

**BUILDING DIVISION DIRECTIVE  
P-001**

**Corrugated Stainless Steel Tubing  
for Residential Construction**

**Replaces Policy No. CPC 1210.11  
Reference: CPC 1209.5.3.4  
Date: November 17, 2008**

This directive supplements Section 1209.5.3.4 of the 2007 California Plumbing Code (CPC). Due to the unique installation requirements of Corrugated Stainless Steel Tubing (CSST) and the potential for damage during and after installation, plan review and plumbing permits shall be required as follows:

- a. For *multiple gas outlets*, CSST shall not be installed unless a plan review is conducted and a permit is issued by the Building Division. A copy of the approved plumbing plans shall be kept at the job site for the inspector's reference.
- b. For *single independent gas branch line from the meter to a single gas outlet*, permits shall be issued by the Building Division without conducting a plan review. However, **plan review shall be conducted at the job site during inspection**. A copy of the plumbing plans shall be kept at the job site for the inspector's review and reference.

Single-family and multi-family residential projects shall not be allowed to utilize a system with pressures exceeding 14 inches water column.

**Compatibility:**

Each CSST piping system is required to utilize only one manufacturer's product. Due to the unique design of fittings, and specific sizing criteria by each maker, intermixing of CSST systems is not acceptable. CSST may be used with other approved gas piping materials in a manner specified by the CSST manufacturer's installation instructions.

**Sizing:**

As part of the pre-approval process for *multiple gas outlets* CSST, an accurate drawing of the entire gas system (new and existing) with the manufacturer's sizing criteria shall be submitted to and approved by the Building Division prior to installation. The pressure provided by PG&E is assumed to be 7 inches of water column pressure. Additional pressures of up to 14 inches of water column may be considered if PG&E agrees to supply gas at those pressures. The drawing shall accurately show the following:

- a. Total system developed length and each branch length.
- b. Demand at each point of use in BTU or CFH (input).
- c. The sizing calculations for each section of the system.
- d. The sizing method used with the Flexible Gas Piping Design Guide and Installation Instructions from the manufacturer.

**NOTE: Field deviations from the approved design shall require a re-submittal of the plumbing plans and new sizing calculations prior to installation and inspection. Appropriate plan review fees will be applicable based on the current fee schedule.**

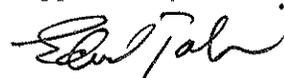
## Installation:

- a. The installation of CSST shall be performed only by persons who have been trained and certified by the manufacturer of the product. A current certification card must be presented at the time of permit issuance and each field inspection. The certified installer shall be present at each gas piping inspection where CSST is installed.
- b. All gas piping on the house side of the system which utilizes CSST shall be permanently identified by a metal tag that identifies the CSST manufacturer, attached to the gas meter outlet.
- c. **The manufacturer's installation instructions and flexible gas piping design guide shall be on-site for each inspection.**
- d. The use of CSST shall be limited to the interior of buildings, at least 6 inches above grade.
- e. When required by the manufacturer or to avoid nails, screws, and other puncture threats, a protection device shall be installed at locations where:
  - CSST tubing passes through studs, joists, and other building materials;
  - CSST tubing is restricted from moving;
  - CSST tubing is within 2 inches of the edge of a stud or joist (Shielding is required at the area of support and within 5" of each side); and
  - When the manufacturer's installation instructions require such protection requirements.
- f. CSST installed in a basement, under floor crawl space or attics shall be attached with two attachment point pipe clips, metal EMT pipe straps, or per the manufactures installation instructions.
- g. CSST shall be reviewed on a case by case basis in locations where the tubing movement may be restricted or may be potentially damaged due to greater exposure from nailing and/or stapling than intended by the manufacturer.
- h. All manufacturer's requirements or recommendations for protection and installation of CSST shall be followed.

## Testing and Inspections:

1. All portions of the CSST system shall be installed and all required protection components for CSST shall be completed prior to the rough-in inspection. Any portion of the system shall not be concealed without approval of the Building Division. At the time of the rough-in inspection, the installer shall be present and shall provide proof that all connecting fittings are properly assembled to the manufacture's joining, splicing, and torque specifications.
2. All other non-CSST portions of the gas system shall be inspected as required by the CPC.
3. The final gas inspection shall include a visual inspection of all exposed portions of the gas piping system and a complete system pressure test as specified in the CPC (10 PSI for 15 minutes with a 0-15 PSI gauge showing 1/10LB increments).
4. Inspections involving more than one gas outlet will be performed by the Building Division Specialty Plumbing/ Mechanical Inspectors.
5. Please refer to the installation instructions for bonding requirements.

Approved by:



Edward Tolentino  
Chief Building Official