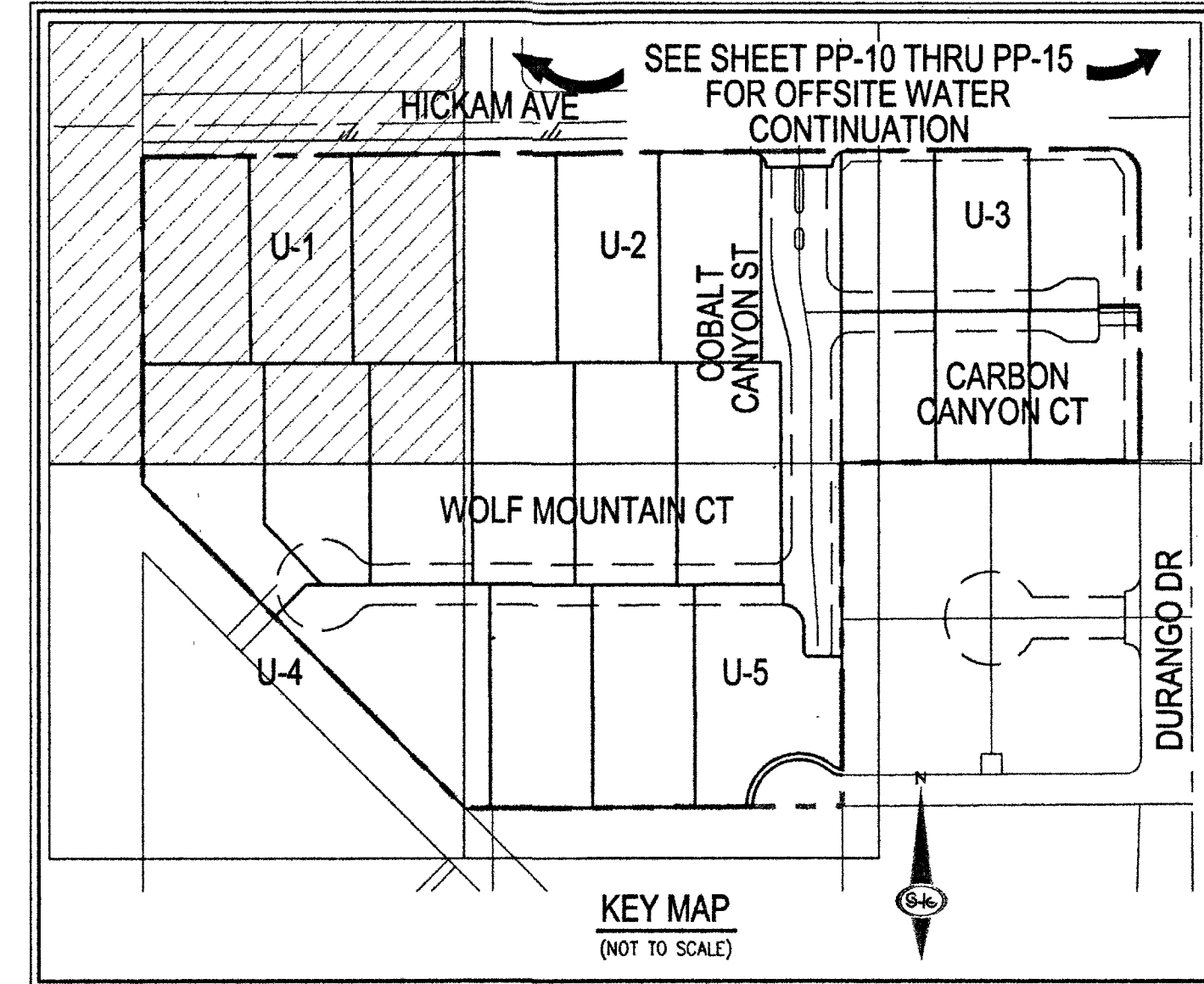
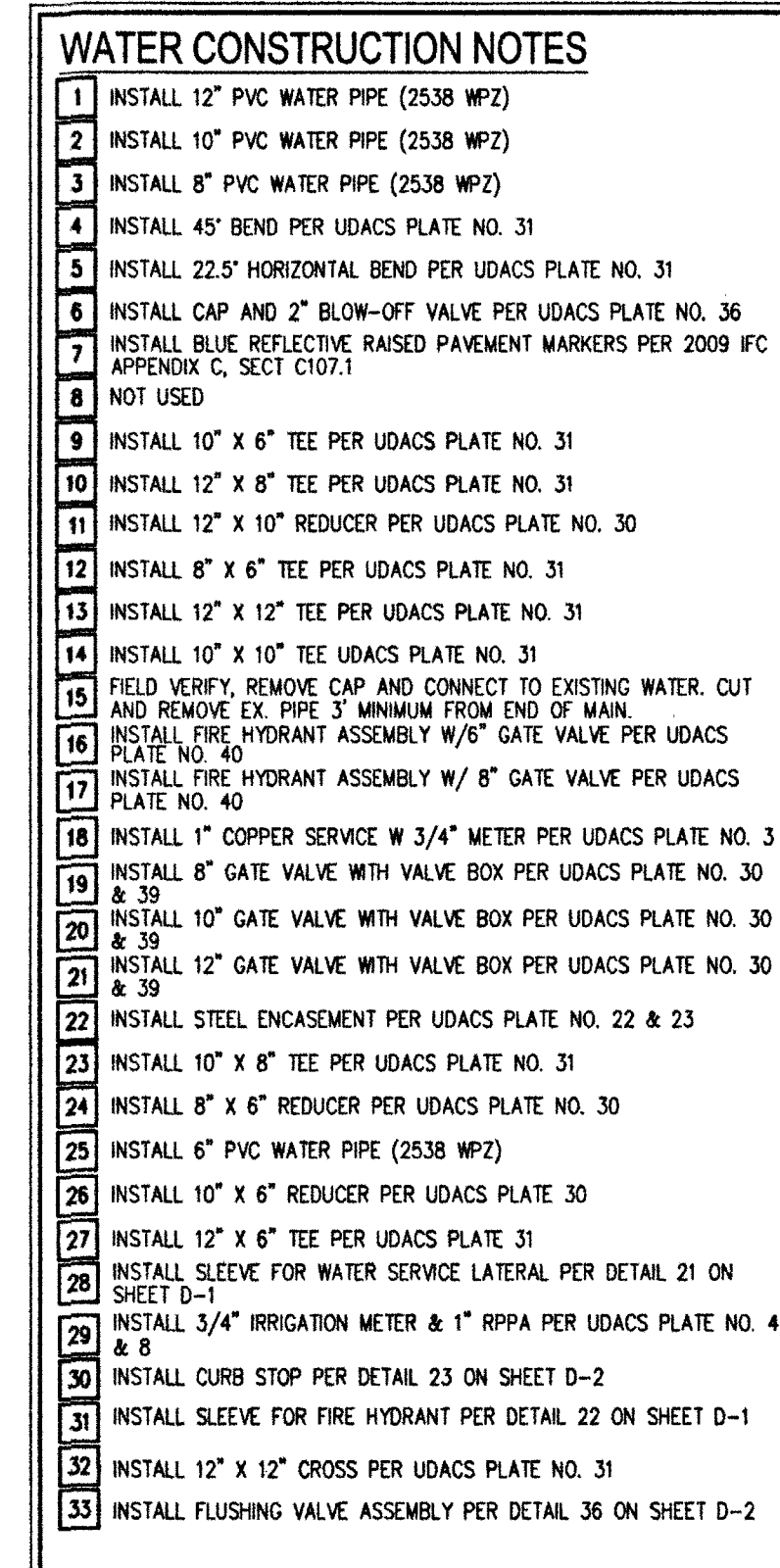




S-I-E **SLATER HANIFAN GROUP**
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5300

[illegible]

CLARK COUNTY, NEVADA

PINNACLE HOMES

**RIDGE ESTATES
UTILITY PLAN I**

CLV SEWER AS-BUILT

1. ALL SEWER / STORM DRAINS CROSSING WATER LINE SHALL CONFORM TO SECTION 2.22 OF THE UNIFORM STANDARD CONSTRUCTION SPECIFICATIONS (U.S.C.S.) WATER MAINS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND DEEPER BUILDS.
2. INSTALL WATERLINE DEEPER BUILDS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING. PER UDACS PLATE NO. 10.
3. WATER MAIN JOINT DEFLECTION (FWD, 4" - 24")
A. JOINT DEFLECTION SHALL BE LIMITED TO THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVE OF 1:50. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE 2.0% OF CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION. FITTINGS SHALL BE USED.
4. CONTROLLED LOW STRENGTH MATERIAL (CLSM) SHALL BE USED TO BACKFILL TRENCHES. HOWEVER, A WATERLINE IS ABOVE A STORM DRAIN OR SEWER, THE TRENCH SHALL BE BACKFILLED WITH CLSM. WATERLINE CANNOT BE MET BACKFILL TRENCH WITH CLSM. CLSM SHALL BE USED TO BACKFILL TRENCH TO THE SPRINGLINE OF THE WATERLINE. THIS REQUIREMENT IS FOR STRUCTURAL SUPPORT ONLY TO MAINTAIN HEALTH OF THE WATERLINE. PER UDACS PLATE NO. 10.
5. PROTECTING WATER VALVE BOXES TO FINISHED GRADE PER UDACS PLATE NO. 39. VALVES SHALL BE ACCESSIBLE AT ALL TIMES.
6. ALL EXISTING PLANS AND ADJUST LWMVD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL EXISTING FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

THE DATA CONTAINED HEREIN IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. SOUTHWEST GAS CORPORATION MAKES NO WARRANTIES AND DOES NOT GUARANTEE THE CORRECTNESS, COMPLETENESS, OR USEFULNESS OF ANY LOSS OR DAMAGE HOWEVER ARISING FROM THE USE OF OR RELIANCE ON THE DATA PROVIDED. THE FIELD LOCATION AND DEPTH OF ALL SOUTHWEST GAS FACILITIES SHOULD BE VERIFIED.

