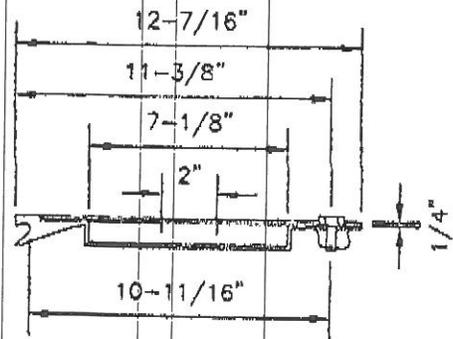


CITY WATER METER COVER
D&L L-2240-15



LID SECTION
D&L L-2240-15

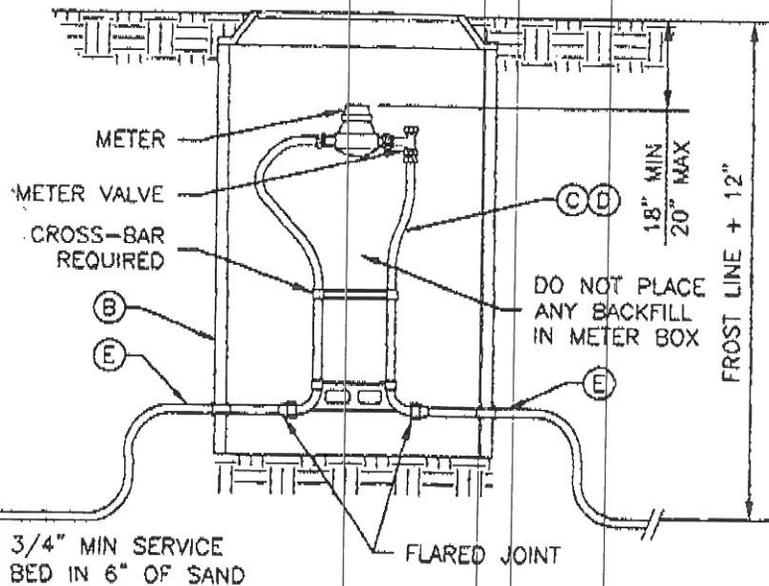


FORD KV13-332W-NL
ANGLE INVERTED KEY
METER VALVE

COMPRESSION
CORP STOP

WATER
MAIN

BRONZE SERVICE
SADDLE W/
STAINLESS STEEL
STRAPS



METER BOX SECTION

LEGEND

No	*	ITEM	DESCRIPTION
(A)		FRAME AND COVER	CAST IRON COVER (GRASS) DUCTILE IRON COVER (DRIVEWAY)
(B)		METER BOX (18" TO 21" DIAMETER) (30" TO 36" DEEP)	WHITE CORRUGATED PE
(C)		3/4" METER YOKE	OPTIONAL BACKFLOW PROTECTION PER AGENCY REQUIREMENTS
(D)		1" METER YOKE	OPTIONAL BACKFLOW PROTECTION PER AGENCY REQUIREMENTS
(E)		3/4" AND 1" SERVICE LINE	TYPE K (SOFT) OR HDPE IPS SDR 9

SERVICE CONNECTION & METER ASSEMBLY

REV. 11-14

3-2-608 VALVES, HYDRANTS, WATER SERVICES AND FITTINGS

(A) GENERAL: This section covers valves, hydrants and water services.

(B) VALVES: Valves shall be of mechanical joint, push-on joint, or flanged connection design as shown on the Standard Drawings. Buried valves shall have a 2 inch operating nut.

(1) Gate valves shall conform to AWWA Specifications C-500. Valves shall be of cast iron body, bronze mounted, double mounted, double disc, parallel seat, non-rising stem design with O-ring seals.

(2) Butterfly valves shall conform to AWWA Specification C-504. Butterfly valves shall be used in place of gate valves in all 12 inch or larger pipes unless otherwise required by the City Engineer.

(3) Resilient seat gate valves shall comply with the requirements of AWWA C509 standards. The valve shall have a cast or ductile iron body, modified wedge disc is fully supported and travels along a machined surface in the valve body, seat ring of resilient rubber, with non rising bronze stem with c-ring seals.

(4) Detector check valves are similar to regular check valves but they have a specially weighted rubber faced clapper with nylon pivot bushings and a body of heavy cast iron. The valve must have provisions for a metered bypass to detect low flows. The detector check in normal operation is in the closed position, any pressure loss through the bypass approximately 1 to 5 PSI automatically opens the main valve allowing unrestricted flow. Detector check valve shall be placed in the location required by the City Engineer and shall be installed in a concrete box as shown on the Standard Drawings.

