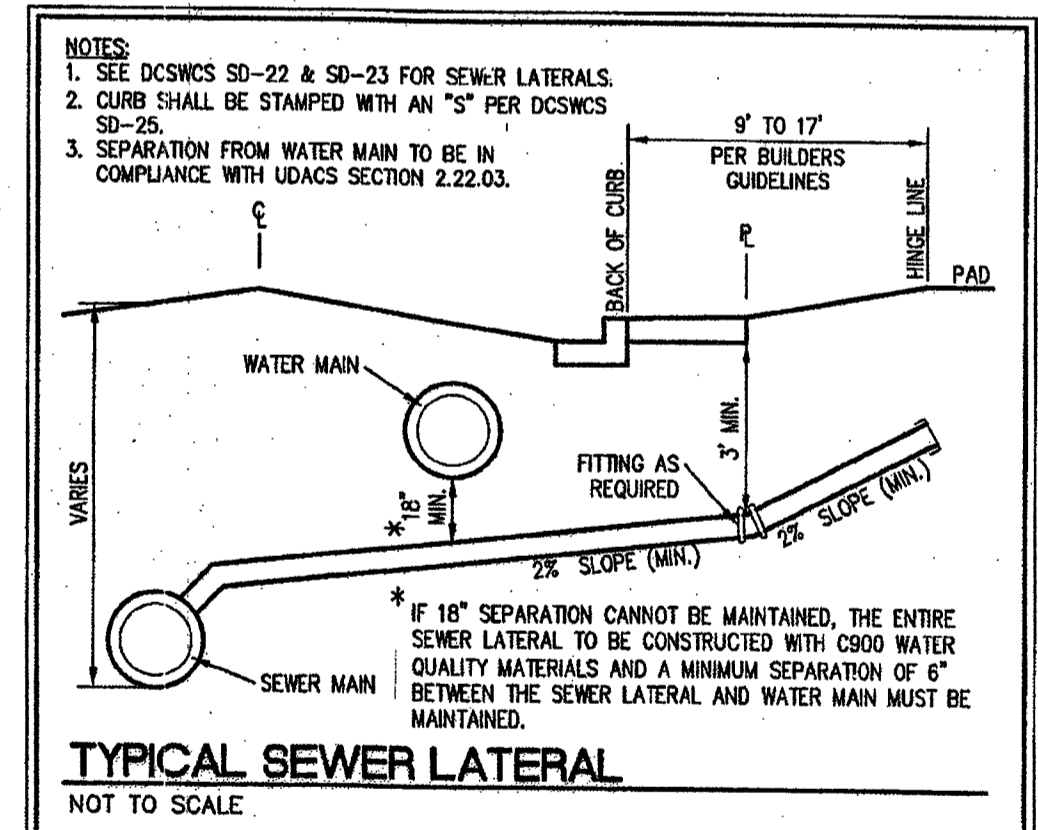
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS
 27 UNITS X 250 GPD/UNIT = 6,750 GPD
 TOTAL AVERAGE CONTRIBUTION = 6,750 GPD = 0.00675 MGD
 TOTAL PEAK FLOW = 0.00675 MGD X 3.5 (PEAK FACTOR) = 0.0236 MGD

DISCLAIMER NOTE
 EXISTING UTILITY LOCATIONS SHOWN HEREON 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 IN THEIR PROPER LOCATION.



RPPA (1) 1"
 APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.



- WATER NOTES**
- 1" 8" PVC WATER PIPE (3090 WP2)
 - 2" 8" X 8" TEE PER UDACS PLATE NO. 31
 - 3" CAP AND 2" BLOW-OFF VALVE PER UDACS PLATE NO. 36. SIZE PER PLAN.
 - 4" 1" DIAPHRAGM ASSEMBLY W/ 8" GATE VALVE PER UDACS PLATE NO. 40
 - 5" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39.
 - 6" 8" X 6" TEE PER UDACS PLATE NO. 31
 - 7" 8" X 6" REDUCER PER UDACS PLATE NO. 30
 - 8" FIELD VERIFY LOCATION, AND CONNECT TO EXISTING WATER WITH 12" TAPPING SLEEVE W/ 3" TAPPING VALVE PER UDACS PLATE NO. 34 & 39 SECTION 2.24.01R
 - 9" 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 2
 - 10" INSTALL 1" COPPER SERVICE W/ 3/4" IRRIGATION METER & 1" RPPA PER UDACS PLATE NO. 4 & 8.
 - 11" INSTALL (2) 2" IRRIGATION SLEEVES
 - 12" 45 DEGREE BEND PER UDACS PLATE NO. 31. SIZE PER PLAN.
 - 13" 90 DEGREE BEND PER UDACS PLATE NO. 31. SIZE PER PLAN.
 - 14" 6" PVC WATER PIPE (3090 WP2)
 - 15" 22.5 DEGREE BEND PER UDACS PLATE NO. 31. SIZE PER PLAN.
 - 16" 11.25 DEGREE BEND PER UDACS PLATE NO. 31. SIZE PER PLAN.
 - 17" 5 DEGREE BEND (RESTRAINED ON EACH END)
 - 18" EXISTING WATER
 - 19" 8" CLASS 53 DIP WATER PIPE (3090 WP2)
 - 20" 90 DEGREE BEND PER UDACS PLATE NO. 31. ROLLED VERTICALLY TO 45 DEGREES. SIZE PER PLAN, W/ THRUST BLOCK AND RESTRAINTS.
 - 21" INSTALL 18" STEEL CASING PER UDACS PLATES 22 & 23
 - 22" INSTALL TEST STATION, SEE DETAILS, SHEET D-2