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.

FIRE FLOW REQUIREMENT IS 2,250 GALLONS PER MINUTE AT 20 P.S.I. RESIDUAL PRESSURE.	
USE/OCCUPANCY	<u>SINGLE FAMILY</u>
TYPE OF CONSTRUCTION (IBC)	<u>TYPE V-B</u>
AUTOMATIC FIRE SPRINKLERS	<u>LOTS 1&2 ONLY</u>
SQUARE FOOTAGE (LIVABLE)	<u><5000</u>
SQUARE FOOTAGE	<u><6200</u>
LARGEST AREA BETWEEN 4 HOUR WALLS	<u>N/A</u>
BUILDING HEIGHT	<u>3/4</u>
NO OF STORIES INCLUDING BASEMENT	<u>2</u>
HIGH PILED COMBUSTIBLE STORAGE	<u>NO</u>
NO OF HYDRANTS INSTALLED	<u>4</u>

NORTH 00°09'04" WEST, BEING THE BEARING OF THE EAST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 5, TOWNSHIP 20 SOUTH, RANGE 80 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 152, PAGE 17 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK NUMBER: QLV00 45W06
BRASS CAP "PLS 7008" AT DURANGO DRIVE AND HICKAM
AVENUE ALIGNMENT
ELEVATION=2395.093 FEET, 730.026 METERS
N.A.V.D. 88 DATUM
PER THE CLARK COUNTY VERTICAL CONTROL V.2003

ALL ABOVE GROUND OBSTRUCTION INCLUDING BUT NOT LIMITED TO, LANDSCAPE BOULDERS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

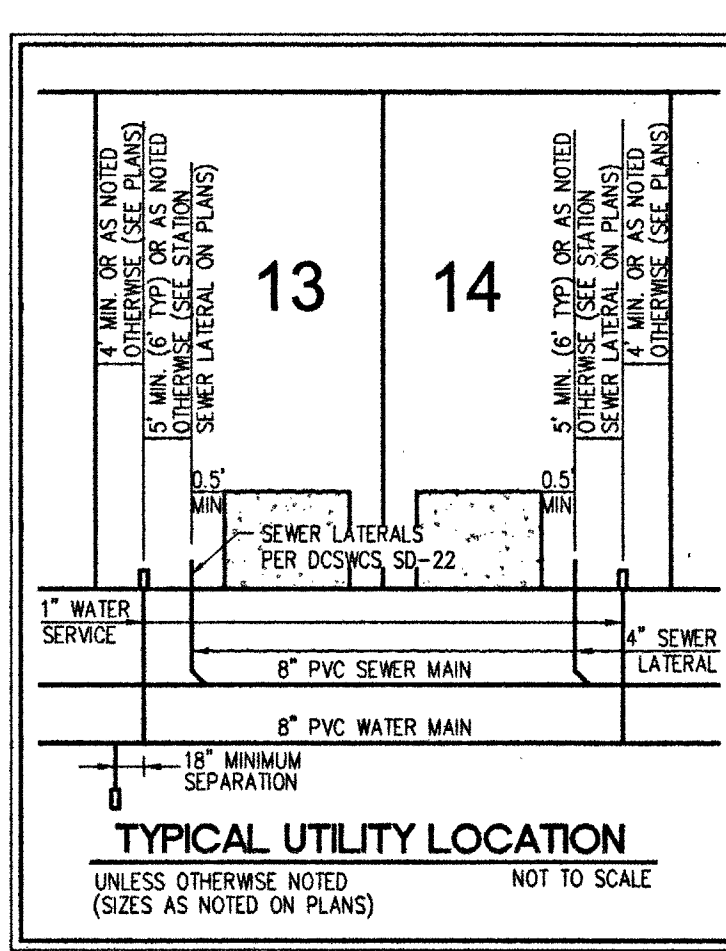
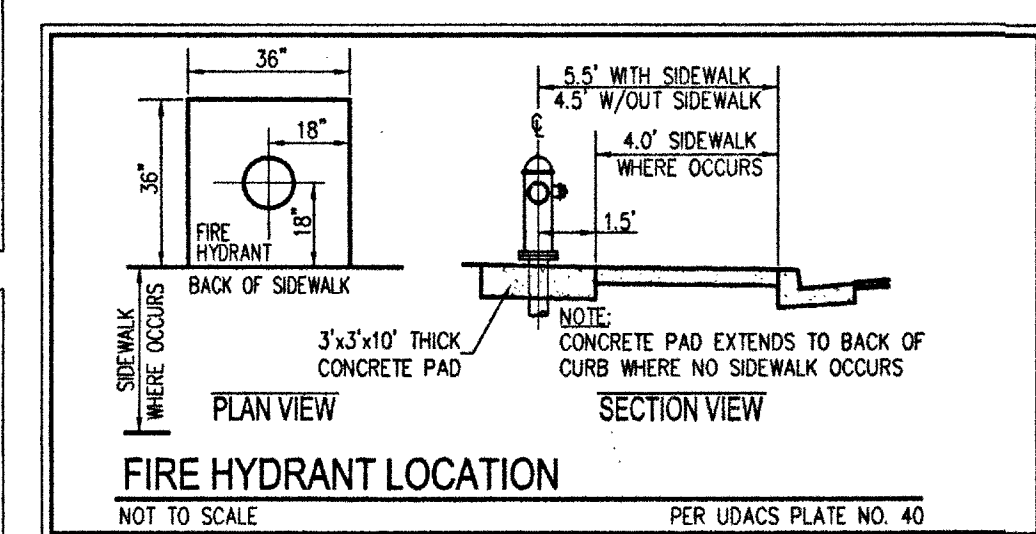
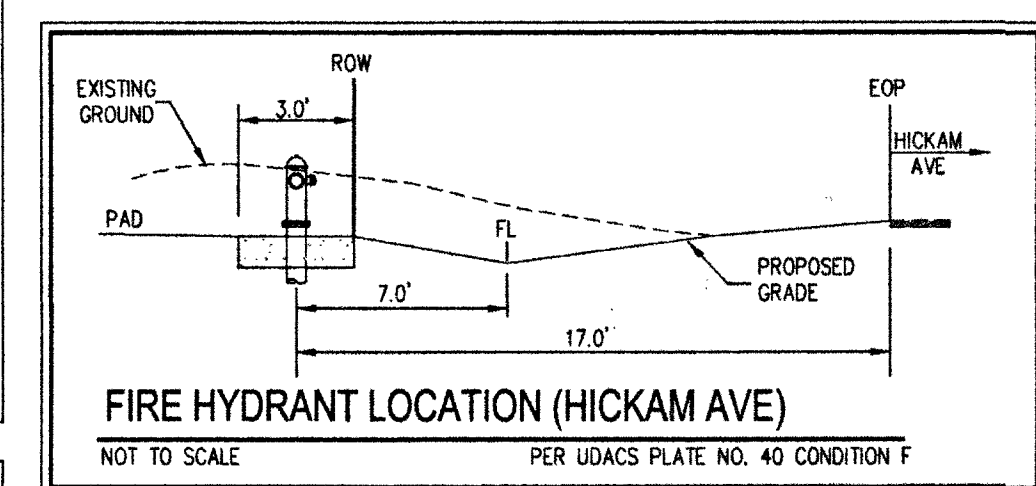
- 4" INSTALL 4" DIAMETER SANITARY SEWER MANHOLE PER DCSWCS 50-10, 50-14, 50-17 AND 50-18 (SINGLE 24" LUG)
- 4" INSTALL 8" PVC SANITARY SEWER PIPE PER DCSWCS 50-17 (PUBLIC)
- 4" INSTALL 8" PVC SEWER LATERAL PER DCSWCS 50-22 & 50-25
- FIELD VERIFY, REMOVE CAP AND CONNECT TO EXISTING SEWER
- 4" INSTALL 8" C-900 SANITARY SEWER PIPE PER DCSWCS 50-17 (PUBLIC)
- 4" INSTALL 4" C-900 SANITARY SEWER LATERAL PER DCSWCS 50-22 & 50-25

ESTIMATED AVERAGE DAILY SOLIDS CONTRIBUTIONS
22 LUG @ 1.250 GPD = 27.50 GPD @ 0.0055 MGD
TOTAL PEAK FLOW = 0.0055 X 4.31 (PEAK FACTOR)
= 0.0237 MGD

LATERAL MARKING REQUIREMENTS
LATERAL SHALL BE MARKED ACCORDING TO THE 2009 DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER TREATMENT PLANTS. A 1" DIA. ALUMINUM OR STEEL MARKER BALL IS TO BE INSTALLED OVER THE CONNECTION POINT AT THE MAIN OR MANHOLE. A SECOND MARKER IS TO BE INSTALLED AT THE POINT WHERE THE LATERAL CROSSES THE PROPERTY LINE. A VISUAL MARKER IS ALSO TO BE INSTALLED AT EACH END OF THE LATERAL. THE CONCRETE AT THE POINT DIRECTLY OVER OR WHERE THE LATERAL PASSES UNDER THE CURB.

	ROADWAY CENTERLINE
	RIGHT-OF-WAY
	LOT LINE
	CURB AND GUTTER
	EXISTING CURB AND GUTTER
	WATER PIPE FITTING
	WATER GATE VALVE
	FIRE HYDRANT
	REFLECTIVE RAISED PAVEMENT MARKERS
	SANITARY SEWER MANHOLE
	SANITARY SEWER FLOW DIRECTION
	WATER POINT OF CONNECTION
	SEWER POINT OF CONNECTION
	BACK WATER VALVE

SEE SHEET C-3 FOR QUANTITIES AND ABBREVIATIONS



CLARK COUNTY FIRE DEPT. APPROVAL

BY: E. Kaminski DATE: 7/9/18

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 2,250 GPM AT 20 P.S.I. RESIDUAL. EP18-00704

APPROVED FOR CONSTRUCTION

4 / *ISHAD*
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 125650 FIRST APPROVED DATE: 7/18/11
LVWD APPROVED FIRE FLOW 2,250 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM

AVOID HITTING OVERHEAD
POWER LINES. IT'S
NOT A STYLISH
CALL BEFORE
YOU DO
OVERHEAD

A schematic diagram showing a crane with a lattice boom lifting a large cylindrical pipe. The crane is positioned on the left, and the pipe is being hoisted towards the right. The entire diagram is enclosed in a rectangular frame.

