

**San Antonio Water System Standard Specifications for Construction**

**ITEM NO. 832**

**Tapping Sleeves and Valves**

**832.1 DESCRIPTION:** This item shall consist of tapping sleeves and valves installed in accordance with these specifications and as directed by the Engineer. The use of size on size taps shall not be permitted. Only cut-in tees shall be used within the system, unless otherwise approved.

**832.2 REFERNCED STANDARDS:** Reference standards cited in this Specification Item No. 832 refer to the current reference standard published at the time of the latest revision date.

1. San Antonio Water System (SAWS):
  - a. Specifications for Water and Sanitary Sewer Construction
  - b. SAWS Materials Specifications
2. City of San Antonio (COSA) Specifications for Construction
3. Texas Commission of Environmental Quality (TCEQ)
  - a. Chapter 290; Subchapter D – Rules and Regulations for Public Drinking Water
4. American Society for Testing and Materials (ASTM) International:
  - a. ASTM A240 - Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels
  - b. ASTM A193 Standard Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service.
  - c. ASTM A194 Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure or High-Temperature Service
  - d. AWWA C 110 - Standard for Ductile-Iron and Gray-Iron Fittings, 3 in. through 48 in., for Water and other Liquids.
5. American Water Works Association (AWWA)
  - a. AWWA C 200 - Standard for Steel Water Pipe - 6 in. and Larger.
  - b. AWWA C 207 - Standard for Steel Pipe Flanges for Waterworks Service - Sizes 4 in. Through 144 in.
  - c. AWWA C 500 - Standard for Metal Seated Gate Valves, for Water Supply Service.
  - d. AWWA C 223 - Fabricated Steel and Stainless Steel Tapping Sleeves.

**832.3 SUBMITTALS:** Contractor shall submit manufacturer's product data, instructions, recommendations, schedule, shop drawings, and certifications. All submittals shall be in accordance with Engineer's requirements and submittals shall be approved prior to delivery.

**832.4 MATERIALS:** The materials for tapping sleeves and valves shall conform to the specifications contained within the latest revision of SAWS' Material Specification Item Nos. 100-35, "Tapping Sleeves," and 21-02, "Resilient Seated Gate Valves and Tapping Valves."

**832.5 CONSTRUCTION:** The installation work involved in tapping sleeves and valves shall consist of: excavation, backfilling the excavation with approved selected material, tapping

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sleeve, approved reaction blocking conforming to Standard Drawing DD-839 Series, tapping valve, valve box assembly, concrete collar and cast iron lid.

1. New taps will not be permitted closer than 2 feet of a joint or existing tap.
2. The use of a shell-type cutter shall be required when tapping sleeves and valves.
3. Whenever working on potable or recycle water systems, the shell cutter shall be disinfected with bleach prior to the start of work.
4. The cutting edge shall be sharp and round.
5. Any defective cutters shall be rejected by the Inspector.
6. All the tapping sleeves shall be air tested to 50 psi prior to tapping the main line, and shall hold pressure for 2 minutes.
7. Tapping AC pipe will require flush valve on tapping machines.
8. The valve box shall be placed in such a manner to prevent shock or stress from being transmitted to the valve.
9. Valve shall be blocked prior to tapping.
10. Valve boxes shall be centered over the valve's operating nut with the box cover flush with the finished existing grade.
11. Valve boxes located in streets or other areas subject to vehicular traffic shall be provided with concrete collars as shown in the accompanying standard drawings.
12. Collars around such valve boxes shall be formed and finished off neatly and in a sound workmanlike manner.

**832.6 MEASUREMENT:** Tapping Sleeves, Valves, and Boxes will be measured by the unit of each such assembly of the various sizes of tapping sleeves, valves, and boxes approved and installed.

**832.7 PAYMENT:** Payment for Tapping Sleeves and Valves, complete with boxes, will be made at the unit price bid for each such assembly of the various types and sizes of valves and valve boxes installed and approved.

1. Payment shall also include: excavation, cutting and replacement of surface, selected embedment material, surface restoration, anti-corrosion when specified, hauling, and disposition of surplus excavated material, backfill, installation of all-weather surface, concrete collar at the valve box, ductile iron riser pipe, cast iron boot, concrete grout, concrete reaction blocking, protective coating material for bolts, nuts, and ferrous surfaces, and polyethylene sleeve where required, and air testing of sleeve.
2. Materials paid on site will be in accordance with Table 1 of Specification Item No. 100 Mobilization

**-End of Specification-**