



STATE OF WASHINGTON  
**STATE BUILDING CODE COUNCIL**

May 2018  
Log No. \_\_\_\_\_

**1. State Building Code to be Amended:**

- International Building Code
- ICC ANSI A117.1 Accessibility Code
- International Existing Building Code
- International Residential Code
- International Fire Code
- Uniform Plumbing Code

- International Mechanical Code
- International Fuel Gas Code
- NFPA 54 National Fuel Gas Code
- NFPA 58 Liquefied Petroleum Gas Code
- Wildland Urban Interface Code

For the Washington State Energy Code, please see specialized [energy code forms](#)

**Section(s):**

**2024 International Fuel Gas Code (IFGC) 404.21**

**Title:**

**Seismic Valves**

**2. Proponent Name (Specific local government, organization or individual):**

**Proponent: Earthquake Valve Company**

**Title: Project Manager**

**Date: 08-27-2024**

**3. Designated Contact Person:**

**Name: David Magee**

**Title: N/A**

**Address: 14012 63<sup>rd</sup> Ave Ct E Puyallup WA 98373**

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**E-Mail address: David@EQvalve.com**

**4. Proposed Code Amendment.** Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code, additional pages may be attached.

Clearly state if the proposal modifies an existing amendment or if a new amendment is needed. If the proposal modifies an **existing amendment**, show the modifications to the existing amendment by underlining all added language and striking through all deleted language. If a new amendment is needed, show the modifications to the **model code** by underlining all added language and striking through all deleted language.

Code(s) IFGC Section(s) 404.21

**\*\*A new amendment is needed.\*\***

Enforceable code language must be used.

404.21 Seismic Valves. An approved seismic gas valve shall be installed downstream of the gas utility meter on each fuel gas line where the gas line serves the following building classifications: Groups E, H, I, M, R-1, R-2, R-3, R-4, located in Seismic Design Category D2, Seismic Design Category D1, per the Seismic Design Category Maps for Residential Construction in Washington identified by the Washington State Department of Natural Resources. Registered owners shall install a Seismic Shutoff Valve when alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms or gas appliances are added.

404.21.1

Scope. An approved seismic gas shutoff valve or excess flow shutoff valve shall be installed downstream of the gas utility meter on each fuel gas line where the gas line serves the following buildings or structures. Valves must be installed prior to entering the building and after any metering device.

404.21.1.1

Seismic Valves shall be installed to an existing building or structure when any fuel gas system alterations are made.

404.21.1.2

Seismic Valves shall be installed in accordance with ANSI 25-2016 and the manufacturer's installation instructions. Seismic Valves shall be plainly marked and labeled and the location of each such valve posted as required by the Authority Having Jurisdiction.

**5. Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.**

The proposed code change aims to enhance fire safety and disaster preparedness in the State of Washington by mandating the installation of seismic shutoff valves in both new and existing buildings. This requirement is intended to mitigate the risk of gas leaks and subsequent fires in the event of an earthquake, protecting lives and property. By automatically shutting off the gas supply during seismic activity, these valves will help prevent gas-related incidents and contribute to overall public safety. This measure is especially critical given Washington's seismic activity and the potential for significant

earthquakes. Implementing this code change will align with the state’s commitment to disaster resilience and public safety, ensuring that building occupants, including those in government facilities, commercial buildings and care institutions, are better protected.

**6. Specify what criteria this proposal meets.** You may select more than one.

- X. The amendment is needed to address a critical life/safety need.
- The amendment clarifies the intent or application of the code.
- The amendment is needed to address a specific state policy or statute.
- The amendment is needed for consistency with state or federal regulations.
- X. The amendment is needed to address a unique character of the state.
- The amendment corrects errors and omissions.

**7. Is there an economic impact:**  X. Yes  No

If no, state reason:

If yes, provide economic impact, costs and benefits as noted below in items a – f.

- a. **Life Cycle Cost.** Use the OFM Life Cycle Cost [Analysis tool](#) to estimate the life cycle cost of the proposal using one or more typical examples. Reference these [Instructions](#); use these [Inputs](#). Webinars on the tool can be found [Here](#) and [Here](#)). If the tool is used, submit a copy of the excel file with your proposal submission. If preferred, you may submit an alternate life cycle cost analysis.
- b. **Construction Cost.** Provide your best estimate of the construction cost (or cost savings) of your code change proposal.
  - 1. Dutch Bros Coffee stand project was completed in 2023 each location cost on average \$1200.00 per location based off commonly used pipe sizing.
  - 2. Fieldstone Memory Care was completed in 2023. This location cost \$2134 due to the larger valve and additional piping and bracing work.Show calculations here, and list sources for costs/savings, or attach backup data pages
- c. **Code Enforcement.**

30 minutes of Inspection if mechanical permit is required from governing agency.
- d. **Small Business Impact.** Small Businesses would have 2 hours of down time, and on average would cost the business owner \$1200. However, these Valves if arranged with the installer could be done at any time an employee is there.
- e. **Housing Affordability.** The cost to a single family is \$375 but should not cost more than this. It is rare but in the case of significant re piping needs to be conducted there may be additional cost of not more than \$100.
- f. **Other.** There is no annual savings/cost regarding energy consumption. However, In the event of a seismic event, Seismic Shutoff Valves would significantly reduce the amount of unintentional release of

Natural Gas into the air. As well as decrease the likelihood of fires burning hazardous material contained in buildings and industrial facilities.

Please send your completed proposal to: [sbcc@des.wa.gov](mailto:sbcc@des.wa.gov)

**All questions must be answered to be considered complete. Incomplete proposals will not be accepted.**