1-702-227-2929

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

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811
 OR
1-800-227-2600

AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.

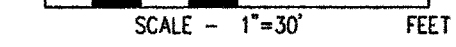
CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929

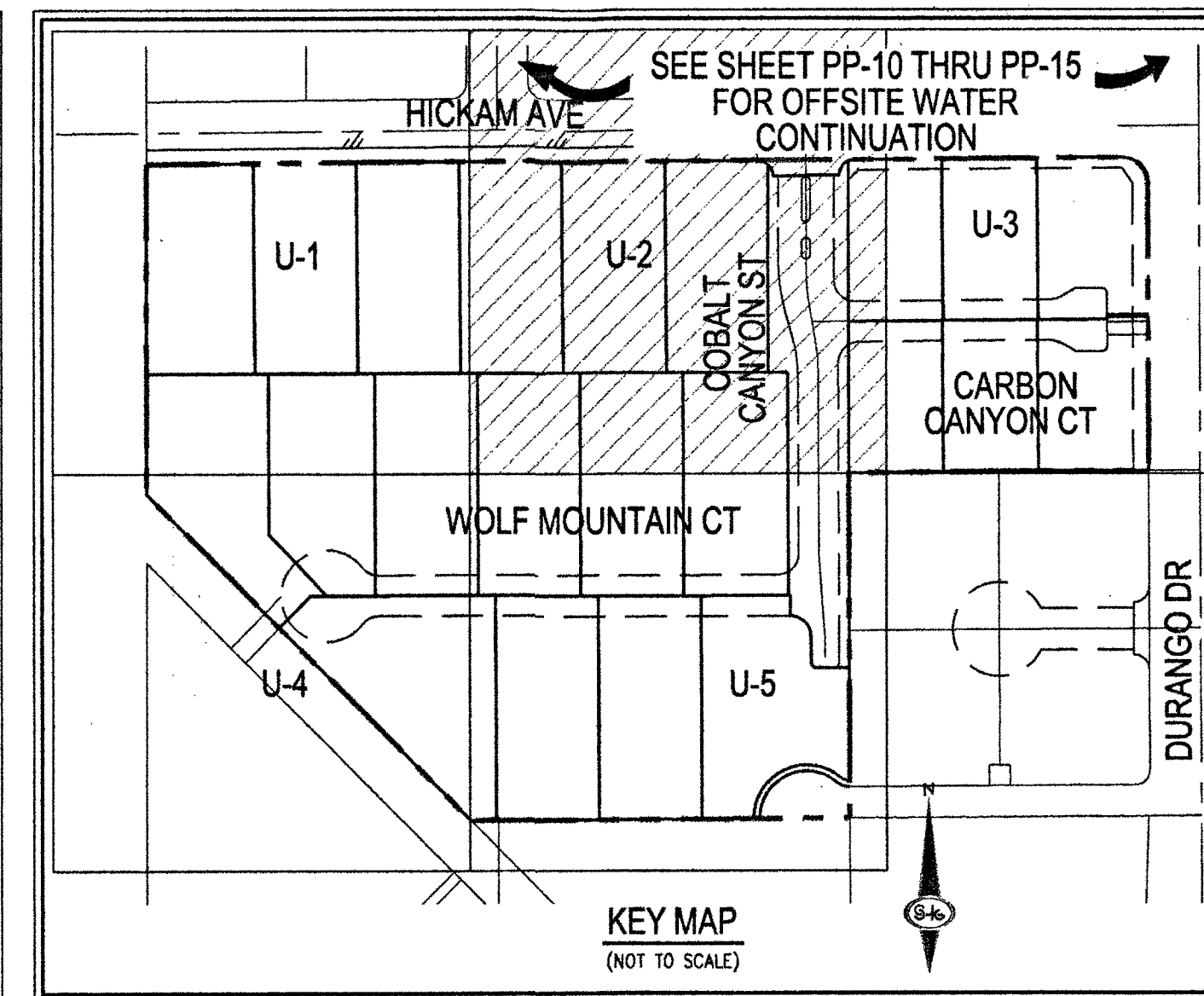
S5 T20 R60	
DATE:	03/26/18

DRAFTER: EMH
DESIGNER: EMH
CHECKED: -KMB
PROJECT NO.
PIN1702

U-1
SHEET 26 OF 49
PW18-10396
L18-00094



1	INSTALL 12" PVC WATER PIPE (2538 WP2)
2	INSTALL 10" PVC WATER PIPE (2538 WP2)
3	INSTALL 8" PVC WATER PIPE (2538 WP2)
4	INSTALL 45° BEND PER UDACS PLATE NO. 31
5	INSTALL 22.5° HORIZONTAL BEND PER UDACS PLATE NO. 31
6	INSTALL CAP AND 2" BLOW-OFF VALVE PER UDACS PLATE NO. 36
7	INSTALL BLUE REFLECTIVE RAISED PAVEMENT MARKERS PER 2009 APPENDIX C, SECT C107.1
8	NOT USED
9	INSTALL 10" x 6" TEE PER UDACS PLATE NO. 31
10	INSTALL 12" x 8" TEE PER UDACS PLATE NO. 31
11	INSTALL 12" x 10" REDUCER PER UDACS PLATE NO. 30
12	INSTALL 8" x 6" TEE PER UDACS PLATE NO. 31
13	INSTALL 12" x 12" TEE PER UDACS PLATE NO. 31
14	INSTALL 10" x 10" TEE UDACS PLATE NO. 31
15	FIELD VERIFY, REMOVE CAP AND CONNECT TO EXISTING WATER. CUT EXISTING 12" WATER MAIN
16	INSTALL FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40
17	INSTALL FIRE HYDRANT ASSEMBLY W/ 8" GATE VALVE PER UDACS PLATE NO. 40
18	INSTALL 1" COPPER SERVICE W 3/4" METER PER UDACS PLATE NO. 31
19	INSTALL 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 31 & 39
20	INSTALL 10" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 31 & 39
21	INSTALL 12" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 31
22	INSTALL STEEL ENCASEMENT PER UDACS PLATE NO. 22 & 23
23	INSTALL 10" x 8" TEE PER UDACS PLATE NO. 31
24	INSTALL 8" x 6" REDUCER PER UDACS PLATE NO. 30
25	INSTALL 6" PVC WATER PIPE (2538 WP2)
26	INSTALL 10" x 6" REDUCER PER UDACS PLATE NO. 30
27	INSTALL 12" x 6" TEE PER UDACS PLATE 31
28	INSTALL SLEEVE FOR WATER SERVICE LATERAL PER DETAIL 21 ON SHEET D-1
29	INSTALL 3/4" IRRIGATION METER & 1" RPPA PER UDACS PLATE NO. 31
30	INSTALL CURB STOP PER DETAIL 23 ON SHEET D-2
31	INSTALL SLEEVE FOR FIRE HYDRANT PER DETAIL 22 ON SHEET D-2
32	INSTALL 12" x 12" CROSS PER UDACS PLATE NO. 31
33	INSTALL FLUSHING VALVE ASSEMBLY PER DETAIL 36 ON SHEET D-2



1. INSTALL 4"Ø DIAMETER SANITARY SENDER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4, SD-4, SD-7 AND SD-9 PER DCSWCS SD-17 (PUBC).

2. INSTALL 8"Ø P.V.C. SANITARY SENDER PIPE PER DCSWCS SD-17 (PUBC).

3. INSTALL 4"Ø P.V.C. SENDER LATERAL PER DCSWCS SD-17 (PUBC).

4. FIELD VERIFY, REMOVE CAP AND CONNECT TO EXISTING SENDER SLUB

5. INSTALL 8"Ø C-900 SANITARY SENDER PIPE PER DCSWCS SD-17 (PUBC).

6. INSTALL 4"Ø C-900 SANITARY SENDER LATERAL PER DCSWCS SD-17A, SD-20, SD-25

ESTIMATED AVERAGE DAILY SENDER CONTRIBUTIONS

22 UNITS X 250 (GPD/UNIT) = 5,500 GPD = 0.0055 MGD

TOTAL PEAK FLOW = 0.0055 X 4.31 (PEAK FACTOR) = 0.0237 MGD

LATERAL MARKING REQUIREMENTS

LATERALS SHALL BE MARKED ACCORDING TO THE 2009 DCSWCS SD-17 (PUBC) REQUIREMENTS FOR WATER COLLECTIONS SYSTEMS. STANDARD DRAWING 25. A 3M MARKER SHALL BE INSTALLED OVER THE CONNECTION POINT AT THE MAIN OR MANHOLE. A SECOND MARKER IS TO BE INSTALLED AT THE POINT WHERE THE LATERAL CROSSES THE MAIN. THE 3M MARKER SHALL ALSO BE REQUIRED A 3-INCH HIGH "X" STAMPED OR CHISELED INTO THE LATERAL PIPE. THE 3M MARKER SHALL BE INSTALLED WHERE THE LATERAL PASSES UNDER THE CURB.

