

## SECTION 20 40 13

### IDENTIFICATION FOR FACILITY SERVICES

#### PART 1 – GENERAL

##### 1.01 SECTION INCLUDES

- A. Pipe markers
- B. Valve markers
- C. Wet standpipe system
- D. Equipment nameplates
- E. Control nameplates
- F. Valve list frame
- G. Valve list
- H. Valve list closure
- I. Office plate tag
- J. Duct identification and markers

##### 1.02 MEASUREMENT AND PAYMENT

- A. General: Separate measurement or payment will not be made for the work required under this Section. All costs in connection with the Work specified herein will be considered to be included or incidental to the Work of this Contract.

##### 1.03 REFERENCES

- A. American National Standards Institute (ANSI):
  - 1. ANSI A13.1 Scheme for the Identification of Piping Systems
- B. State of California, Department of Transportation (Caltrans):
  - 1. Standard Specifications, Section 85, Pavement Markers
  - 2. Standard Specifications, Section 95, Epoxy

##### 1.04 SUBMITTALS

- A. General: Refer to Section 01 33 00, Submittal Procedures, and Section 01 33 23, Shop Drawings, Product Data, and Samples, for submittal requirements and procedures.

- B. Product Data: Submit manufacturer's product data of pipe markers, valve markers, equipment nameplates, control nameplates, orifice plate tag, and duct identification and markers.
- C. Schedules: Submit valve schedule for each piping system, typewritten and reproduced on eight and a half by 11 inches bond paper for mounting. Tabulate valve number, piping system, system abbreviation (as shown on tag), location of valve (room or space), and variations for identification (if any). Mark valves which are intended for emergency shut-off and similar special uses with "flags" in the margin of the schedule. In addition to mounted copies, furnish extra copies as required for maintenance manuals as specified in Section 01 78 23, Operations and Maintenance Data.
- D. Samples: Submit samples of each color, lettering style, and other graphic representation required for each identification material or system.

## **PART 2 – PRODUCTS**

### **2.01 MATERIALS**

- A. Pipe Markers:
  - 1. Provide pipe markers of semi rigid plastic which are visibly accessible for maintenance operations (except piping in finished space). Include direction-of-flow arrows at each pipe marker. Pipe markers and flow arrows shall either be of the self-adhesive type or fastened to the pipe using epoxy-based adhesive. Adhesive used shall be approved by the Engineer.
  - 2. Color code marker background with a clearly printed legend to identify the contents of the pipe. Conform colors, lettering size, and legend to ANSI A13.1.
  - 3. Do not allow stainless steel piping to come into contact with pipe marker materials containing chlorides.
  - 4. Identify potable waterlines so as to distinguish them from non-potable lines. Begin marking or identification on non-potable waterlines immediately down stream of back flow preventer.
- B. Valve Markers: Brass tags one and a half inches in diameter. Letters shall be one fourth inch high and numbers shall be a half inch high. For supervised OS & Y and butterfly valve, letters shall be two inches by four inches, and numbers shall be one fourth inches. Marker fasteners shall be either four-ply 18 gage stainless steel wire, stainless steel "S" hooks, or stainless steel meter seals. Markers shall bear identifications as indicated.
- C. Wet Standpipe System:
  - 1. Requirements: Tunnel and Station wall signs shall be six inches by nine inches in size, opaque plastic back with anodized aluminum face. Letters shall be engraved, black, five eighths inch high, approximately three sixty-fourth inch

wide Helvetica Compact style. The background of the sign shall be bright aluminum. The image shall be engraved below the anodized layer. Signs shall conform to color and finish of sample signs furnished by the Engineer.

