

SECTION 15015 - PVC PRESSURE PIPE

City of San Diego, CWP Guidelines

PART 1 -- GENERAL

1.1 WORK OF THIS SECTION

- A. The WORK of this Section includes providing solvent-welded, polyvinyl chloride (PVC) piping as indicated, including fittings and accessories as required for a complete and operable piping system, up to and including 4-inch diameter pipe.

1.2 RELATED SECTIONS

- A. The WORK of the following Sections applies to the WORK of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this WORK.
 - 1. Section 02200 Earthwork
 - 2. Section 09800 Protective Coating
 - 3. Section 15000 Piping Components
 - 4. Section 15020 Pipe Supports
 - 5. Section 15030 Piping Identification Systems

1.3 CODES

- A. The WORK of this Section shall comply with the current editions of the following codes as adopted by the City of San Diego Municipal Code:
 - 1. Uniform Plumbing Code

1.4 SPECIFICATIONS AND STANDARDS

- A. Except as otherwise indicated, the current editions of the following apply to the WORK of this Section:
 - 1. ASTM D 1599 Test Method for Short-Time Hydraulic Failure Pressure of Plastic Pipe, Tubing and Fittings.
 - 2. ASTM D 1785 Specification for Polyvinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120.
 - 3. ASTM D 2467 Specification for Socket-Type Polyvinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 80.

1.5 STANDARD SPECIFICATIONS

- A. Except as otherwise indicated in this Section of the Specifications, the CONTRACTOR shall comply with the Standard Specifications for Public Works Construction (SSPWC), as specified in Section 01090 - REFERENCE STANDARDS.

1.6 SHOP DRAWINGS AND SAMPLES

A. The following shall be submitted in compliance with Section 01300:

- [1. Shop drawings showing dimensions and details of pipe joints, fittings, fitting specials, valves and appurtenances.]
2. Detailed layout, spool or fabrication drawings showing pipe spools, spacers, adaptors, connectors, fittings and pipe supports not indicated in the Contract Documents.
3. Manufacturer's product data.

1.7 OWNER'S MANUAL

A. The following shall be submitted in compliance with Section 01300:

1. Manufacturer's installation instructions.
2. Manufacturer's certification of compliance with these specifications.

1.8 PROJECT RECORD DRAWINGS

A. For concealed field-routed piping, the following shall be included in the PROJECT RECORD DRAWINGS in compliance with Section 01300:

1. Complete layout drawings indicating the pipeline as installed; fully dimensioned including location, length and depth of all piperuns, offsets, bends, fittings and specials and appurtenances.

1.9 FACTORY TESTING

A. **Product Testing:** PVC pipe shall be tested at the factory for compliance with the minimum burst pressure requirements as specified in ASTM D 1785, using the test method specified in ASTM D 1599.

B. **Witnesses:** The OWNER and the CONSTRUCTION MANAGER (at the option of either or both) reserve the right to witness factory tests.

1.10 FIELD TESTING

A. Piping shall be pressure tested at the pressure indicated in the Piping Schedule for not less than one hour without exceeding the leakage tolerances in the Piping Schedule. Where pressures are not indicated the piping shall be subjected to 1½ times the maximum working pressure.

1. Leakage may be determined by loss of pressure, soap solution, chemical indicator, or other positive and accurate method. All fixtures, devices, or other accessories connected to the line which would be damaged by the test pressure shall be disconnected. Ends of branch lines disconnect points shall be plugged or capped as appropriate during the test procedure.

2. Leaks shall be repaired to the satisfaction of the CONSTRUCTION MANAGER and the piping shall be re-tested until no leaks are found.

1.11 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. **Delivery of Materials:** Piping materials shall be delivered in original, unbroken packages, containers, or bundles bearing the name of the manufacturer.
- B. **Storage:** Piping materials shall be carefully stored in a manner that will prevent damage and in an area that is protected from sunlight and other harmful elements.

PART 2 -- PRODUCTS

2.1 GENERAL

- A. **General:** Pipe and fittings for welded joints shall comply with the requirements of Subsections 212-2.1.3 of SSPWC, and as indicated herein.

2.2 PIPE

- A. Polyvinyl chloride (PVC) pipe shall conform to ASTM D 1785 - Schedule 80, suitable for solvent weld joints.

2.3 FITTINGS

- A. Fittings shall be socket fittings conforming to ASTM D 2467 - Schedule 80.

2.4 PIPE SUPPORTS

- A. Pipe supports shall conform to the requirements of Section 15020 and shall also be in compliance with manufacturer's recommendations.

PART 3 -- EXECUTION

3.1 INSTALLATION OF PIPING

- A. **General:** PVC pipe shall be installed in accordance with Subsection 308-5.2.3 of SSPWC and the manufacturer's instructions, using solvent weld joints.
- B. For exposed piping, pipe supports shall be provided in compliance with Section 15020 and as recommended by the manufacturer of the pipe.
- C. For buried piping, trenching configuration pipe zone material, backfill and compaction shall be performed in accordance with the manufacturer's instructions, and in compliance with Section 02200.

3.2 PROTECTIVE COATING

- A. Unless otherwise indicated, PVC piping exposed to sunlight shall be painted with a coating system as specified in Section 09800.

3.3 PIPE IDENTIFICATION

- A. Piping identification shall be in compliance with Section 15030.

** END OF SECTION **