	ROADWAY CENTERLINE
	RIGHT-OF-WAY
	LOT LINE
	CURB AND GUTTER
	EXISTING GUTTER
	WATER PIPE FITTING
	WATER GATE VALVE
	FIRE HYDRANT
	REFLECTIVE RAISED PAVEMENT MARKERS
	SANITARY SEWER MANHOLE
	SANITARY SEWER FLOW DIRECTION
	WATER POINT OF CONNECTION
	SEWER POINT OF CONNECTION
	BACK WATER VALVE

SEE SHEET C-3 FOR QUANTITIES AND ABBREVIATIONS

[illegible]

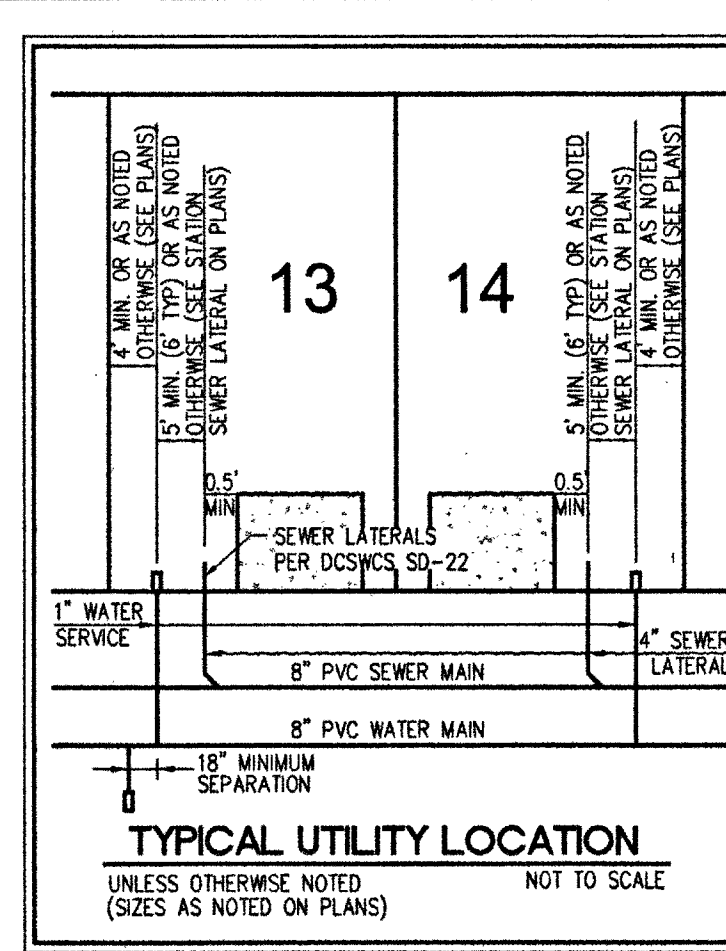
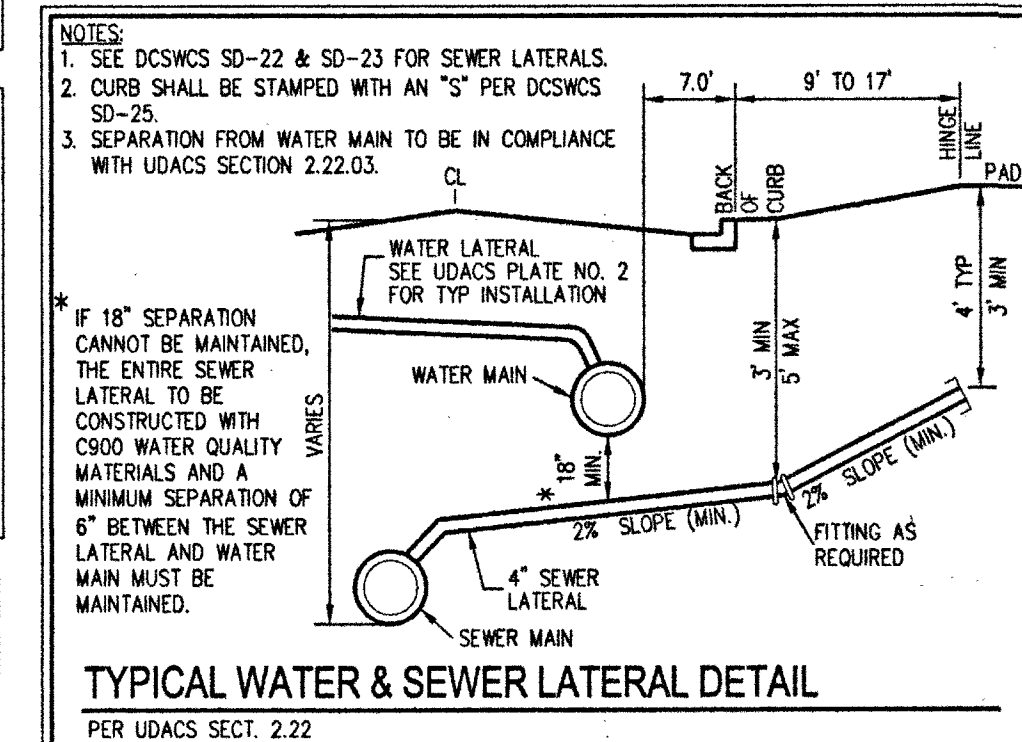
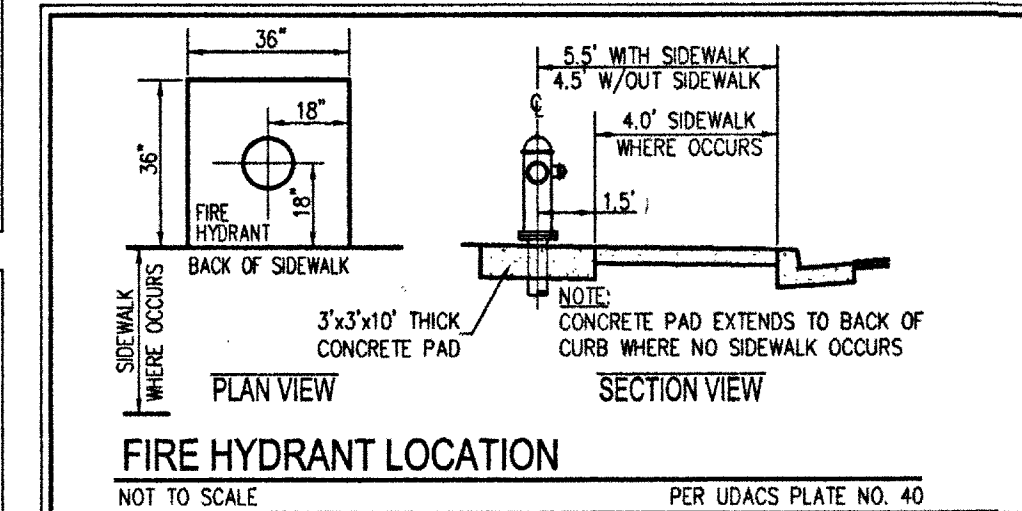
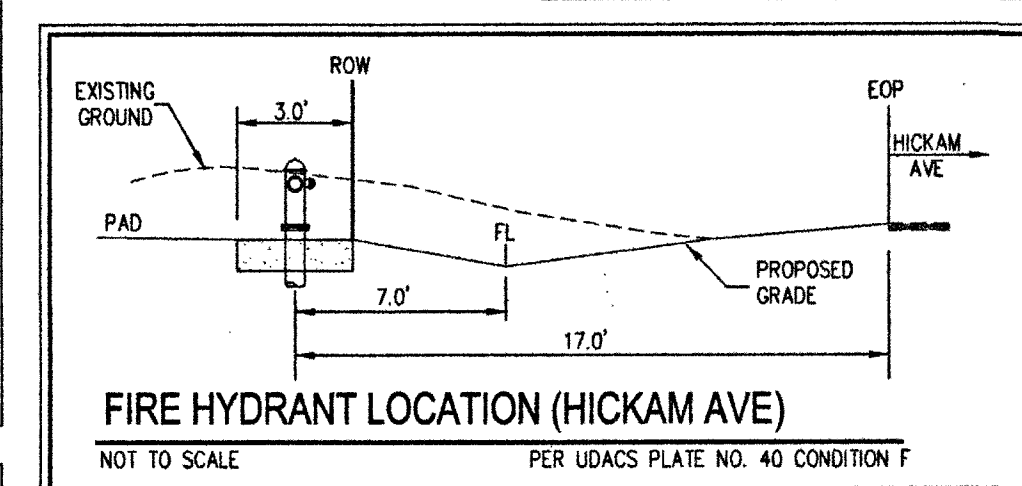
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FIRE FLOW REQUIREMENT IS 2,250 GALLONS PER MINUTE AT 20 P.S.I. RESIDUAL PRESSURE.	
USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC)	TYPE V-B
AUTOMATIC FIRE SPRINKLERS	LOTS 142 ONL
SQUARE FOOTAGE (LIVABLE)	<5000
SQUARE FOOTAGE	58200
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	355
NO OF STORIES INCLUDING BASEMENT	2
HIGH PILED COMBUSTIBLE STORAGE	NO
NO OF HYDRANTS INSTALLED	4

NORTH 00°09'04" WEST, BEING THE BEARING OF THE EAST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 5, TOWNSHIP 20 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 152, PAGE 17 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK NUMBER: 0LV00 4SWW6
BRASS CAP "PLS 7008" AT DURANGO DRIVE AND HICKAM
AVENUE ALIGNMENT
ELEVATION=2395.093 FEET, 730.026 METERS
N.A.V.D. 88 DATUM
PER THE CLARK COUNTY VERTICAL CONTROL V.2003



BY: E. K. Kamrila DATE: 7/9/18

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 2,250 GPM AT 20 P.S.I. RESIDUAL. EP18-00704

4 DISHARDI
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 125650 FIRST APPROVED DATE: 7/18/11
MINIMUM APPROVED FIRE FLOW 2,250 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM

Ten 7-8-18
SOUTHWEST GAS CORPORATION DATE

ALL ABOVE GROUND OBSTRUCTION INCLUDING BUT NOT LIMITED TO, LANDSCAPE BOULDERS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

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
FREEMWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.
Call
811
OR
1-800-227-2600

