

UNIFORM DESIGN STANDARDS FOR WATER DISTRIBUTION SYSTEMS

**LEGEND**

- APPROVED DOUBLE CHECK DETECTOR ASSEMBLY WITH 3/4" BY-PASS AND OS & Y" GATE VALVES BY - PASS METER.
- INSULATED ENCLOSURE.
- CONCRETE PAD, ( 3000 PSI @ 28 DAYS ) SEE TABLE BELOW.
- FLG x FLG 90° DUCTILE IRON ELBOW
- 3/8" - 18 NC x 2-3/4" LG "RED HEAD" WEDGE ANCHOR - GALVANIZED.
- 4" x 3" DUCTILE IRON FLG CONC REDUCER. (USED ONLY WITH 3" DOUBLE CHECK ASSEMBLY)
- FLG x PE DUCTILE IRON PIPE, CLASS 50.
- 1/4" EXPANSION JOINT MATERIAL.
- ADJUSTABLE PIPE SUPPORT.
- WELDED WIRE FABRIC, 4" x 4" x 1/4" DIA. WIRE.
- PUSH - ON OR 1/2" DUCTILE IRON ELBOW.
- DUCTILE IRON FLANGE RESTRAINING ADAPTER.
- CONCRETE THRUST BLOCK, SEE UDS PLATE NO. 5.
- NO. 5 REBAR. (WRAP EXPOSED PORTION NO. 5 REBAR WITH "SCOTCHRAP" NO. 51 PLASTIC TAPE WITH 1/2" OVERLAP)
- 4" MIN. TYPE II AGGREGATE BASE COMPACTED TO 95% COMPACTION.

DEVICE SIZE	CONCRETE PAD SIZE - ITEM 3 DIMENSIONS
3"	4" x 48" x 96"
4"	4" x 54" x 114"
6"	4" x 58" x 134"
8"	4" x 64" x 152"
10"	4" x 66" x 197"

NOT TO SCALE

FILE NAME: UDS011-1  
 DRAWN BY: B.L.  
 CHECKED BY: C.M.M.

DOUBLE CHECK DETECTOR ASSEMBLY  
 3" TO 10" DIAMETER  
 ABOVE GROUND INSTALLATION

UDS PLATE NO. 20B  
 SHEET 2 OF 2

UNIFORM DESIGN STANDARDS FOR WATER DISTRIBUTION SYSTEMS

FOAM INSULATION  
 SCREEN WIRE IS SECURED AROUND THE DRAINAGE PORT  
 RUST RESISTENT SCREEN WIRE  
 DISCHARGE FLOW  
 SIDE VIEW SHOWING THE INSTALLATION OF SCREEN WIRE INSIDE OF ENCLOSURE OPENINGS

NOTE: FOR LEGEND SEE SHEET 1 OF 2 (UDS PLATE NO. UDS011-1)  
 "INDUSTRIAL FIBERGLASS" ENCLOSURE ILLUSTRATED

NOT TO SCALE

FILE NAME: UDS011-1  
 DRAWN BY: B.L.  
 CHECKED BY: C.M.M.

BACKFLOW PREVENTION DEVICE  
 REDUCED PRESSURE PRINCIPLE ASSEMBLY  
 3/4" - 2" DIAMETER

UDS PLATE NO. 11A  
 SHEET 2 OF 2

UNIFORM DESIGN STANDARDS FOR WATER DISTRIBUTION SYSTEMS

CONDITION A (R/W AT BACK OF SIDEWALK)  
 1/2" PREMOLDED EXPANSION JOINT  
 SET FIRE HYDRANT PAD IN SIDEWALK ADJACENT TO R/W

CONDITION B (R/W 3' OR LESS FROM BACK OF SIDEWALK)  
 1/2" PREMOLDED EXPANSION JOINT  
 SET FIRE HYDRANT PAD IN SIDEWALK ADJACENT TO R/W

CONDITION C (R/W GREATER THAN 3' FROM BACK OF SIDEWALK)  
 1/2" PREMOLDED EXPANSION JOINT  
 SET FIRE HYDRANT PAD ADJACENT TO BACK OF SIDEWALK