(C) VALVE BOXES: All buried valves shall be installed complete with two-piece, cast iron, screw or flanged type, 5 1/4 inch shaft valve box with locking or regular lid. Valve boxes installed between the curb and gutter and sidewalk as well as those behind the sidewalk shall be placed in a concrete pad as indicated on the Standard Drawing. Valve boxes placed in the street shall be surrounded by a concrete ring that extends 6 inches away from the valve box and 8 inches deep.

(D) FIRE HYDRANTS: Fire Hydrants shall be dry barrel "traffic model" type designed to conform to the latest revision of AWWA specification C502 and shall be of a compression type. Acceptable hydrants are Watrous WB67 or Mueller A423 with break away coupling.

All hydrants shall be supplied with a 6 inch auxiliary valve complete with valve box. Hydrants shall have two 2-1/2 inch hose nozzles and one 4-1/2 inch pumper nozzle. All nozzles shall be of National Standard thread design with a National Standard pentagon operating nut for the nozzle covers and for hydrant operation. The hydrant shall close by a clockwise rotation of the operating nut. The auxiliary valve shall be attached to the hydrant by a ANSI 150 pound flange. All hydrants have a one cubic yard gravel sump surrounding the drain.

Hydrants shall be located as required by the City and local ordinances. Final grade shall place the traffic flange no lower than two inches below or four inches above top back of curb or finish grade.

(E) WATER SERVICES: (3/4-1 inch) pipe for water services shall be iron pipe size high molecular weight polyethylene tubing or type K soft copper tubing.

The connection to the main shall require that a corporation stop be placed at the main. Either direct tapped for cast or ductile iron or by means of a tapping saddle. All tapping saddles shall be either all bronze with double straps or epoxy coated with double stainless steel straps.

Meter setters shall be of copper and bronze manufacture with an inverted key lockable angle meter valve on the inlet and a dual check valve on the outlet. The dual check valve must be able to be repaired without removal of the meter. Connection to the service line shall be with a bronze pack joint or an "insta-tite" fitting.

Meter boxes shall be round 18 inch inside diameter either concrete or ribbed plastic. The lids shall be cast iron with a locking lid operated by a pentagon nut and provide for a 12 inch minimum opening.

(F) WATER SERVICES: (1-1/4 to 2 inch) pipe for services shall be high molecular weight polyethylene tubing or type K soft copper tubing. Meter boxes and setters shall be installed as shown on the standard drawings. Other types of installations must have the approval of the City Engineer.

(F) PVC PLASTIC WATER PIPE: All PVC plastic pressure pipe with integral bell and spigot joints shall be made from clean, virgin, Type I, Grade I, unplasticized polyvinyl chloride (PVC) and shall meet the requirements of the latest revision of ASM D-1784, and ASTM D-2241, and conform to the requirements set forth in the latest revision of AWWA C-900, with dimension ration (DR) of 18 (class 150 psi) for all pipe, unless otherwise stated. All pipe and fittings shall be National Sanitation Foundation (NSF) approved.

Pipe and fitting joints shall be rubber gasket, bell and spigot type, or mechanical joint. The bell shall consist of an integral wall section with a solid cross-section rubber ring which meets the requirements of ASTM D-1869. The Bell section shall be designed to be at least as strong as the pipe wall.

Fittings shall be short body cast iron or ductile iron for PVC application and in accordance with AWWA C-110. They shall be capable of withstanding, without bursting, hydrostatic test of 3.0 times the rated water working pressure. The fittings shall be furnished with mechanical, bell and spigot, or flange joints and shall conform to the dimensions and weights given in AWWA C-110 and AWWA C-111.

(G) PVC PLASTIC SEWER PIPE: PVC plastic Sewer pipe shall be made of compound conforming to ASTM D-1784 with a cell classification of 13364-B with a minimum tensile modulus of 500,000 psi. PVC Sewer pipe must meet all the dimensional, chemical and physical requirements outlined in ASTM D-3034 and shall have a S.D.R. of 35.0. Pipe shall carry the IAPMO UPC seal of Approval.

(H) PE PLASTIC DRAINAGE PIPE: Pipe and fittings shall be made of virgin polyethylene (PE) compounds which conform with the requirements of Type III, Class C as defined and described in ASTM D1248. Corrugated PE tubing that is intended for subsurface drainage use where soil support is given to the tubings flexible walls shall comply with the above mentioned ASTM specification and shall be installed according to the manufactures recommendation.

When perforated tubing is specified, the perforations shall be cleanly cut so as not to restrict the inflow of water, and uniformly spaced along the length and circumference of the tubing. The water inlet area shall be a minimum of 1 square inch per linear foot of tubing.