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

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**PINNACLE HOMES
ELK RIDGE ESTATES
UTILITY PLAN II**

CLV SEWER AS-BUILT

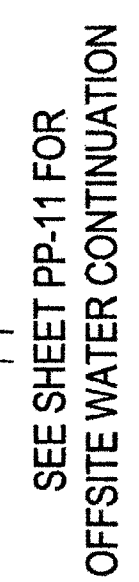
DATE:	03/26/18
DRAFTER:	EMH
DESIGNER:	EMH
CHECKED:	KMB
PROJECT NO.	PIN1702



U-2

SHEET 27 OF 49

PW18-10396



-
- SEE SHEET PP-10 THRU PP-15
FOR OFFSITE WATER
CONTINUATION
- HICKAM AVE
- U-1
- U-2
- COBALT CANYON ST
- U-3
- CARBON CANYON CT
- WOLF MOUNTAIN CT
- U-4
- U-5
- DURANGO DR
- KEY MAP
(NOT TO SCALE)
- N
- 340

- # UTILITY LEGEND
- | | |
|--|------------------------------------|
| | ROADWAY CENTERLINE |
| | RIGHT-OF-WAY |
| | LOT LINE |
| | CURB AND GUTTER |
| | EXISTING CURB AND GUTTER |
| | WATER PIPE FITTING |
| | WATER GATE VALVE |
| | FIRE HYDRANT |
| | REFLECTIVE RAISED PAVEMENT MARKERS |
| | SANITARY SEWER MANHOLE |
| | SANITARY SEWER FLOW DIRECTION |
| | WATER POINT OF CONNECTION |
| | SEWER POINT OF CONNECTION |
| | BACK WATER VALVE |
- SEE SHEET C-3 FOR QUANTITIES AND ABBREVIATIONS

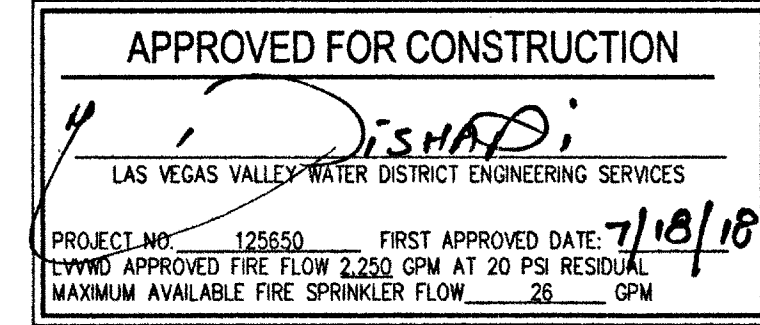
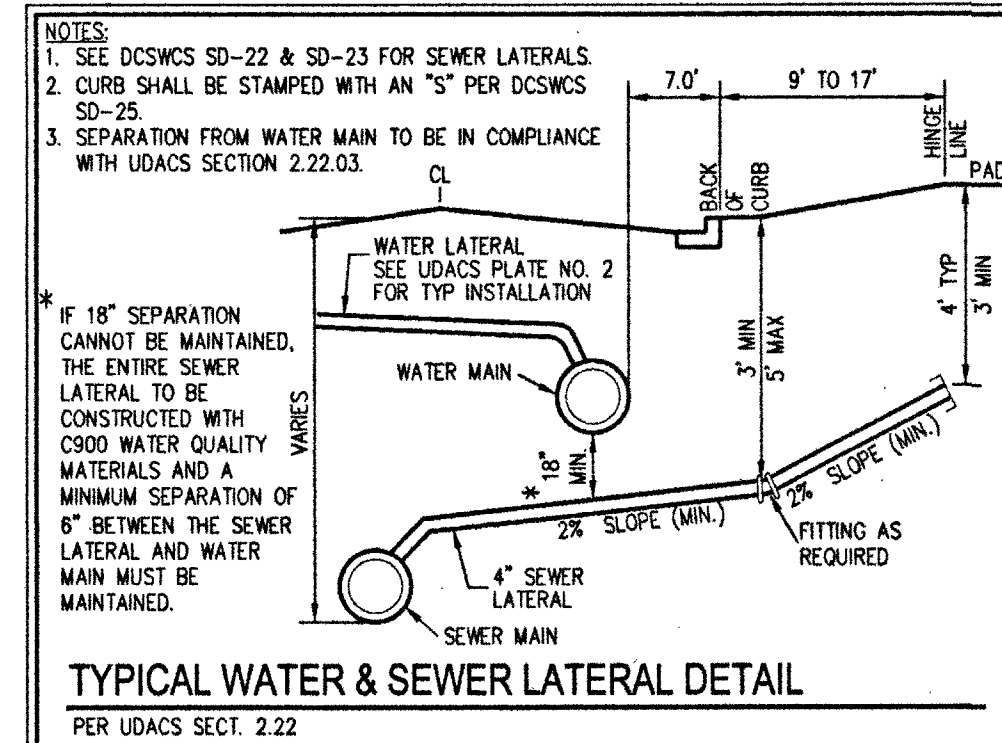
BENCHMARK

BENCHMARK NUMBER: OLVOO 45WWS

BRASS CAP "PLS 700B" AT DURANGO DRIVE AND HICKAM AVENUE ALIGNMENT

ELEVATION=2395.093 FEET, 730.026 METERS
N.A.V.D. 88 DATUM

PER THE CLARK COUNTY VERTICAL CONTROL V.2003



TO ENSURE LVVWD ACCESS WITHIN EASEMENT

ALL ABOVE GROUND OBSTRUCTION INCLUDING BUT NOT LIMITED TO, LANDSCAPE BOULDERS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT

AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.

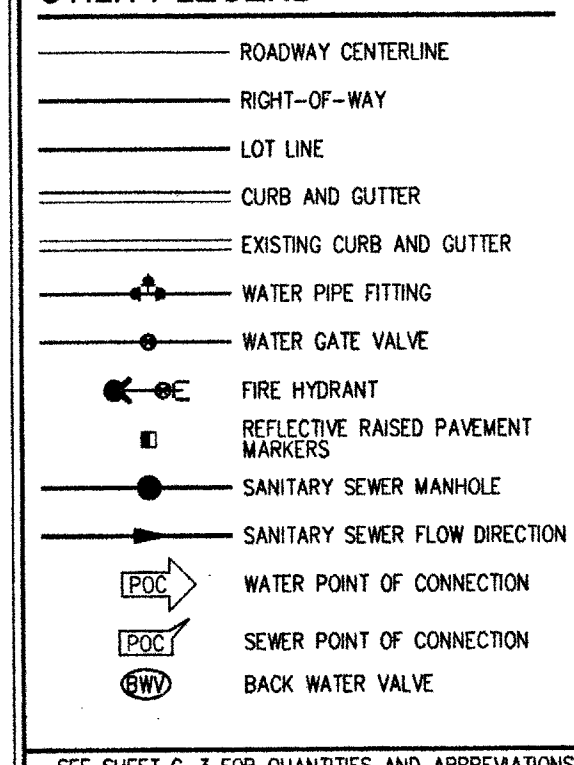
CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929

U-3
SHEET 28 OF 49
PW18-10396
L18-00094

CLV SEWER AS-BUILT

1	INSTALL 12" P.V.C. WATER PIPE (2538 WPZ)
2	INSTALL 10" P.V.C. WATER PIPE (2538 WPZ)
3	INSTALL 8" P.V.C. WATER PIPE (2538 WPZ)
4	INSTALL 45° BEND PER UDACS PLATE NO. 31
5	INSTALL 22.5° HORIZONTAL BEND PER UDACS PLATE NO. 31
6	INSTALL CAP AND 2" BLOW-OFF VALVE PER UDACS PLATE NO. 36
7	INSTALL BLUE REFLECTIVE RAISED PAVEMENT MARKERS PER 2009 IFC APPENDIX C, SECT C107.1
8	NOT USED
9	INSTALL 10" x 6" TEE PER UDACS PLATE NO. 31
10	INSTALL 12" x 8" TEE PER UDACS PLATE NO. 31
11	INSTALL 12" x 10" REDUCER PER UDACS PLATE NO. 30
12	INSTALL 8" x 6" TEE PER UDACS PLATE NO. 31
13	INSTALL 12" x 12" TEE PER UDACS PLATE NO. 31
14	INSTALL 10" x 10" TEE UDACS PLATE NO. 31
15	PER VERIFY, REMOVE CAP AND CONNECT TO EXISTING WATER, CUT AND REMOVE EX. PIPE 3" MINIMUM FROM END OF MAIN
16	INSTALL FIRE HYDRANT ASSEMBLY W/5" GATE VALVE PER UDACS PLATE NO. 40
17	INSTALL FIRE HYDRANT ASSEMBLY W/ 8" GATE VALVE PER UDACS PLATE NO. 40
18	INSTALL 1" COPPER SERVICE W 3/4" METER PER UDACS PLATE NO. 3 & 39
19	INSTALL 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
20	INSTALL 10" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
21	INSTALL 12" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
22	INSTALL STEEL ENCASUREMENT PER UDACS PLATE NO. 22 & 23
23	INSTALL 10" x 8" TEE PER UDACS PLATE NO. 31
24	INSTALL 8" x 6" REDUCER PER UDACS PLATE NO. 30
25	INSTALL 6" P.V.C. WATER PIPE (2538 WPZ)
26	INSTALL 10" x 6" REDUCER PER UDACS PLATE 30
27	INSTALL 12" x 6" TEE PER UDACS PLATE 31
28	INSTALL SLEEVE FOR WATER SERVICE LATERAL PER DETAIL 21 ON SHEET D-1
29	INSTALL 3/4" IRRIGATION METER & 1" RPPA PER UDACS PLATE NO. & 4
30	INSTALL CURB STOP PER DETAIL 23 ON SHEET D-2
31	INSTALL SLEEVE FOR FIRE HYDRANT PER DETAIL 22 ON SHEET D-1
32	INSTALL 12" x 12" CROSS PER UDACS PLATE NO. 31
33	INSTALL FLUSHING VALVE ASSEMBLY PER DETAIL 36 ON SHEET D-2



1. MUST SEWER/STORM DRAINS CROSSING WATER LINES
2. ALL CONVEY TO SECTION 2.22 OF THE UNIFORM
3. WATER SYSTEMS (UDACS) FOR WATER AND STORM
4. INSTALL PIPING MARKER BALLS IN TRENCH ABOVE
5. EACH HORIZONTAL ELBOW FITTING, PER 24" ONLY.
6. WATER MAIN JOINT DEFLECTION (FWD, 4"=24")
7. MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1)
8. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1)
9. (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF
10. 20.00' FOR CHANGES IN DIRECTION EXCEEDING THE
11. 20.00' FOR CHANGES IN DIRECTION EXCEEDING THE
12. FITTINGS SHALL BE USED.
13. CONTROLLED LOW STRENGTH MATERIAL (CLSM).
14. WATERLINES REPAIRS: WHEREVER A
15. WATERLINE IS ABOVE A STORM DRAIN OR SEWER
16. WATERLINE CANNOT BE MET, BACKFILL TRENCH WITH
17. CLSM TO THE SPRINGLINE OF THE WATERLINE. THIS
18. REQUIREMENT IS FOR STRUCTURAL SUPPORT ONLY
19. UDCS 2.22.
20. ALL EXISTING WATER VALVE BOXES TO FINISHED
21. GRADE PER UDCS PLATE NO. 39. VALVES SHALL BE
22. ACCESSIBLE AT ALL TIMES. ADJUST LWMD EXISTING
23. FACILITIES TO FINISHED GRADE PER UDCS.
24. ALL FACILITIES SHALL BE ACCESSIBLE AT ALL
25. TIMES.