CONDITION D (AREA WITH CURB AND GUTTER ONLY AND R/W IS 8'-0" OR LESS FROM BACK OF CURB)  
 SET FIRE HYDRANT PAD IN SIDEWALK ADJACENT TO R/W

CONDITION E (AREA WITH CURB AND GUTTER ONLY AND R/W IS GREATER THAN 8'-0" FROM BACK OF CURB)  
 CENTER FIRE HYDRANT PAD 7'-0" FROM BACK OF CURB  
 GREATER THAN 8'-0"

CONDITION F (IF NO SIDEWALK, CURB AND GUTTER EXISTS, SET FIRE HYDRANT PAD ADJACENT TO R/W AS SHOWN IN CONDITION D ABOVE.)

CONDITION G (IF EASEMENT FOR FIRE HYDRANT IS PROVIDED, SET FIRE HYDRANT PAD WITHIN LIMITS OF THE EASEMENT, AS SHOWN BY THE APPROVED PLAN.)

NOT TO SCALE

FILE NAME: UDS007-2  
 DRAWN BY: B.L.  
 CHECKED BY: C.M.M.

FIRE HYDRANT INSTALLATION

UDS PLATE NO. 7  
 SHEET 2 OF 2

UNIFORM DESIGN STANDARDS FOR WATER DISTRIBUTION SYSTEMS

Pre-cast Reinf. conc.  
 RING & COVER  
 GRADE RING  
 GRADE RING  
 CONE  
 Tongue & Groove joint  
 Vent Stack or 6" Min. Dia. Storm Pipe  
 1' SECTION (optional)  
 2' SECTION (optional)  
 3' SECTION (optional)

TABLE OF DIMENSIONS

Size	A	B	C	D	E	F	G	H	I	J	K	L
18"	18	18	18	18	18	18	18	18	18	18	18	18
24"	24	24	24	24	24	24	24	24	24	24	24	24
30"	30	30	30	30	30	30	30	30	30	30	30	30
36"	36	36	36	36	36	36	36	36	36	36	36	36
42"	42	42	42	42	42	42	42	42	42	42	42	42
48"	48	48	48	48	48	48	48	48	48	48	48	48

NOTES:  
 1. Precast concrete sections shall conform to A.S.T.M. Designation C-478 as last amended. All Cement to be Type V.  
 2. Manhole Bases may be square.  
 3. All Manhole Steps shall face 180° from opening invert.  
 4. Bases shall be 3000# concrete per Section 4.8.2.  
 5. In unstable soil conditions a second pipe joint is required within 3' of the manhole connection.  
 6. On the 6' dia. foot Dia. manholes the reducer or transition must be placed directly beneath the cone.  
 7. When Precast Manhole Bases are used a minimum of 4" of crushed rock will be placed under the manhole base.

FLEX-JOINTS required for 12" ID. and smaller with pipe joints required on all rigid pipes.

STANDARD ECCENTRIC MANHOLE  
 ISSUED: NUMBER: SD-1

NOT TO SCALE

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DOUBLE CHECK DETECTOR ASSEMBLY  
 3" TO 10" DIAMETER  
 ABOVE GROUND INSTALLATION

UDS PLATE NO. 20B  
 SHEET 1 OF 2

UNIFORM DESIGN STANDARDS FOR WATER DISTRIBUTION SYSTEMS

DRAFT

SECTION A-A  
 SECTION B-B

NOTE:  
 IF PROTECTION BOLLARDS ARE REQUIRED, SEE STANDARD PLATE NO. 23. SEE SHEET 2 FOR LEGEND AND SHEET 3 OF 3 FOR APPROVED PRODUCTS. TOP OF CONCRETE PAD TO BE FLUSH WITH SIDEWALK WHEN POURED AGAINST SIDEWALK.

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DOUBLE CHECK DETECTOR ASSEMBLY  
 3" TO 10" DIAMETER  
 ABOVE GROUND INSTALLATION

UDS PLATE NO. 20B  
 SHEET 1 OF 2

UNIFORM DESIGN STANDARDS FOR WATER DISTRIBUTION SYSTEMS

NOTE:  
 RPPA ASSEMBLY INCLUDING ABOVE GRADE PIPING NOT TO BE PAINTED.

