



INSPECTION CHECKLIST
Residential Fuel Gas Piping
April 2011

2009 Codes

This checklist is intended for use to prepare for an inspection. This is only a general list and does not represent the full body of the 2009 International Residential Code (R = Residential, M = Mechanical, G = Gas) or the 2009 International Fuel Gas Code as referenced and modified by the 2009 IRC. IRC references are in parentheses () and IFGC references are in brackets [].

Please verify the following before calling for a gas pipe inspection.

Permits and Plans

- Job address is posted in a visible location. (R319)
- Permit and approved plans are on the site and accessible to the inspector. (R106.3.1 and R105.7).
- Permit information is correct (address, permit number, scope of work, etc). (R106.1)
- Manufacturer's installation information is available if needed. (R106.2)
- Confirm that all new gas appliances are included on the permit. (R106.1)

General

- Permit information is correct (address, permit number, scope of work, etc.). (R106.1)
- Main shutoff is accessible and ahead of the meter. (G2420.2),
- Pipe is supported per Table G2421.1. (G2418.1&2, G2421.1),
- Gas piping is sized per methods in Section G2413.4
- Pipe must be new or previously used for gas piping only. (G2414.2),
- Bends in plastic are per manufacturer's instructions. (G2416.3),
- Radius of bends in PE pipe are not less than 25 pipe diameters. (G2416.3),
- Gas pipe does not run through air ducts, chimneys, vents, plenums, clothes chutes, dumbwaiters, elevator shafts or through adjoining townhouse party walls. (G2415.1),
- Under floor or outdoor piping is a minimum 3 ½ inches above ground or roof. (G2415.7),
- CSST (Corrugated Stainless Steel Tubing) piping requires electrical bonding per IFGC 310.1.1 and shielding devices per manufacturer which extend 4 inches beyond the CSST. (G2414.5.3)
- Piping other than steel pipe requires nail plate protection if less than 1 and ½ inches from stud face. (G2415.5)
- Ferrous metal piping exposed in external locations is protected from corrosion in a manner satisfactory to the code official. (G2415.8)

Materials and Installation

- Steel (galvanized) or black pipe is okay. (G2414.4.2)
- Ends of pipe are deburred. (G2414.7)
- Cast-iron pipe not used for gas. (G2414.4.1)
- Corrugated stainless steel tubing (CSST) is okay when installed per manufacturer's instructions. (G2414.5.3)

- Except for black steel pipe, exposed piping is identified by a yellow label marked "Gas" in black letters. (G2412.5)
- LP gas must have piping/tubing dielectric fittings separating aboveground/underground connections. (G2414.8)

Joins in Pipe or Tubing

- Ferrous pipe is threaded or welded. (G2414.10.1)
- Connections for copper tubing can be done by brazing (alloys with less than 0.05% phosphorous) or by approved gas tubing fittings complying with ANSI LC-4. (G2414.10.2)
- Flared joints okay in nonferrous pipe & tubing only. (G2414.10.3)
- PE or PB plastic piping are heat fused or mechanically connected per the manufacturer's instructions. Heat fused fittings are marked "ASTM D2513". (G2414.11)
- No unions or bushings at concealed locations. (G2415.3)
- Right/left couplings are okay only in accessible locations. (G2415.3)

Inspections & Tests

- Test gauge has a high reading not more than 5 times the test pressure. (G2417.4),
- LP Gas tested at least 1 ½ times operating pressure but not less than 3 psi for 10 minutes minimum.
(G2417.4.1)
- Test with air, nitrogen, carbon dioxide or an inert gas. (oxygen not allowed) (G2417.2)
- Turn off or cap all outlets before first turning on gas. (G2417.6.2)
- Detect leaks with an approved type detector or soap suds. (G2417.5.1)
- Defective piping shall be replaced and not repaired. (G2414.7)
- Testing is required only for new pipe added to an existing system. (G2417.1.3)
- Equipment that is not to be included in the test is to be disconnected or isolated by blanks, blind flanges or caps. (G2417.3.2)

Underground

- Ferrous pipe must be protected from corrosion. (G2415.9)
- Pipe protective wrapping must be factory (machine) applied. (G2415.9.2)
Exception: Field wrapping okay at joints. (G2415.9.2, Exception)
- Above grade metallic gas piping requires bonding. (G2411.1)
- Gas piping not used as a grounding electrode. Ferrous underground pipe connected to ferrous above ground requires a dielectric fitting. (G2410.1)
- Minimum burial depth is 12 inches. (G2415.10)
- Individual gas lines to lights, BBQ's, etc. may have 8 inches of cover if not susceptible to damage and approved by authority having jurisdiction (AHJ). (G2415.10.1)
- 18 AWG yellow insulated copper tracer wire run with PE or PB piping. (G2415.15.3)
- PE or PB require ferrous riser before going vertical. (G2415.15.1)
Exception: May terminate outside above ground in accordance with manufacturer's instructions or above ground in a sleeved wall head adapter. (G2415.15.1, Exceptions)

Gas Piping Under Building Slab

- Gas piping is not to be buried under or in a slab within the building.
Exception: It is allowed below grade under a building if sleeved in schedule 40 steel, iron, or plastic pipe conduit extending at least 4 inches to outside of building.
- The interior end of the conduit enclosing the gas pipe is sealed. (G2415.12)
- The exterior end of the conduit is a minimum 4 inches outside of the building, vented above grade and installed so as to prevent the entrance of water and insects. (G2415.12)
- Conduit is protected from corrosion if not plastic. (G2415.12)

- Gas piping shall not penetrate foundation walls at any point below grade. (G2415.4)

Shutoff Valves

- All shutoff valves are accessible. (G2420.1.3)
- Outdoor shutoff is required for all buildings. (G2420.3)
- All meters have a shutoff on the supply side. (G2420.2)
- Accessible shutoff required within 6 feet of an appliance and in the same room. (G2420.5)
- Shutoff valves installed inside firebox of fireplace are installed per manufacturer's instructions. (G2420.5.1)

Appliance Fuel Connectors

- Connector is not concealed within or passes through walls, floors, partitions, ceilings or appliance housings. (G2422.1.2.3)
- Maximum length is 3 feet except for range or domestic clothes dryers, which may be 6 feet. (G2422.1.2)
- Connectors are sized for the total demand of the appliance. (G2422.1.2.2) [411.1.2]
- Connectors for external use are listed, labeled and installed in accordance with the manufacturer's installation instructions. (2422.1)
- Pipe dope not allowed at flex connector flared connections. (per ANSI/manufacturer's regulations).