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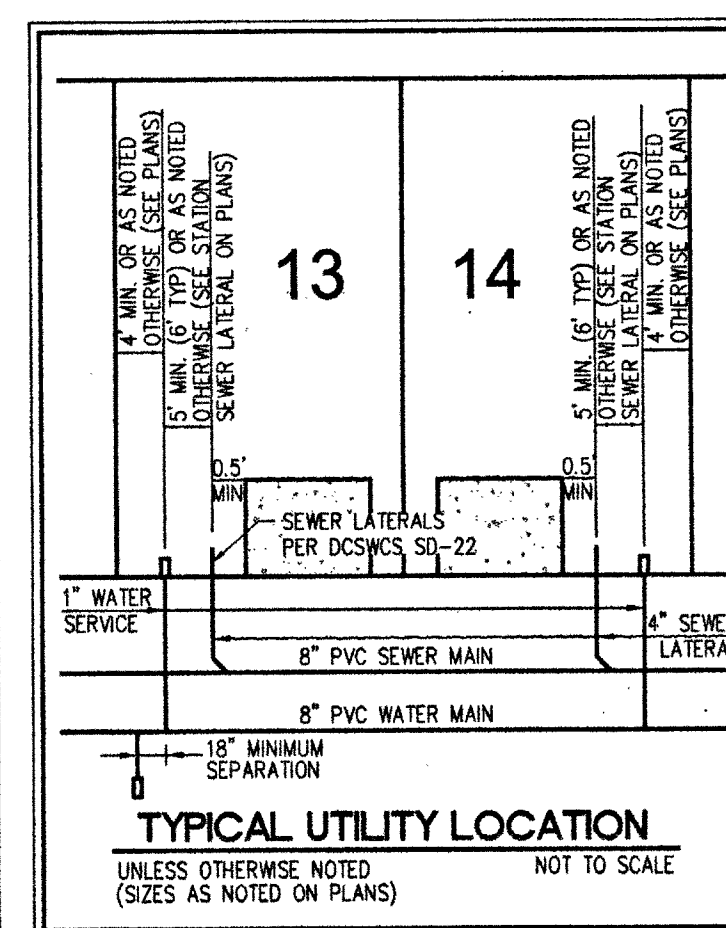
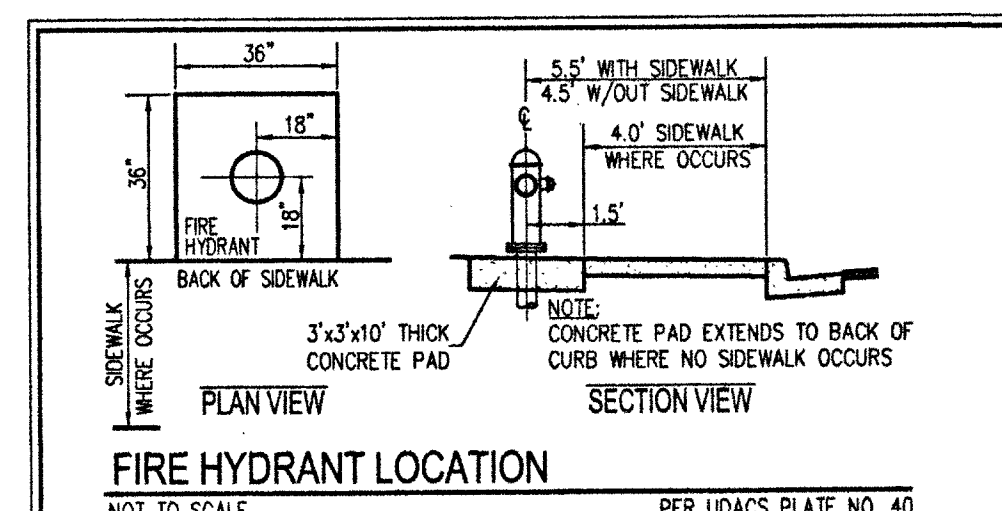
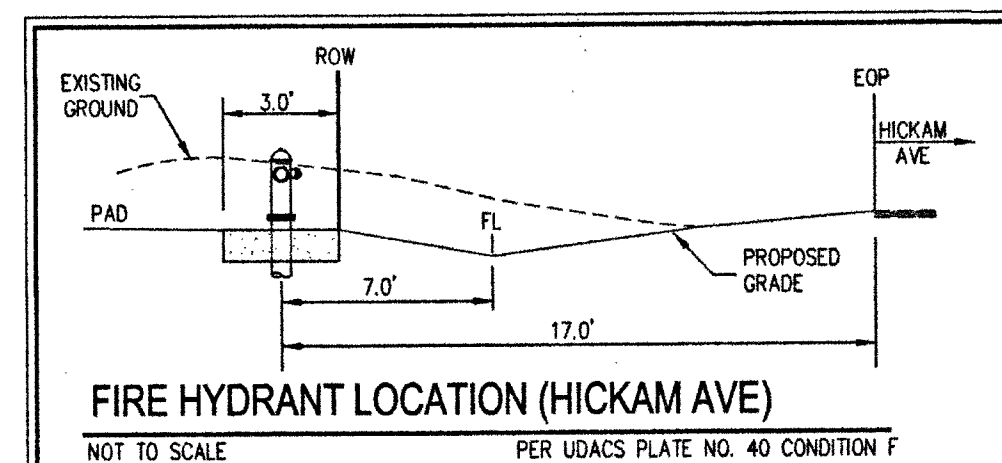
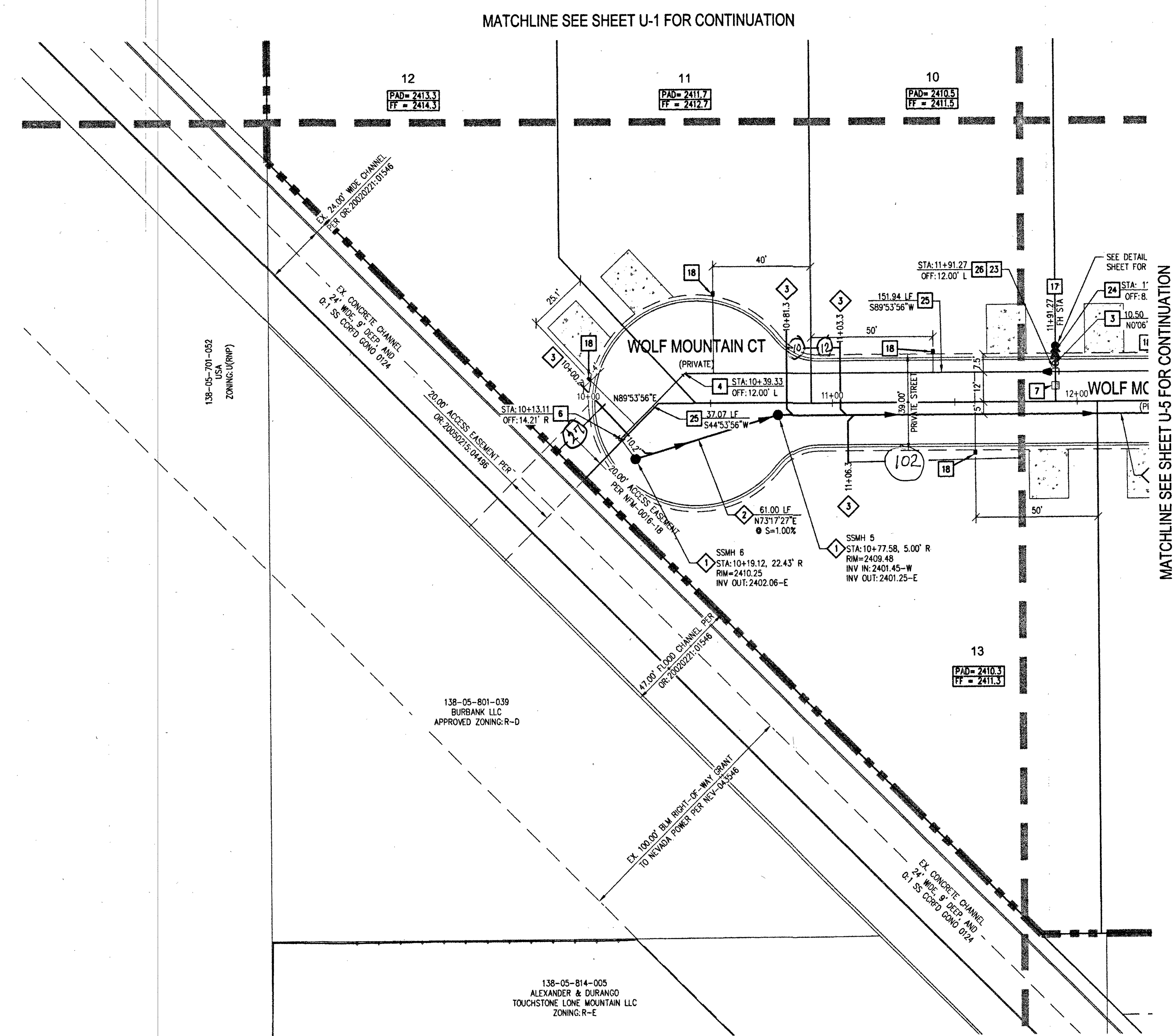
EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON.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

