

**SECTION 22 05 53**  
**SYSTEMS IDENTIFICATION FOR PLUMBING**

**PART 1 – GENERAL**

**1.01 WORK INCLUDED**

- A. The work of this Section shall include, but is not limited to, the following:
  - 1. Valve identification
  - 2. Equipment identification
  - 3. Piping identification
  - 4. Signage

**1.02 RELATED DOCUMENTS**

- A. Section 22 05 01 – Plumbing General Provisions
- B. Section 22 05 50 – Access Doors in General Construction for Plumbing

**1.03 REFERENCE STANDARDS**

Published specifications standards, tests or recommended methods of trade, industry or governmental organizations apply to work in this Section where cited below:

- A. ASME – American Society of Mechanical Engineers
  - 1. ASME A13.1 – 2007 Revised 2013: Scheme for the Identification of Piping Systems
- B. ASTM – American Society for Testing and Materials
  - 1. ASTM D709 – 2013: Standard Specification for Laminated Thermosetting Materials
- C. APWA – American Public Works Association
  - 1. Recommended Guidelines for Underground Utilities

**1.04 QUALITY ASSURANCE**

- A. Above ground piping identification shall comply with ASME Standard A13.1.
- B. Underground piping identification shall comply with APWA Recommended Guidelines for Underground Utilities.

**1.05 SUBMITTALS**

- A. Submit the following:
  - 1. Valve identification chart
  - 2. Lists of pipe and equipment to be labeled
  - 3. Color chart

- B. Product Data: Manufacturer's latest published data for materials, equipment and installation, including samples of valve tags, equipment identification and piping identification.
- C. Maintenance Manuals: Provide valve tag schedules for inclusion in maintenance manuals.

#### 1.06 PERFORMANCE REQUIREMENTS

- A. Identification shall meet or exceed the performance requirements specified in this specification section.

### **PART 2 – PRODUCTS**

#### 2.01 ACCEPTABLE MANUFACTURERS

- A. Seton
- B. Stranco
- C. Kolbi

#### 2.02 VALVE IDENTIFICATION

- A. All tagged components shall be in accordance with ASME A13.1.
- B. For valves, use metal tags 2-inch minimum diameter, fabricated of 19-gauge polished brass, stainless steel or aluminum.
  - 1. Attach tags with jack chain "S"-hook or split ring of same materials.
  - 2. Provide engraved/stamped tags with black ink-filled ¼-inch high letters and ½-inch high numbers.
  - 3. Provide minimum 5/32-inch hole for fastener.

#### 2.03 PIPE IDENTIFICATION

- A. Pipe markers shall have 1¼-inch high letters and integral directional flow arrows. Smaller letters may be used only when space does not permit 1¼-inch high lettering.
- B. For piping up to 5-inch diameter, use pre-formed snap-on markers.
- C. For piping 6-inch diameter and up, use pre-formed strap-on markers with nylon straps.
- D. Material: Semi-rigid colored vinyl; 15 gauge up to 1-inch pipe, 30 gauge for all other pipe sizes.
- E. Seton "Setmark" or equal.
- F. Pressure-sensitive tapes are unacceptable.
- G. Exterior Underground Pipe Markers:
  - 1. Material shall be detectable tape, nominal 5-mil thick, minimum 3 inches wide

- with aluminum backing.
- 2. Tape color, size and depth to be in accordance with APWA standards with black lettering and appropriate warning message.

#### 2.04 EQUIPMENT IDENTIFICATION

- A. Plumbing equipment shall be identified by means of nameplates permanently screw-fastened to the equipment. Nameplates shall be black surface, white core laminated bakelite with engraved letters. Plates shall be a minimum of 3-inch long by 1-inch wide with white letters  $\frac{3}{8}$ -inch high.

#### 2.05 SIGNAGE

- A. Provide engraving stock melamine plastic laminate, complying with ASTM D709, in sizes and thicknesses indicated, engraved with engraver's standard letter style of sizes and wording indicated, black with white core (letter color) except as otherwise indicated, punched for fastening except where adhesive mounting is necessary because of substrate.
  - 1. Thickness:  $\frac{1}{16}$ -inch for signs up to 20 square inches or 8-inch length;  $\frac{1}{8}$ -inch for larger signs.
  - 2. Fasteners: Self-tapping stainless steel screws, except contact type permanent adhesive where screws cannot or should not penetrate substrate.

### **PART 3 – EXECUTION**

#### 3.01 VALVE IDENTIFICATION

- A. Do not identify valves where the use is obvious, such as equipment isolation valves.
- B. Provide schedules of all valves showing identification number, size, type and service of each valve. Provide separate list for each separate type of system. Incorporate in maintenance manuals.

#### 3.02 EQUIPMENT IDENTIFICATION

- A. Identify equipment with identical letter and/or number as used on the Drawings. Where space is available, use full name of equipment. Attach nameplates in a permanent manner in a location that will be clearly visible after installation is complete.

#### 3.03 PIPING IDENTIFICATION

- A. Piping identification shall be in conformance with the ASME A13.1.
- B. Identify piping systems with color-coded bands, sharply contrasting with background. Locate bands near strategic points, such as valves, items of equipment, changes in direction, wall penetrations, capped stub-out for future connection and every 40 feet of straight runs. If necessary, paint a strip background of black or white to obtain contrast.
- C. Apply bands where they can be easily read. Provide bands with backgrounds of different colors.

### 3.04 ACCESS IDENTIFICATION

- A. Identify service, piping and equipment behind all architectural access doors.
- B. Removable ceiling tile shall be marked by small color markings at corner of tile or door in accordance with the following color assignment:
  - 1. Plumbing – Silver

### 3.05 INSTALLATION OF IDENTIFICATION

- A. Where identification is to be applied to surfaces which require insulation, painting or other covering or finish, including valve tags in finished spaces, install identification after completion of covering and painting. Install identification prior to installation of acoustical ceilings and similar removable concealment.

### 3.06 UNDERGROUND PIPING IDENTIFICATION

- A. During backfilling/topsoil of each exterior underground piping system, install continuous detectable underground type plastic line marker, located directly over, buried in accordance with APWA standards.
- B. For tile fields and similar installation, mark only edge pipe lines of field.

END OF SECTION 22 05 53