

Residential **GAS GRILL & LIGHTS** Checklist & Guide Permanently Installed Outdoors

(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 **Gas Grills & Lights 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 provides basic mechanical code requirements for a mechanical permit to permanently install outdoors a gas grill and/or gas lights and their associated piping.
- 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 associated 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 Permits Processing Staff and/or the Building Plan Reviewer may determine the proposed work, conditions, or construction require additional drawings and information be submitted for review.

Submittal Requirements



Submit the following for a mechanical permit to permanently install only a gas grill or lights outdoors:

- A completed **electronic**, signed and dated **mechanical permit application**.
- Permit issuance the same day the application is submitted is possible with a while-you-wait, over-the-counter review. An eligible application identifies a gas grill or lights that is/are listed and labeled by an approved testing agency for permanent installation outdoors. Example agencies are Underwriters Laboratories/UL or the American Gas Association/AGA (*G2433.1*).
- Gas grill and/or lights installations that include new work construction require the application be changed to a building permit and submitted for building plan review, and may not qualify for a while-you-wait review. Other checklists may be provided then, depending on the construction proposed.

Design Requirements



- The gas appliance must be listed and labeled approved by an accepted 3rd party testing agency for permanent outdoor installation in the setting proposed (*G2412.10; G2447.1; G2450.1*).

- Cooking appliances designed for permanent installation shall be tested in accordance with ANSI Z21.1 OR ANSI Z21.58, and must be approved for domestic/household use (G2447.1; G2447.2).
- Gas piping materials shall comply with the standards noted in the following table, and with 2015-IRC Chapter 24 (G2412.10; 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).
- **Plastic gas piping** is allowed installed underground outdoors only and shall not be within or under any building or slab (G2415.17.1).
- **Provide adjacent to underground nonmetallic gas piping** a yellow insulated copper tracer wire or other approved conductor that can be accessed, or terminates above ground at each end of the nonmetallic gas piping. The tracer wire size must be at least 18 AWG, and its insulation type shall be suitable for direct burial (G2415.17.3).
- **Provide a shutoff valve** to the gas piping system serving the **grill or lights** as follows (G2420.5):
 - a) Within 6'-0" of the appliance and upstream of the union, connector, or quick disconnect device it serves, and readily accessible (G2420.5.1).
 - 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 – G2419 (G2420.5.3).
- **Provide an appliance pressure regulator** in the gas line to the illuminating appliance, where (G2450.4):
 1. No regulator has been supplied with the illuminating appliance and;
 2. The service line is not equipped with a service pressure regulator.
 3. One regulator of adequate capacity may serve more than one illuminating appliance installed.

Installation Requirements



- The manufacturer's installation instructions for the outdoor permanent installation of the gas grill or lights must remain on-site and be readily available to the Inspector during installation and inspection (G2408.1; G2447.1; G2449.1).

- Gas piping system serving the grill or lights shall extend from the gas fuel point of delivery to its connection to the gas log appliance (G2412.1).
- Gas piping shall enter and exit a building above grade. The annular space between the pipe and the foundation shall be sealed. Elevate gas piping outside of the building at least 3-1/2" above ground, securely supported, and protected from physical damage (G2415.6; G2415.9; G2418).
Notice: Gas piping passing through building foundations below grade is prohibited.
- **Gas illuminating appliances** shall be tested in accordance with ANSI Z21.42 (G2450.1).
- Illuminating appliances mounted on building walls or ceilings shall be securely attached to substantial structures so the gas piping shall not be made load-bearing (G2450.2).
- Illuminating appliances mounted on posts shall be securely and rigidly attached to it. The supporting post(s) must also be rigidly mounted. Posts taller than 3'-0" must have strength and rigidity equal to a 1" Schedule 40 pipe. Posts 3'-0" high maximum shall not be smaller than 3/4" Schedule 40 steel pipe. Provide a drain opening at post the base to release any captured moisture (G2450.3).
- Bury gas piping systems at least 12" below grade (G2415.12).
Notice: An Individual gas line an outside gas appliances is allowed to be at least 8" below finished grade, where the pipe's location does not make it susceptible to physical damage. The trench bottom must provide the pipe with firm continuous bearing (G2415.12.1; G2415.13).
- Gas metal piping or tubing shall have **approved corrosion protection** where exposed to corrosive action, as in soil conditions or by moisture. Protection shall be only factory-applied coatings and/or wrappings. Zinc coatings (galvanizing) shall not be accepted as protection adequate for gas piping below ground (G2415.11).
Notice: Field applications are allowed where the factory coating has been damaged or necessarily removed at joints. Applications shall comply with the manufacturer's instructions (G2415.11.2).
- Dissimilar metals joined underground shall have an insulated coupling or fitting (G2415.11).
- Piping shall not be laid in contact with cinders (G2415.11).

Notice: The preceding requirements apply to most simple projects for the permanent installation of **Gas Grills and Lights Outdoors**. 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.