FIRE FLOW REQUIREMENT IS 2,250 GALLONS PER MINUTE AT 20 P.S.I. RESIDUAL PRESSURE.	
USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC)	TYPE V-B
AUTOMATIC FIRE SPRINKLERS	LOTS 1&2 ONLY
SQUARE FOOTAGE (LIVABLE)	<5000
SQUARE FOOTAGE	<6200
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	<35
NO OF STORES INCLUDING BASEMENT	2
HIGH PILED COMBUSTIBLE STORAGE	NO
NO OF HYDRANTS INSTALLED	4

NORTH 00°09'04" WEST, BEING THE BEARING OF THE EAST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 5, TOWNSHIP 20 SOUTH, RANGE 80 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 152, PAGE 17 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK NUMBER: OLVOO 4SWW6
BRASS CAP "PLS 7008" AT DURANGO DRIVE AND HICKAM
AVENUE ALIGNMENT
ELEVATION=2395.093 FEET, 730.026 METERS
N.A.V.D. 88 DATUM
PER THE CLARK COUNTY VERTICAL CONTROL V.2003

ALL ABOVE GROUND OBSTRUCTION INCLUDING BUT NOT LIMITED TO, LANDSCAPE BOULDERS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.



BY: E. Kammitli DATE: 7/9/16

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 2,250 GPM AT 20 P.S.I. RESIDUAL. **FP18-00704**

4 - ISHADI
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 125550 FIRST APPROVED DATE: 7/18/11
LVVWD APPROVED FIRE FLOW 2,250 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM

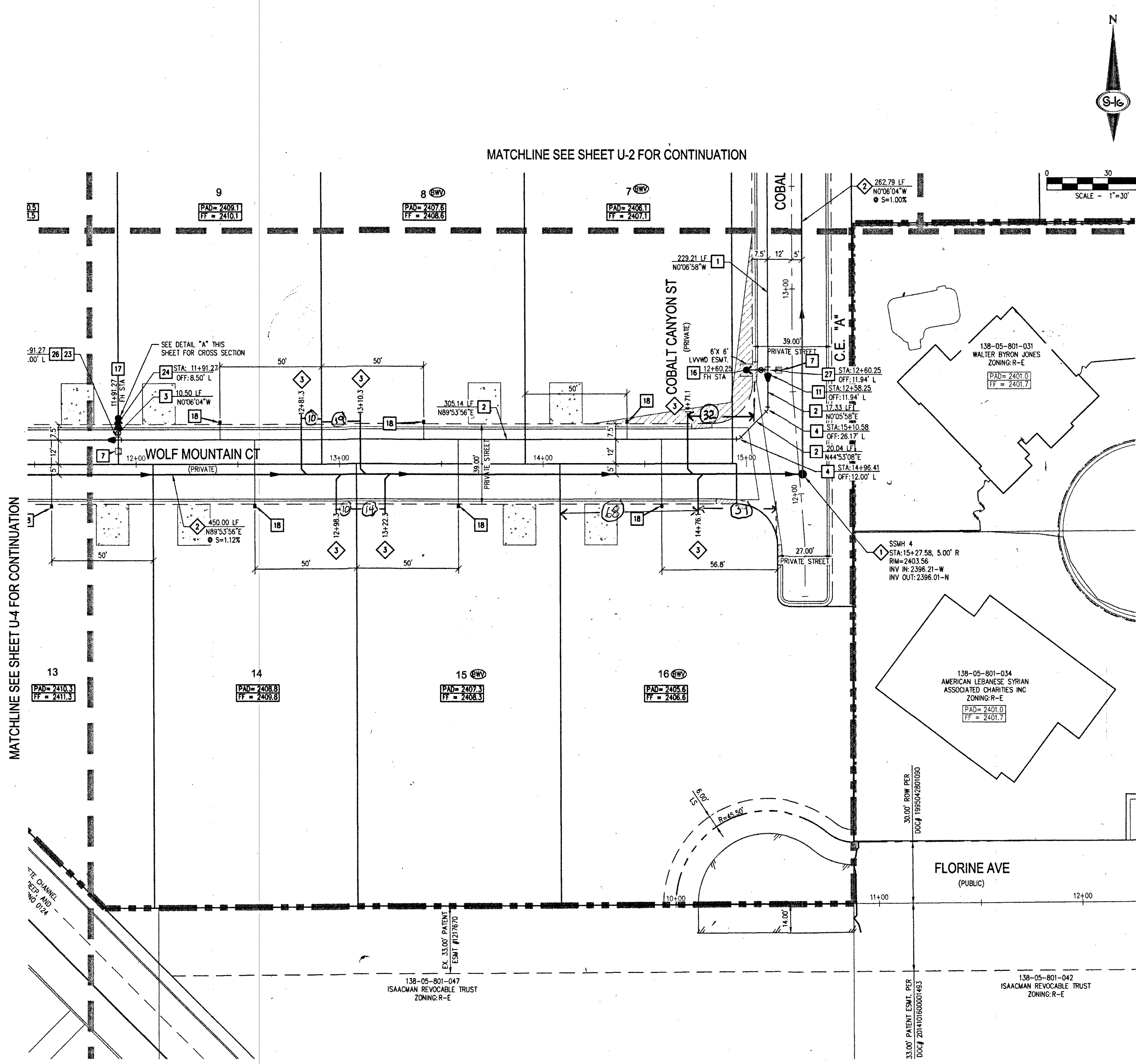
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**PINNACLE HOMES
ELK RIDGE ESTATES IV
UTILITY PLAN IV**

02 01-RC	
DATE:	03/26/18
DRAFTER:	EMH
DESIGNER:	EMH
CHECKED:	KMB
PROJECT NO.	
PIN1702	
	
U-4	
SHEET 29 OF 44	
PW18-10396 L18-00094	

CLV SEVER AS-BUILT

CLV SEWER AS-BUILT



WATER NOTES

1. ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.2.2 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
2. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
3. WATER MAIN JOINT DEFLECTION (WJDF) 4" - 24" MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1150 FEET. PER UDACS 2.07.01 AND 2.07.02 FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
4. CONTROLLED LOW STRENGTH MATERIAL (CLSM) PROTECT WATERLINES IN PLACE WHEREVER A WATERLINE IS ABOVE A STORM DRAIN OR SEWER WHERE COMPACTED UNDER A WATERLINE. WATERLINE CANNOT BE MET BACKFILL TRENCH WITH CLASS II CONTROLLED LOW STRENGTH MATERIAL (CLSM) TO THE SPRINGLINE OF THE WATERLINE. THIS REQUIREMENT IS FOR STRUCTURAL SUPPORT ONLY. ADDITIONAL HEALTH REGULATIONS MAY APPLY PER UDACS 2.22.
5. ADJUST EXISTING WATER VALVE BOXES TO FINISHED GRADE PER UDACS PLATE NO. 30. VALVES SHALL BE ACCESSIBLE AT ALL TIMES.
6. PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

SWG DISCLAIMER

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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.

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENT IS 2,250 GALLONS PER MINUTE AT 20 P.S.I. RESIDUAL PRESSURE.

USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC) <td>TYPE 1-2</td>	TYPE 1-2
AUTOMATIC FIRE SPRINKLERS <td>LOTS 1&2 ONLY</td>	LOTS 1&2 ONLY
SQUARE FOOTAGE (LIVABLE) <td><5000</td>	<5000
SQUARE FOOTAGE <td><5000</td>	<5000
LARGEST AREA BETWEEN 4 HOUR WALLS <td>N/A</td>	N/A
BUILDING HEIGHT <td><30</td>	<30
NO OF STORES INCLUDING BASEMENT <td>2</td>	2
HIGH PILED COMBUSTIBLE STORAGE <td>NO</td>	NO
NO OF HYDRANTS INSTALLED <td>4</td>	4