- SEWER NOTES**
1. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER UDACS SD-1A
 2. INSTALL 8" PVC SANITARY SEWER PIPE (PUBLIC)
 3. INSTALL 8" SANITARY SEWER CAP, PER SEWER STANDARD.
 4. INSTALL 4" PVC SANITARY SEWER LATERAL, PLUG AND 4"x4" POST PER DCSWCS SD-22, MARK PER SD-25
 5. REMOVE PLUG & CONNECT TO EXISTING SANITARY SEWER.
 6. INSTALL 8" C900 PVC SANITARY SEWER PIPE (PUBLIC)
 7. INSTALL 48" DIAMETER SANITARY SEWER DROP MANHOLE WITH PRECAST BASE PER UDACS SD-12
 8. ENCASE SEWER LINE IN 4" CEMENT SLURRY.
 9. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH 12" TAPPING SLEEVE AND SILENT CONE PER UDACS SD-13, SPECIAL MH "A"
 10. INSTALL 4" C900 SANITARY SEWER LATERAL, PLUG AND 4"x4" POST PER DCSWCS SD-23, MARK PER SD-25
- SEE SHEET C-2 FOR LEGEND, ABBREVIATIONS AND QUANTITIES

BENCHMARK
 BENCHMARK NUMBER: 619524W6
 RIVET AND PLATE IN TOP CURB WEST SIDE OF SHAUMBER ROAD AT DEER SPRINGS WAY.
 ELEVATION = 2957.70 FEET, 901.509 METERS
 N.A.D. 88 DATUM
 PER THE CITY OF LAS VEGAS BENCHMARKS - 2008
 ADJUSTMENT (UPDATED 05/24/2010).

BASIS OF BEARING
 NORTH 89°02'28" EAST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW/4) OF THE SOUTHWEST QUARTER (SW/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CLARK COUNTY, NEVADA, PER BOOK 118, PAGE 88 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

APPROVAL
 [Signature] 2/3/15
 LAS VEGAS FIRE AND RESCUE
 DATE

APPROVED FOR CONSTRUCTION
 [Signature] 2/3/15
 LAS VEGAS VALLEY DISTRICT ENGINEERING SERVICES MANAGER
 DATE PROJECT NO. 123101
 LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

FIRE FLOW CALCULATIONS
 FIRE FLOW REQUIREMENT IS 1,500 GALLONS PER MINUTE AT 20 P.S.I. RESIDUAL PRESSURE.

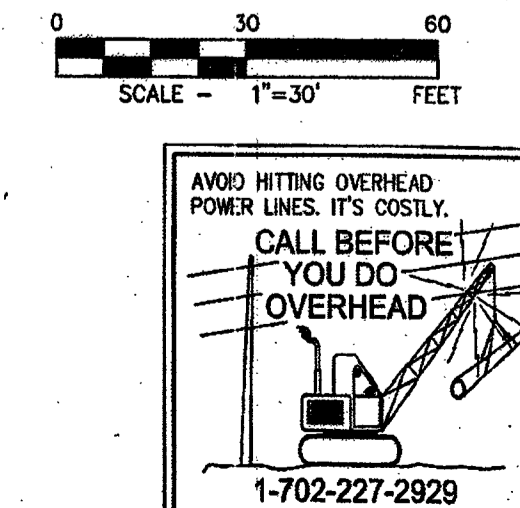
USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC)	TYPE V-B
AUTOMATIC FIRE SPRINKLERS	NO
SQUARE FOOTAGE	3,800
LARGEST AREA BETWEEN 4 HOUR WALLS	1,4
BUILDING HEIGHT	<30
NO OF STORIES INCLUDING BASEMENT	2
HIGH PILED COMBUSTIBLE STORAGE	NO
NO OF HYDRANTS INSTALLED	1

ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19, 06 & 08.

ABANDONED VALVES CUT AND CAP
 ALL VALVES TO BE ABANDONED SHALL BE ABANDONED IN THE CLOSED POSITION, UNLESS SHOWN OTHERWISE, BY REMOVING A MINIMUM OF THE TOP TWO (2) 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. THE LATERAL MUST BE CUT WITHIN ONE (1) FOOT OF THE ABANDONED VALVE, OR AS SHOWN ON 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 LOCATIONS. THE INSTALLATION OF A PLUS 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 UDACS PLATE 31.

THE DISTRICT CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDED CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.
 CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

FOR LOT 48
 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. PRIVATE ARE THE DEVELOPER'S RESPONSIBILITY, AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVWD FACILITIES.



Call before you Dig
 Avoid cutting underground utility lines. It's costly. Call
 811
 CLARK COUNTY TRAFFIC OPERATIONS AND TRAFFIC SERVICES
 1-800-227-2800
 CLARK COUNTY TRAFFIC OPERATIONS
 1-702-455-6000
 CLARK COUNTY TRAFFIC OPERATIONS
 1-702-432-5300
 CLARK COUNTY TRAFFIC OPERATIONS
 1-702-227-2929

SLATER HANIFAN GROUP
 CONSULTING ENGINEERS & PLANNERS
 5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
 PHONE (702) 284-5300

RICHMOND AMERICAN HOMES
 PROVIDENCE POD 308 PHASE 1
 UTILITY SHEET II

DATE: 2/9/2015
 DRAFTER: SS
 DESIGNER: DEB
 CHECKED: DEB
 PROJECT NO. FIG1303-000

APPROVED FOR CONSTRUCTION
 [Signature] 2/3/15
 LAS VEGAS VALLEY DISTRICT ENGINEERING SERVICES MANAGER
 DATE PROJECT NO. 123101
 LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

DOUGLAS BERG
 PROFESSIONAL ENGINEER - CIVIL
 No. 17103 (NV)

U-2
 SHEET 16 OF 18
 H=5552
 10715020-1