LEGEND:  
 1. APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY  
 2. COPPER TUBING - TYPE "C"  
 3. BRASS 90° ELBOW - IRON PIPE THREAD  
 4. BRASS PIPE - STANDARD - T.B.E.  
 5. BRASS CLOSE NIPPLE  
 6. BRASS UNION - IRON PIPE THREAD  
 7. METER COUPLING  
 8. CONCRETE SLAB - 3000 P.S.I.  
 9. WELDED WIRE FABRIC - 1/4" x 1/4" x 1/4"  
 10. FIBERGLASS ENCLOSURE - SEE UDS PLATE 11A-2  
 11. 3/8"-18NC x 2-3/4" LG WEDGE ANCHOR BOLT  
 12. STAINLESS STEEL HATCH SPRING  
 13. POLISHED STAINLESS STEEL PIANO HINGE  
 14. CHROME PLATED ZINC SHVEL HASP-BOTTOM  
 15. CHROME PLATED ZINC SHVEL HASP-TOP  
 16. CHROME PLATED ZINC HANDLE

NOT TO SCALE

FILE NAME: UDS011-1  
 DRAWN BY: B.L.  
 CHECKED BY: C.M.M.

BACKFLOW PREVENTION DEVICE  
 REDUCED PRESSURE PRINCIPLE ASSEMBLY  
 3/4" - 2" DIAMETER

UDS PLATE NO. 11A  
 SHEET 1 OF 2

UNIFORM DESIGN STANDARDS FOR WATER DISTRIBUTION SYSTEMS

NOTE: SEE UDS PLATE NO. UDS007-2 FOR FIRE HYDRANT AND FIRE HYDRANT PAD HORIZONTAL LOCATION DETAILS.

LEGEND:  
 1. FIRE HYDRANT  
 2. 8" DIAMETER LATERAL  
 3. 8" RESIDENT SEATED GATE VALVE FLANGED + PUSH ON OR FLANGED + RING JOINT, OR FLANGED + MECHANICAL JOINT.  
 4. VALVE BOX INSTALLATION AND ADJUSTMENT (SEE UDS PLATE NO. UDS008)

NOTES:  
 1. NO HYDRANT SHALL BE LOCATED WITHIN 25 FEET OF ANY STRUCTURE OR 8 FEET OF A DRIVEWAY, POWER POLE, LIGHT STAND, OR ANY OTHER OBSTRUCTION. FOR WALLS, FENCE, AND PLANTER LOCATIONS A PERIMETER AROUND THE HYDRANT MEASURING A MINIMUM OF 3 FEET FROM ITS CENTER SHALL BE MAINTAINED CLEAR OF ALL OBSTRUCTIONS AT ALL TIMES. HYDRANTS MUST BE LOCATED A MINIMUM OF 8 FEET AWAY FROM THE BEGINNING OF A TURNING RADIUS.  
 2. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT HYDRANT INSTALLATION SPECIFICATIONS AND ORDINANCE NO. 331A. CLASS CLARITY ORDINANCE NO. 1181 FROM THE LATEST EDITION AND THE UNIFORM FIRE CODE LATEST EDITION.  
 3. 8" DIAMETER FIRE HYDRANT LATERAL SHALL BE SAME CLASS AND TYPE OF MATERIAL AS THE DISTRIBUTION MAIN.  
 4. DUCTILE IRON PIPE TO BE DISCHARGED WITH 800# MIN. THICK POLYETHYLENE FILM.

NOT TO SCALE

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 CHECKED BY: C.M.M.

FIRE HYDRANT INSTALLATION

UDS PLATE NO. 7  
 SHEET 1 OF 2

PROJ NO: AZ01002  
 DESIGN: RAC/LG  
 DATE: 09/26/01  
 SCALE: AS SHOWN  
 FILE: FS44-17

PROFESSIONAL ENGINEER - STATE OF NEVADA  
 ALLEN REVELL  
 No. 9029

STAMP DATE: 9-26-01

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AZTEC ENGINEERING

CITY OF LAS VEGAS  
 FIRE STATION NO. 44  
 CONSTRUCTION DETAILS VII

SHEET  
 C-17  
 17 OF 20 SHEETS  
 CLV DRAWING NO.  
 630.97

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