2. Hose Valves: Signs, at each hose valve, shall have four lines of information. The first line shall be the track designation, such as C1 and C2; the second line shall be the mile post location such as MP XX.XX (closest mile post designation expressed in nearest hundredths of a mile); the third line shall be the primary fire department street address connection location; and the fourth line shall be secondary fire department street address location. Additional lines of information and other signs shall be as indicated.
  3. Sectional Control Valves: The sign for each sectional control valve in a tunnel section shall have two lines of information. The first line shall be the track designation, such as C1 and C2; the second line shall be the milepost location, such as MP XX.XX; and the third line shall be the flasher control panel numbers as indicated.
  4. Hose Valve Markers: Markers shall be blue, two-way reflective type, as specified in Caltrans Standard Specifications, Section 85.
  5. Hose Valve Reflectors: Provide three-inch minimum metal-backed high reflective blue as approved by the Engineer. Reflectors shall be mounted on each side of galvanized steel wall brackets to be visible in either direction, as indicated.
  6. Hose Valve Reflective Tape: Provide three fourths-inch wide high visibility white self adhesive tape.
- D. FDC and PIV Signage: FDC: Identification escutcheon or plaques for standpipe system shall be cast brass and shall have the following designation; first line: "BART", second line: either "WET STANDPIPE" or "AUTOSPKR" or "AUTOSPKR AND STANDPIPE". PIV: Identification plaque shall be cast brass and shall have the following designation; first line: "BART", second line: shall have a physical location description with respect to the BART system such as a station name or building name.
- E. Equipment Nameplates: Aluminum, two inches by four inches, with a black enamel background and either etched or engraved lettering. Lettering shall be as indicated. Nameplates shall bear notations corresponding to the same notations on the framed wiring diagrams and operating instructions. Place warning signs on machines driven by electric motors which are controlled by fully automatic starters, in accordance with General Safety Orders Article 3281.
- F. Control Nameplates: Laminated colored plastic with white lettering. Each switch shall have its switch positions clearly indicated and identified. Nameplates shall be worded to identify the respective item and function.
- G. Valve List Frame: Crafted wood or nonferrous metal with clear glass front.
- H. Valve List: Provide on heavyweight white bond paper, either typed or printed and laminated between clear plastic.

- I. Valve List Closure: Crafted of transparent plastic. Front and back plastic sheets, which form closure, shall be not thinner than 15 mils. Two holes shall be punched at top of plastic closure to allow a nickel-plated bead chain to be affixed thereto.
- J. Orifice Plate Tag: Aluminum tag secured with not less than 18 gage stainless steel wire to the pipe extension. Tag shall identify make, model, bore diameter, and serial number of the portable meter connected to the device.
- K. Duct Identification and Markers: Provide duct identification of all ducts, such as "warm air" and "return air", and air flow directional arrows. Provide such identification at 10-foot centers along the duct. Also, identify all dampers by function. Duct identification markers and flow arrows shall be flexible plastic tape, permanent self-adhesive type or fastened with an epoxy adhesive.

## **PART 3 – EXECUTION**

### **3.01 INSTALLATION**

- A. Pipe Markers:
  - 1. Install adjacent to each valve and fitting, except on plumbing fixtures and equipment; at each branch and riser take-off; at each pipe passage through wall, floor and ceiling construction; at each pipe passage to underground; and on 10 foot centers on horizontal pipe runs. Install markers on exterior of insulation for insulated piping.
  - 2. Identify potable water lines to distinguish them from non-potable lines. Begin markings or identification on non-potable water lines immediately downstream of backflow preventers.
- B. Valve Markers: Fasten to valve body in location where markers can be easily read.
- C. Wet Standpipe System:
  - 1. Sectional control valve and hose valve signs shall be mounted to tunnel or station wall. Hose valve signs shall be mounted to the side of the hose valve. Sectional control valve signs shall be mounted below the valve, four feet six inches above walkway to bottom of sign. The signs shall be firmly attached to the tunnel or station wall using adhesive conforming to Caltrans Standard Specifications, Section 95-2.04, Rapid Set Epoxy Adhesive for Pavement Markers.
  - 2. Reflectors specified in Article 2.01.C.5 shall be mounted on new brackets fastened to the tunnel wall directly across from each hose valve, as indicated. The reflector mount shall be located one inch clear below the bottom of the nearest milepost sign and positioned so as not to obstruct the train operator's vision of the sign.
  - 3. Reflective tape specified in Article 2.01.C.6 shall be applied to the sides of the hose valve riser pipe with four parallel vertical strips equally spaced about a

semicircle of the pipe nearest to the trackway, beginning 6 feet above the walkway and ending at the threaded elbow.

- D. Valve List Frame: Mount on a wall in the mechanical room, where it can be easily read. One valve list shall be mounted in each frame. Mount with tamper-proof, corrosion-resistant fasteners.
- E. Equipment Nameplates: Mount with tamper-proof, corrosion-resistant fasteners.
- F. Control Nameplates: Mount with tamper-proof, corrosion-resistant fasteners.
- G. Duct Identification and Markers: Install duct identification and markers on all ducts, where most visible, and on the exterior side of insulated ductwork. Install in accordance with the identification tape manufacturer's installation instructions and recommendations for the conditions.

**END OF SECTION 20 40 13**