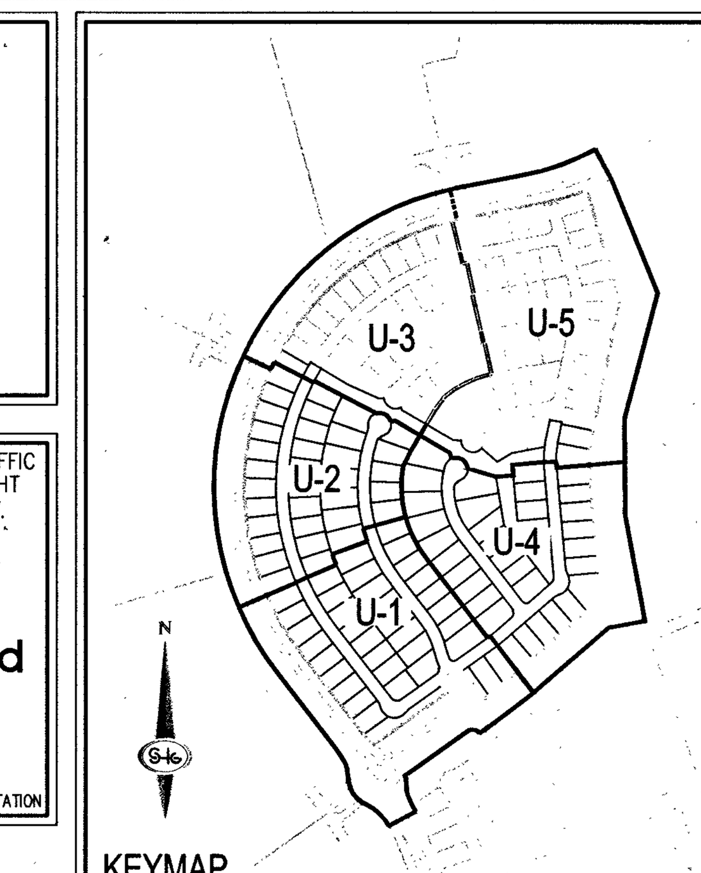
AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY. CALL BEFORE YOU DO OVERHEAD 1-702-227-2929

Call before you Dig. Avoid cutting underground utility lines. It's costly. Call 811 OR 1-800-227-2600 AND CLARK COUNTY TRAFFIC OPERATIONS 1-702-455-6000

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY. Call before you do UnderGround 1-702-455-6000 CLARK COUNTY TRAFFIC OPERATIONS AND 1-702-432-5300 FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION



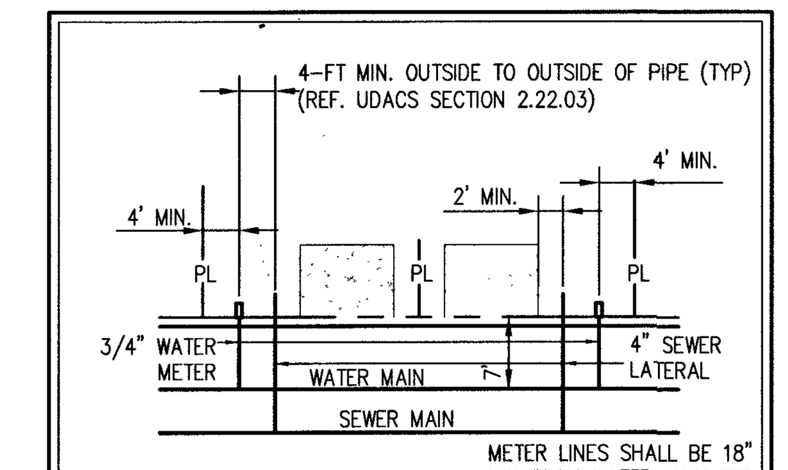
KEYMAP
N.T.S.

SCALE: 1"=40 FEET

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

WATER MAIN JOINT DEFLECTION (PVC, 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.



