

SECTION 15150

SANITARY WASTE AND VENT PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section

1.2 SUMMARY

- A. This Section includes the following for soil, waste, and vent piping inside the building
 - 1. Pipe, tube, and fittings

1.3 QUALITY ASSURANCE

- A. Piping materials shall bear label, stamp, or other markings of specified testing agency

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection
 - 1. Available manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified

2.2 HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS

- A. Pipe and Fittings: ASTM A74, Service class
- B. Gaskets: ASTM C564, rubber
- C. Calking Materials: ASTM B29, pure lead and oakum or hemp fiber

2.3 HUBLESS CAST-IRON SOIL PIPE AND FITTINGS

- A. Pipe and Fittings: ASTM A888 or CISPI 301
- B. Sovent Stack Fittings: ASME B16.45 or ASSE 1043, hubless, cast-iron aerator and deaerator drainage fittings

- C. Shielded Couplings: ASTM C1277 assembly of metal shield or housing, corrosion-resistant fasteners, and rubber sleeve with integral, center pipe stop

PART 3 - EXECUTION

3.1 EXCAVATION

- A. Refer to Section 02200 for excavating, trenching, and backfilling

3.2 PIPING APPLICATIONS

- A. Flanges and unions may be used on aboveground pressure piping, unless otherwise indicated
- B. Aboveground, soil and waste piping shall be the following as indicated on the Drawings
 - 1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints
- C. Aboveground, vent piping shall be the following as indicated on the Drawings
 - 1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints
- D. Underground, soil, waste, and vent piping shall be the following as indicated on the Drawings
 - 1. Service class, cast-iron soil piping; gaskets; and gasketed joints

3.3 PIPING INSTALLATION

- A. Sanitary sewer piping outside the building is specified in Section 02622
- B. Basic piping installation requirements are specified in Section 15060
- C. Install cast-iron soil piping according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings"
- D. Install engineered soil and waste drainage and vent piping systems as follows
 - 1. Solvent drainage system: Comply with ASSE 1043 and solvent fitting manufacturer's written installation instructions
 - 2. Reduced-size venting: Comply with standards of authorities having jurisdiction
- E. Sleeves are not required for cast iron soil piping passing through concrete slabs-on-grade if slab is without membrane waterproofing
- F. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction

3.4 JOINT CONSTRUCTION

- A. Basic piping joint construction requirements are specified in Section 15060
- B. Join hub-and-spigot, cast iron soil piping with gasket joints according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for compression joints
- C. Join hubless cast iron soil piping according to CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for hubless-coupling joints

3.5 HANGER AND SUPPORT INSTALLATION

- A. Pipe hangers and supports are specified in Section 15070. Install the following
 - 1. Vertical piping: MSS Type 8 or Type 42, clamps
 - 2. Install individual, straight, horizontal piping runs according to the following:
 - a. 100 feet and less: MSS Type 1, adjustable, steel clevis hangers
 - b. Longer than 100 feet: MSS Type 43, adjustable roller hangers
 - c. Longer than 100 feet, if indicated: MSS Type 49, spring cushion rolls
 - 3. Multiple, straight, horizontal piping runs 100 feet or longer: MSS Type 44, pipe rolls. Support pipe rolls on trapeze
 - 4. Base of vertical piping: MSS Type 52, spring hangers
- B. Support vertical piping and tubing at base and at each floor
- C. Rod diameter may be reduced one size for double-rod hangers, with $\frac{3}{8}$ -inch minimum rods
- D. Install hangers for cast-iron soil piping with the following maximum horizontal spacing and minimum rod diameters
 - 1. NPS 1½ and NPS 2: 60 inches with $\frac{3}{8}$ -inch rod
 - 2. NPS 3: 60 inches with $\frac{1}{2}$ -inch rod
 - 3. NPS 4 and NPS 5: 60 inches with $\frac{5}{8}$ -inch rod
 - 4. NPS 6: 60 inches with $\frac{3}{4}$ -inch rod
 - 5. NPS 8 to NPS 12: 60 inches with $\frac{7}{8}$ -inch rod
- E. Install supports for vertical cast-iron soil piping every 15 feet
- F. Install hangers for steel piping with the following maximum horizontal spacing and minimum rod diameters
 - 1. NPS 1¼: 84 inches with $\frac{3}{8}$ -inch rod
 - 2. NPS 1½: 108 inches with $\frac{3}{8}$ -inch rod
 - 3. NPS 2: 10 feet with $\frac{3}{8}$ -inch rod
 - 4. NPS 2½: 11 feet with $\frac{1}{2}$ -inch rod
 - 5. NPS 3: 12 feet with $\frac{1}{2}$ -inch rod
 - 6. NPS 4 and NPS 5: 12 feet with $\frac{5}{8}$ -inch rod
 - 7. NPS 6: 12 feet with $\frac{3}{4}$ -inch rod
 - 8. NPS 8 to NPS 12: 12 feet with $\frac{7}{8}$ -inch rod

- G. Support piping and tubing not listed above according to MSS SP-69 and manufacturer's written instructions

3.6 CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties

END OF SECTION