

SECTION 02719

COMPOUND WATER METERS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Installation of 1.5-inch through 6-inch compound water meters for domestic service.

PART 2 - PRODUCTS

2.01 COMPOUND WATER METERS

- A. Meter shall meet the requirements of AWWA/ANSI C701 AND C702 and NSF Standard 61, Annex F and G. Meter shall be Sensus OMNI™ C² and no substitution will be considered.
- B. MAINCASE: The meter maincase shall be of epoxy coated ductile iron composition. The epoxy coating shall be provided as standard fusion-bonded and adhere to NSH for non-lead regulation compliance.
- C. MEASURING CHAMBER: The measuring chamber shall consist of a measuring element, removable housing, and all-electronic register. The measuring element shall be mounted on a horizontal, stationary stainless steel shaft with sleeve bearing and be essentially weightless in water. The measuring element shall be capable of operating within the listed accuracy limits for the meter without calibration when transferred from one maincase to another of the same size. The measuring chamber shall be so configured to capture all flows without the requirement of an automatic valve.
- D. DIRECT MAGNETIC DRIVE SYSTEM: The direct magnetic drive shall occur between the motion of the measuring element blade position and the electronic register. Additional intermediate, magnetic or mechanical drive couplings are not acceptable.
- E. ELECTRONIC REGISTER: The meter's register shall be all-electronic and not contain any mechanical gearing to display flow and accurate totalization. The electronic register shall include AMR resolution units that are fully programmable; pulse output frequency that is fully programmable; integral data logging capability; integral resettable accuracy testing feature; large, easy-to-read LCD display; and a 10-year battery life guarantee.
- F. STRAINERS: The meter strainer shall be integral and cast as part of the meter maincase. The strainer screen shall have a minimum net open area of at least two times the pipe opening and be V-shaped configuration for the purpose of

maintaining a full unobstructed flow pattern. The strainer body shall be a coated ductile iron fusion-bonded epoxy identical to that of the meter maincase. All fasteners shall be stainless steel.

- G. STRAIGHTENING VANES: A straightening vane assembly is mandatory and shall be positioned directly upstream of the measuring element. The straightening vane assembly shall be an integral component of the measuring chamber.
- H. CONNECTIONS: Flanges for the 1.5" and 2" size meter assemblies shall be of the 2-bolt oval flange configuration. All meters 3" and larger shall have flanges of the Class 125 round type, flat faced, and conform to ANSI B16.1 for specified diameter, drilling and thickness.
- I. MARKING AND PRESSURE RATING: The meter assembly shall operate without leakage, damage or malfunction up to a maximum working pressure of 200 psi. All meter sizes shall display the size, model, manufacturer name and direction of flow cast on the side of the meter.
- J. PERFORMANCE: The meter assembly shall have performance capability of continuous operation up to the rated maximum flows as set forth in AWWA requirements without affecting long-term accuracy or causing undue component wear. The meter assembly shall also provide a 25% flow capacity in excess of the maximum flows listed for intermittent flow demands.

PART 3 - EXECUTION

3.01 SETTING METERS

- A. Meters shall be installed in precast concrete meter boxes as shown on the Standard Details. Meter boxes shall be set level with top of meter box a flush to grade. Meter boxes shall be set atop a minimum of 8-inches of crushed stone and include a drain hole in the bottom of the meter box. Care shall be taken in the backfilling around the meter box to prevent damage to the meter box. Backfill around meter boxes shall be select backfill with no stone or rock greater than 2-inches.
- B. Rubber gaskets shall be used at each flange during installation. Bolts on flanges shall be torqued to the manufacturer's recommended requirements. Do not over-tighten bolts.
- C. Meter appurtenances shall be provided in accordance with the Standard Details.

END OF SECTION