TYPICAL UTILITY LOCATION

UNLESS OTHERWISE NOTED
(SIZES AS NOTED ON PLANS)

METER LINES SHALL BE 18" MIN FROM WATER MAIN TEE INTERSECTIONS, CROSSINGS, AND VALVES

FIRE FLOW CALCULATIONS

FIRE FLOW 2000 GPM AT 20 P.S.I. RESIDUAL

USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC)	TYPE V-B
AUTOMATIC FIRE SPRINKLERS	NO
SQUARE FOOTAGE	<4,000
LARGEST AREA BETWEEN 4-HR WALLS	N/A
BUILDING HEIGHT	<35
NO OF STORIES INCLUDING BASEMENT	2
HIGH PILED COMBUSTIBLE STORAGE	NO
NO OF HYDRANTS INSTALLED	11

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 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 IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.G.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. WATER LINES TO BE CONSTRUCTED WITH MINIMUM DEPTH OF COVER AS LISTED IN UDACS SECTION 2.08 AND UDACS PLATES NO. 16 & 17, UNLESS AS SHOWN OTHERWISE ON THE PROFILE.
5. 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.
6. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.

WATER NOTES

1. REMOVE EX. CAP AND BLOW-OFF ASSEMBLY AND CONNECT TO EX. 8" DIP WATER PIPE (BY OTHERS)
2. INSTALL 8" PVC (CLASS 150) WATER PIPE
3. INSTALL 3/4" WATER METER PER UDACS PLATE # 2 (TYP)
4. INSTALL 8" x 8" CROSS WITH THRUST BLOCKS PER UDACS PLATE # 31
5. INSTALL 8" x 8" TEE WITH THRUST BLOCKS PER UDACS PLATE # 31
6. INSTALL 8" x 6" TEE PER UDACS PLATE # 31 AND FIRE HYDRANT ASSEMBLY WITH 6" GATE VALVE PER UDACS PLATE # 40
7. INSTALL CAP AND 2" BLOWOFF VALVE PER UDACS PLATE # 36
8. INSTALL 5° HORIZONTAL BEND (RESTRAIN BOTH ENDS)
9. INSTALL 45° BEND PER UDACS PLATE #31
10. INSTALL 22.5° BEND PER UDACS PLATE #31
11. INSTALL 90° HORIZONTAL BEND PER UDACS PLATE #31
12. 1° MAX. DEFLECTION (VERTICAL)
13. INSTALL 1" IRRIGATION METER PER UDACS PLATE NO. 4 WITH BACKFLOW PREVENTION ASSEMBLY PER UDACS PLATE NO. 8
14. 2-EA. 4" (SCH 40) PVC AND 1-EA. 6" (SCH 40) PVC SLEEVES
15. INSTALL 6" PVC (CLASS 150) WATER PIPE
16. INSTALL 8"x6" REDUCER
17. INSTALL 1" WATER METER PER UDACS PLATE NO. 4
18. REMOVE CAP AND BLOW OFF PER UDACS PLATE NO. 36 AND CONNECT TO EXISTING MAIN
19. INSTALL 11.25° HORIZONTAL BEND PER UDACS PLATE #31
20. INSTALL 45° VERTICAL BEND PER UDACS PLATE #31
21. REMOVE CAP AND BLOWOFF PER UDACS PLATE NO. 36 AND CONNECT TO EXISTING MAIN
22. INSTALL 8" x 6" TEE PER UDACS PLATE # 31 WITH 6" GATE VALVE PER UDACS PLATE # 40
23. INSTALL 8" DIP (CLASS 53) WATER PIPE
24. 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39

