

Residential **DECORATIVE GAS LOG APPLIANCES** Checklist and Guide for a Building Permit

(2015 IRC requirements as amended by St. Louis County Ordinances for 1-& 2-Family Dwellings and Townhouses)



SAINT LOUIS COUNTY
Transportation and Public Works

This **Decorative Gas Log Appliance Checklist** is based on St. Louis County's (SLCO) policies, construction codes amended and adopted by ordinances. See list below. It is not a substitute for those codes and ordinances, but serves as a guide to reading them. More information and explanation is provided in commentaries and interpretations published by St. Louis County and acknowledged code organizations.



List of Applicable Codes and Ordinances:

2015 International Residential Code (IRC) & Ordinance #27,654-Ch.1116 ("R" "G", "N", and "M" references and Appendix K - Sound Transmission).

2015 International Building Code (IBC) & Ordinance #27,654-Ch.1116\5 ("B" references).

2015 International Mechanical Code (IMC) & Ordinance #27,619-Ch.1108 ("IMC" refs).

For inquiries regarding the information provided in this guide, please contact:

St. Louis County Permit Processing _____ (314) 615-5184

St. Louis County Zoning Review _____ (314) 615-3763

St. Louis County Building Plan Review _____ (314) 615-5485

Right-of-Way Owner

State _____ (888) 275-6636

County _____ (314) 615-8517

Municipality _____ Call the project site's Municipality

St. Louis County's Municipal Contracts Matrix shows those municipalities that currently contract for its Code Enforcement services. The Matrix is on our web site at

<https://stlouiscountymo.gov/st-louis-county-departments/transportation-and-public-works/residential-building/>

For the electronic plan review, scan QR code or visit us online at

<https://stlouiscountymo.gov/st-louis-county-departments/transportation-and-public-works/electronic-plan-review/>

Sections from the Codes, their Referenced Standards, and St. Louis County Ordinances, are shown at ends of statements and are *italicized* in parentheses (.).



Notices Regarding Permits



- The applicant (property owner or the Contractor) is responsible for contacting those other agencies separate from St. Louis County, that may be affected by, or have legal oversight of, the new work along with but separate from St. Louis County. Contact these agencies before beginning work approved under a permit issued by St. Louis County. Such agencies may include:
 1. The project site's Municipality;
 2. The Property's Local Fire Protection District;
 3. Subdivision Trustees.
- This guideline for the homeowner and installer/contractor provides basic mechanical code requirements for a permit to install a decorative gas-fired log appliance in an existing all-masonry or new or existing prefabricated fireplace.
- The new work proposed under a mechanical permit cannot include construction. Where construction is proposed, apply for a building permit and submit an **electronic** set of drawings of the construction with appliance installation.
- The installer/contractor must be a registered, financially responsible (bonded and insured) or licensed contractor authorized to do mechanical work.
Notice: Homeowners performing their own work may obtain a permit to do mechanical work within their own dwelling with no requirement to be registered or licensed.
- **The Plan Reviewer** may determine the proposed work, conditions, or construction require additional drawings and information be submitted to Code Enforcement-Plan Review.

Submittal Requirements



Submit the following for a mechanical permit to install only a decorative gas log appliance and its piping:

- A completed, signed and dated **electronic mechanical permit application**.
- A mechanical permit may be issued the same day the application is submitted over-the-counter and while you wait. Eligible applications are those for decorative gas log appliances, listed and labeled by an approved testing agency, to be installed in existing all-masonry fireplaces.
- For gas log appliance installations in other conditions or that include new work construction, select from the St. Louis County Residential Permits website the checklist for "Residential Factory-Built Fireplaces, Chimneys & Fireplace Stoves".

Design Requirements



- Verify the appliance is approved for installation in the location and condition proposed:
 1. Installation in a solid fuel-burning fireplace (burns real wood) requires the appliance be listed and labeled for that location by a testing approved agency, like Underwriter's Laboratories/UL

(G2406.1; G2406.2-Item 2; G2407.5; G2408.1; G2432.1; G2432.3).