BASIS OF BEARINGS

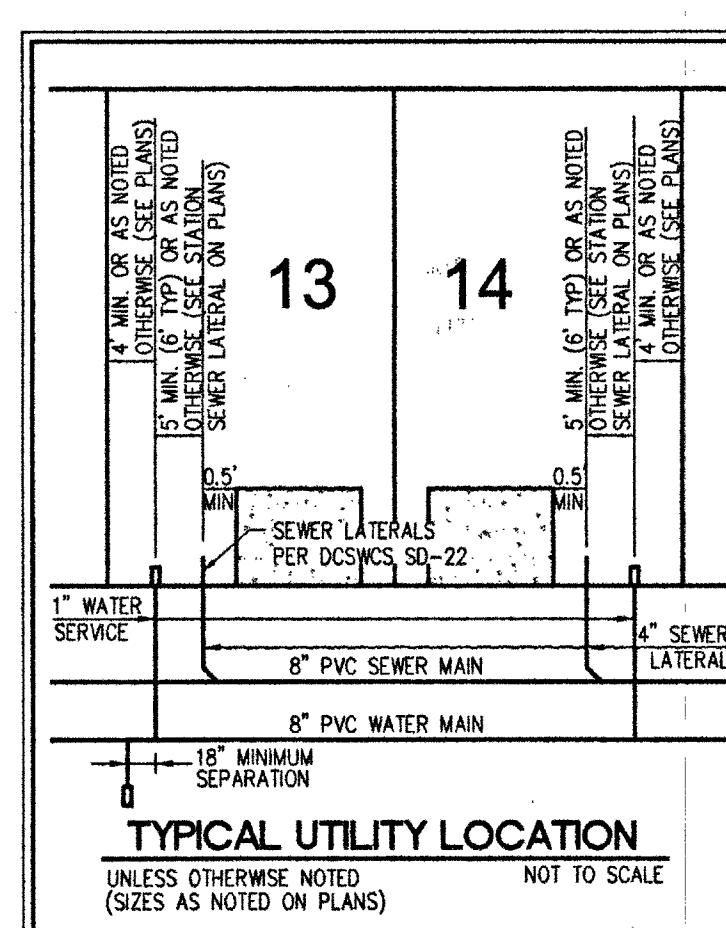
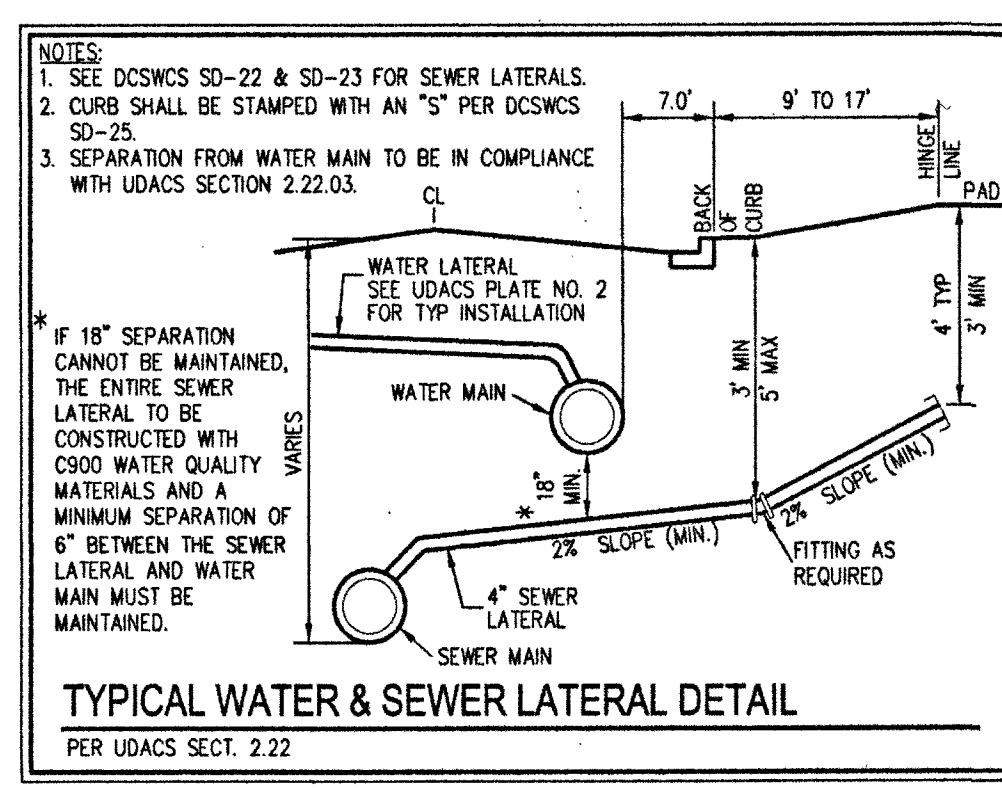
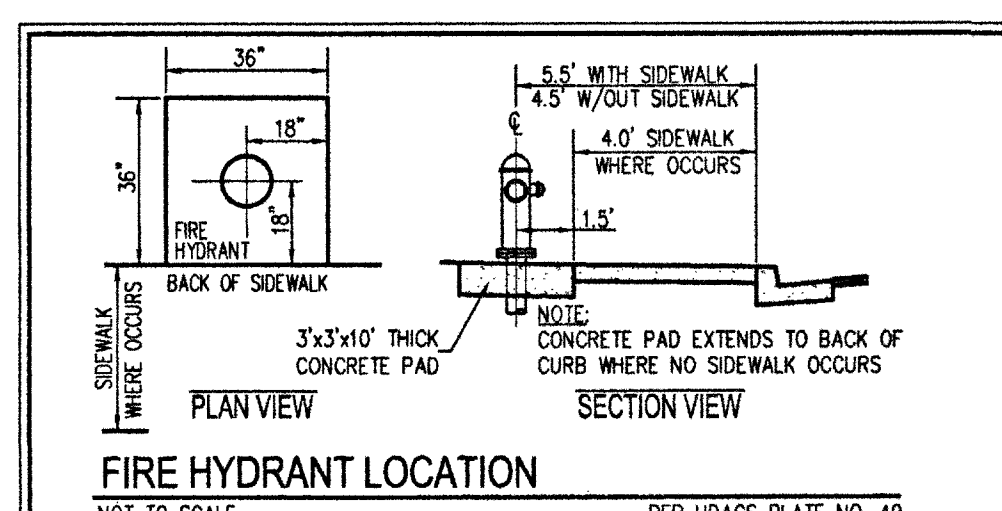
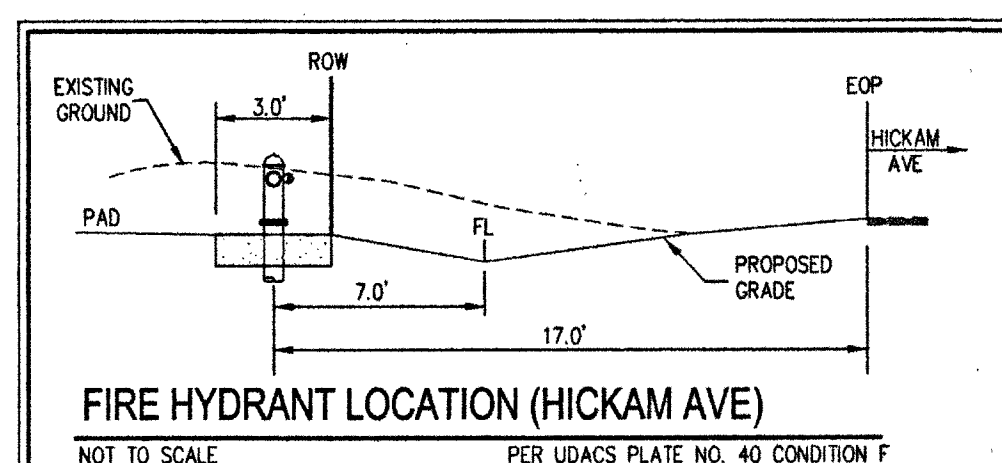
NORTH 00°09'04" WEST, BEING THE BEARING OF THE EAST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 20 SOUTH, RANGE 60 EAST, N.M.L., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 152, PAGE 17 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK

BENCHMARK NUMBER: CLV00 45W6
BRASS CAP "HIS 7008" AT DURANGO DRIVE AND HICKAM AVENUE CORNER
ELEVATION: 7305.093 FEET, 730.026 METERS
N.A.V.D. 88 DATUM
PER THE CLARK COUNTY VERTICAL CONTROL V2003

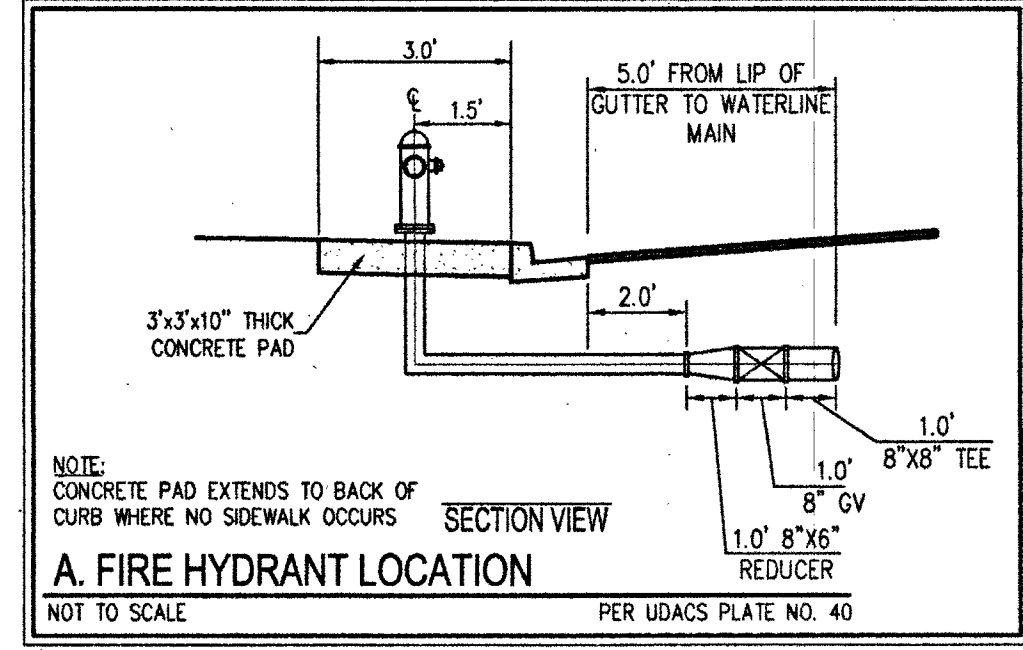
TO ENSURE LVVWD ACCESS WITHIN EASEMENT

ALL ABOVE GROUND OBSTRUCTION INCLUDING BUT NOT LIMITED TO, LANDSCAPE, BOLLARDS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.



CLARK COUNTY FIRE DEPT. APPROVAL
BY: [Signature] DATE: 7/18/18
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 2,250 GPM AT 20 P.S.I. RESIDUAL. **EP18-00704**

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 125650 FIRST APPROVED DATE: 7/18/18
LVVWD APPROVED FIRE FLOW 2,250 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW: 28 GPM



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

CLARK COUNTY, NEVADA

DATE: 03/26/18
BY: [Signature]
APP.: [Signature]

PINNACLE HOMES
ELK RIDGE ESTATES IV
UTILITY PLAN V

U-5
SHEET 30 OF 44
PIN1702

KEVIN M. BROSS
REGISTERED PROFESSIONAL ENGINEER - CIVIL
No. 24571, EXPIRATION 7/2/18

U-5
SHEET 30 OF 44
PIN18-10396
L18-00094

CLV SEWER AS-BUILT