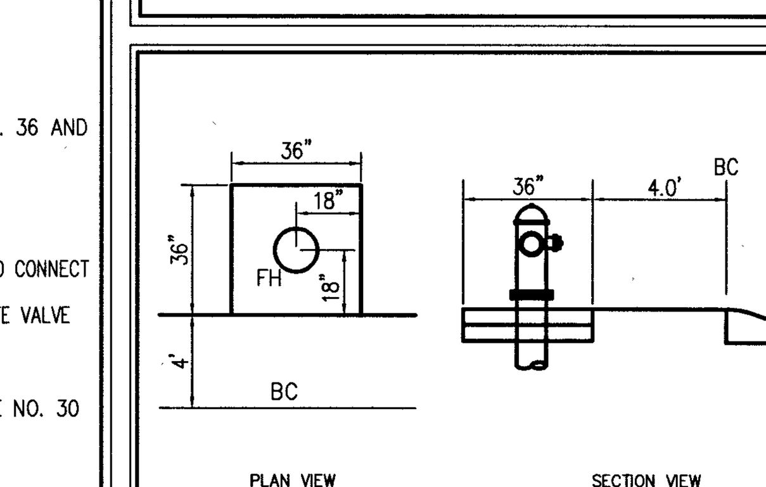
SEWER NOTES

1. INSTALL 8" PVC SANITARY SEWER PIPE
2. INSTALL 48" DIAMETER SANITARY SEWER MAHOLE PER DCWCS SD-1A & SD-1B.
3. INSTALL 4" SEWER LATERAL PER SD-22, SD-23, & SD-25 W/ 8" X 4" WYE (TYPICAL).
4. STUB AND CAP 8" SS (WITH THRUST BLOCK PER DETAIL ON SHEET U-1)
5. CONNECT TO SANITARY SEWER MANHOLE (BY OTHERS)
6. DROP INLET NOTE: CAST-IN-PLACE MONOLITHIC POUR WITH WTER STOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WTIH WATER STOPS, CENTER BULB, OR FLAT STRIP (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

SEE SHEET C-2 FOR QUANTITIES AND ABBREVIATIONS

SEWER CONNECTION NOTE

ONE OR MORE OF THE DOWNSTREAM SEWER SYSTEM THAT WILL SERVE THIS PROJECT HAS NOT BEEN COMPLETED AND/OR ACCEPTED FOR MAINTENANCE BY THE CITY OF LAS VEGAS. ANY WORK DONE ON THIS PROJECT PRIOR TO THE COMPLETION AND/OR ACCEPTANCE OF THE DOWNSTREAM SEWER SYSTEM(S) SHALL BE DONE AT THE DEVELOPER'S OWN RISK. THE CITY OF LAS VEGAS RESERVES THE RIGHT TO PREVENT THE PHYSICAL CONNECTION OF THIS PROJECT INTO THE DOWNSTREAM SEWER SYSTEM UNTIL ALL SEGMENTS HAVE BEEN COMPLETED AND ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THE ARE DEEMED AVAILABLE FOR SERVICE.



TYPICAL FIRE HYDRANT LOCATION DETAIL

REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 1"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER UDACS PLATE NO. 8, NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPAL ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY LVVWD. 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.

ADDITIONAL SEWER NOTE

ABANDON EXISTING 4" SEWER LATERAL. REMOVE WYE, REPLACE MAIN WITH 8" PVC SEWER AND CONSTRUCT 4" SEWER LATERAL AT NEW LOCATION DCSWCS 3.17.1

INTERSECTION DATA

ELDER VIEW ~~ST~~ DR STA 10+00.00=
ARTWOOD ~~AVE~~ STA 10+00.00

ARTWOOD ~~AVE~~ LN STA 12+27.74=
CALGROVE ~~CT~~ ST STA 13+01.34

ARTWOOD ~~AVE~~ LN STA 15+60.53=
OAKRUN CT STA 10+00.00

ARTWOOD ~~AVE~~ LN STA 17+25.27=
HIGHSPRING ST STA 10+0.00

LOTS: 1-19, 52-81, 116-137, 153-169, 173-175
THIS PROPERTY MAY HAVE STATIC 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.

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.

APPROVAL
3/24/14
LAS VEGAS FIRE AND RESCUE — DATE

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE 3-26-14 PROJECT NO. 122268
LVVWD APPROVED FIRE FLOW 2,000 GPM AT 20 PSI RESIDUAL

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.
7	REVISE LOT 52 DWY & RELOCATE SWR LAT.	6/22/18	RM		
1	REVISE STREET NAME	6/13/14	DNP		

LENNAR®
CITY OF LAS VEGAS
DELANO - PHASE 1
UTILITY PLAN IV

S27 T20 R59

DATE:	03/18/14
DRAFTER:	BCC
DESIGNER:	BCC
CHECKED:	STS

PROJECT NO.
LEN1303.000

PROFESSIONAL ENGINEER – STATE OF NEVADA
JERRY J. SLATER
Exp. 06/30/2014
CIVIL
No. 14167
3.18.14

U-4
SHEET 23 OF 25

H-52924
107Y4995-1

i:\len1303-000 summ v23 parcel rs\dwg\improv\phase 1\len1303-000 ph1 u-1.dwg 3/18/2014 11:59 AM Brian Chapman