2. Installation in a prefabricated fireplace requires the fireplace, the decorative gas log appliance, and the piping to the gas log appliance be listed for such an installation, and noted as allowed by the fireplace manufacturer (G2406.1; G2408.1; G2432.1; G2432.3).
- Gas piping materials shall comply with the standards noted in the following table, and with 2015-IRC Chapter 24 (G2413.4; G2414; G2415.1; Tables G2413.4(1)-(21)):

FUEL GAS PIPE

MATERIAL	STANDARD
Semi-Rigid Copper Tubing, Type K or L (G2414.5.2)	ASTM B 88 or ASTM B 280
Corrugated Stainless Steel Tubing-CSST (G2414.3; G2415.2)	ANSI LC1/CSA 6.26-13
Polyethylene plastic pipe and tubing ^{1, 2} (G2414.6)	ASTM D 2513
Steel & wrought-iron pipe-Schedule 40(G2414.4.2)	ASTM A 53/A 53M; ASTM A 106; ASME B 36.10, 10M
Steel tubing (G2414.5.1)	ASTM A 254

1 – Piping shall be marked 'Gas' and 'ASTM D 2513'.

2 – Provide Tracer wire at underground locations (G2415.17.3).

- Size gas piping to adequately serve the new gas log appliance (G2412.8; G2413.3).
Notice: Piping systems must provide a gas supply sufficient to meet the maximum demand of, and not less than the minimum supply pressure required by, the appliance (G2413.1; G2413.2).
- Provide a Flame Safeguard Device with the direct ignition device, pilot flame, or fuel igniter at the main burner of the decorative gas log appliance provided within a solid-fuel burning fireplace. The flame safeguard device shall automatically shut off the fuel supply to a main burner or group of burners when their means of ignition becomes inoperative (G2432.2).
- Provide a shutoff valve to the piping system serving the gas log appliance as follows (G2420):
 - a) In the same room as and within 6'-0" of the appliance and upstream of the union, connector, or quick disconnect device it serves. Provide access to a concealed shutoff valve through an operable panel or door. A shutoff valve may be within the fireplace firebox only where noted as allowed in the gas log appliance manufacturer's installation manual (G2420.5.1).
 - b) Located in an area remote from the appliance for a vented decorative appliance or room heater. The shutoff valve must be permanently identified, be readily accessible, and serve only that appliance. No panel, door, or other means shall cover the shut off valve. Gas piping from the manifold to within 6'-0" of the appliance must be sized and provided in accordance with the 2015-IRC Sections G2412 –through G2419 (G2420.5.2).
 - c) Located at a manifold and within 50'-0" of the appliance served, is readily accessible, and is permanently identified. Gas piping from the manifold to within 6'-0" of the appliance must be sized and provided in accordance with the 2015-IRC Sections G2412 –through G2419. This is allowed for vented and unvented decorative gas log appliances (G2420.5.3).

Installation Requirements



- The manufacturer's installation instructions for decorative gas log appliance installation in a solid-fuel-burning fireplace must remain on-site and be readily available to the inspector during installation

and inspection (G2408.1).

- The manufacturer's installation manual for an existing or new work prefabricated fireplace must also be maintained on-site and readily available to the inspector during the installation and inspection of the decorative gas log appliance into it (G2408.1).
- Gas piping system serving the gas log appliance shall extend from the gas fuel point of delivery to its connection to the gas log appliance (G2412.1).
- Gas piping in solid floors shall be laid in channels or placed in conduit of Schedule 40 steel, wrought-iron, PVC, or ABS pipe. Protect piping from corrosive substances or excessive moisture. Provide floor cover that allows access to piping with minimum damage to materials (G2415.8).
- Gas piping into a factory-built (prefabricated) firebox is only allowed where the prefabricated fireplace is listed for the installation of the decorative gas log appliance and its piping leading. Gas piping run through an existing knockout shall be of an approved piping material listed in the "Fuel Gas Pipe" table (G2415.7).
- Gas piping into an all-masonry firebox shall comply the 2015-IRC Chapter 24. Gas piping through an outside wall shall be protected from corrosion by an approved, factory-applied coating, or wrapping with an inert material. The annular space between the piping and a protective sleeve shall be sealed (G2415.11.2; G2415.14.1).
- Gas piping serving a gas log appliance installation in an existing all-masonry fireplace may run through the ash dump of an existing all-masonry fireplace (G415.3; *SLCO Policy*).
- Gas piping shall not penetrate a building foundation anywhere below grade. Gas piping shall enter and exit a building above grade. The annular space shall be sealed between the pipe and the foundation. Gas piping outside of the building shall be elevated at least 3-1/2" above ground, securely supported, and protected from physical damage (G2415.6; G2415.9; G2418).
- Underground gas piping system shall be minimum 12" below finished grade (G2415.12).

Notice: The preceding requirements apply to most simple projects for a **Decorative Gas Log Appliance** installation in a residential fireplace. However, the Plan Reviewer may determine the actual new work proposed requires additional information be submitted to verify its compliance with codes. The above requirements are based on the construction codes in effect at the time this checklist was last updated. Please be aware St. Louis County Code Enforcement updates its construction codes every few years.