

STATE OF WASHINGTON

**STATE BUILDING CODE COUNCIL**

**15-040**

# State Building Code to be Amended:

X International Building Code

D ICC ANSI A ll7.1 Accessibility Code

D International Existing Building Code International Residential Code

D International Fire Code

D Uniform Plumbing Code

D State Energy Code

D International Mechanical Code

D International Fuel Gas Code

D NFPA 54 National Fuel Gas Code

D NFPA 58 Liquefied Petroleum Gas Code

D Wildland Urban Interface Code

Section(s): R313, R313.1, R313.1.1, R313.2

(e.g.: Section: R403.2)

# Title: Automatic Fire Sprinkler Systems

(e.g: Footings for wood foundations)

# Proponent Name (Specific local government, organization or individual): Proponent: Washington State Association of Fire Marshals

Title:

Date: 2/26/2015

# 3. Designated Contact Person: Name: Jon Napier

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1. **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. Ifmore 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. (Examples on the SBCC website)

**Code(s)** International Residential Code **Section(s) R313, R313.1, R313.1.1, R313.2**

Enforceable code language must be used ; see an example by clicking here. Amend section to read as follows:

**R313 ,\atamatie Fire Sprinkler System.** This section is not adopted.

**R313.1 Townhouse automatic fire sprinkler systems.** An automatic residential fire sprinkler system shall be installed in *townhouses.*

**Exception:** An automatic residential fire sprinkler system shall not be reguired when *additions* or *alterations* are made to existing *townhouses* that do not have an automatic residential fire sprinkler system installed.

**R313.1.1 Design and installation.**

Automatic residential fire sprinkler systems for *townhouses* shall be designed and installed in accordance with Section P2904 or NFPA 13D.

**R313.2 One- and two-family dwellings automatic fire systems.** This section is not adopted.

1. **Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.** Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

This proposal will align Washington 's residential code with the IRC by retaining the requirement for newly constructed townhouses to be equipped with residential fire sprinklers. This requirement, first published in the 2009 IRC, was retained in the 2012 and again in the 2015 edition, and it has been adopted in 10 state codes (California, Maine, Maryland , Massachusetts , Minnesota, New Hampshire, Oklahoma, Pennsylvania , West Virginia and Wisconsin, plus the District of Columbia and numerous other jurisdictions). We have found no indication of negative impacts on home affordability or other issues that are sometimes mentioned as obstacles in these states.

Unlike detached homes, where an owner has direct control over personal safety, townhouses are multifamily structures that include many unrelated individuals and families living under a single roof. In a townhouse, the fire safety of every family is reliant on the behaviors of others, i.e. your neighbor's carelessness directly impacts the fire safety of you, your family and your property. There have been many incidents where a fire in one townhouse unit had catastrophic consequences on neighbors who had nothing to do with the cause of the fire. Residential fire sprinklers prevent such tragedies by keeping fires contained to the unit of origin, either controlling the fire or extinguishing it altogether.

Townhouses also place significantly increased demand on fire service resources as compared to detached dwellings . Townhouses increase the complexity of rescue operations, and firefighting is hampered because fire spread into adjacent units cannot be easily followed by firefighters from unit to unit. There are no access openings in party walls allowing firefighters to pass back and forth between opposite sides when fighting a fire.

The building code already requires all multifamily dwellings, including townhouses built under that code, to be sprinklered. It is the intent of the IRC and this proposal to provide equal protection to residents of all townhouses, regardless of which code they are built under. Furthermore, research conducted by the National Institute of Standards and Technology and Underwriters Laboratories on changes in residential fire behavior and the value of residential fire sprinklers to firefighter and occupant safety provides a technical basis for this recommendation.

Finally, it is important to note that the original proponent of the IRC requirement for townhouses to have fire sprinklers was NOT a fire service or public safety interest group. The proposal was submitted by a major national multifamily builder, Avalon Bay Communities. This builder recognized that the cost of providing fire sprinklers in townhouses could be recaptured through the reduced cost of fire separations between units and other incentives offered by the code, and with no significant cost impact (or perhaps even a cost savings), model code writers agreed that it simply made sense for all townhouses to have the protection of a residential fire sprinkler system.

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

[gJ The amendment is needed to address a critical life/safety need.

DThe amendment is needed to address a specific state policy or statute.

D The amendment is needed for consistency with state or federal regulations.

D The amendment is needed to address a unique character of the state.

D The amendment corrects errors and omissions.

1. **Is there an economic impact:** [gJ Yes D No

Explain: This code proposal will increase the overall costs of construction with the installation of the automatic fire sprinkler system. However, there are significant savings in construction trade-offs which are allowed because the automatic fire sprinkler system is installed, i.e. wall ratings and wall penetrations.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

NA

|  |  |  |  |
| --- | --- | --- | --- |
| Building Type | Construction' | Enforcemeni- | Operations & Maintenance' |
| Costs | Benefits4 | Costs | Benefits4 | Costs | Benefits" |
| Residential |  |  |  |  |  |  |
| Single family | $1.35\* | \*\* | $265\*\*\* | \*\* | NA | \*\* |
| Multi-family | NA | NA | NA | NA | NA | NA |
| Commercial/Retail | NA | NA | NA | NA | NA | NA |
| Industrial | NA | NA | NA | NA | NA | NA |
| Institutional | NA | NA | NA | NA | NA |  |

Please send your completed proposal to: sbcc@ ga.wa.gov

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

1 **$ / square foot of floor area or other cost. Attach data. Construction costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.**

2 **Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.**

3 **Cost to building owner/tenants over the life of the project.**

4 **Measurable benefit.**

\* See attachment titled, " Home Fire Sprinkler Cost Assessment - 2013, Newport Partners, September 2013"

\*\* See attachment titled, "Home Structure Fire Loss in the U.S. and Fire Sprinkler Impact"

\*\*\* See attachment titled, "Survey of 10 local jurisdiction's permit fees"