



STATE OF WASHINGTON
STATE BUILDING CODE COUNCIL

May 2018
Log No. _____

1. State Building Code to be Amended:

- | | |
|---|---|
| <input checked="" type="checkbox"/> International Building Code | <input type="checkbox"/> International Mechanical Code |
| <input type="checkbox"/> ICC ANSI A117.1 Accessibility Code | <input type="checkbox"/> International Fuel Gas Code |
| <input type="checkbox"/> International Existing Building Code | <input type="checkbox"/> NFPA 54 National Fuel Gas Code |
| <input type="checkbox"/> International Residential Code | <input type="checkbox"/> NFPA 58 Liquefied Petroleum Gas Code |
| <input checked="" type="checkbox"/> International Fire Code | <input type="checkbox"/> Wildland Urban Interface Code |
| <input type="checkbox"/> Uniform Plumbing Code | |

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

Section(s):

IFC Chapter 80; IBC Chapter 35,

Title:

Reference Standards

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

Proponent: Dave Kokot, P.E., Spokane Fire Department

Title: Fire Protection Engineer

Date: May 24, 2021

3. Designated Contact Person:

Name: Dave Kokot, P.E.

Title: Fire Protection Engineer

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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. (Examples on the SBCC [website](#))

Code(s) 2018 International Fire Code _____
2018 International Building Code _____

Section(s) Chapter 80 _____
Chapter 35 _____

Amend section to read as follows:

International Fire Code

13—16: Standard for the Installation of Sprinkler Systems (except 8.15.5.3(5))

903.3.1.1, 903.3.2, 903.3.8.2, 903.3.8.5, 904.13, 905.3.4, 907.6.4, 914.3.2, 1019.3, 1019.3, 1103.4.8, 3201.1, 3204.2, 3205.5, Table 3206.2, 3206.4.1, 3206.10, 3207.2, 3207.2.1, 3208.2.2, 3208.2.2.1, 3208.4, 3210.1, 3401.1, 5104.1, 5104.1.1, 5106.5.7, 5704.3.3.9, Table 5704.3.6.3(7), 5704.3.7.5.1, 5704.3.8.4

International Building Code

13—16: Standard for the Installation of Sprinkler Systems (except 8.15.5.3(5))

403.3.3, 712.1.3.1, 903.3.1.1, 903.2, 903.3.8.2, 903.8.5, 904.13, 905.3.4, 907.6.4, 1019.3

5. **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.

The requirement for fire sprinklers in pits of hydraulic elevators is predicated by the amount of debris that is collected in the pit and the potential of an ignition source that could cause a fire. With the advent of hydraulic fluids that are combustible but at flashpoints near 450 degrees F., the lack of ignition sources (cigarette use in buildings has significantly decreased), the reduction of combustible materials found in elevator pits, and the significant reduction nationally in the amount of elevator pit fires (see NFPA data attached), the need for a fire sprinkler in the pit and elevator equipment room been significantly reduced. NFPA 13 has included language in the code commentary that the requirement of sprinklers in the pit needs to be evaluated for benefit compared to the additional cost to install sprinklers, additional detection, and a shunt trip to accommodate shutting off the power to the elevator before fire sprinklers are activated. Further, when the power turned off to the elevators it could trap someone who is using the elevator. For that reason some Fire Departments do not use elevators during a fire event as they would not have full control of it and responders could become trapped in the elevator.

This has been discussed by the City of Spokane with the Washington State Lead Elevator Inspector. Although they agree that the sprinklers are not necessary, they have to enforce the requirement identified in NFPA 13 as well as directing the other jurisdictions in the State that have elevator programs (Seattle and Spokane) to do so as well. Seattle has previously gotten support for a WAC to allow them to have a manual sprinkler system for the elevator pit, and Spokane previously used a performance based alternative method to not require fire sprinklers in pits of hydraulic elevators (that the State no longer allows).

This amendment would recognize the low risk associated with elevator pit fires and the unnecessary expenditure to provide protection that is not warranted as well as recognize the need to remove barriers for emergency response for buildings with elevators.

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

- 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.
- The amendment is needed to address a unique character of the state.
- The amendment corrects errors and omissions.

7. Is there an economic impact: Yes No

Explain:

The requirement for fire sprinklers in elevator pits produces a cost of approximately \$10,000-20,000 dollars as well as maintenance of the system and associated devices. The removal of this requirement will result in lower construction costs for a system that has a marginal effect on the life safety improvement in the building.

Provide your best estimate of the construction cost (or cost savings) of your code change proposal?

The cost for the shunt trip is approximately \$6,000-\$10,000. Relays are about \$350 each, and monitoring modules are about \$500 each. Including wiring, label and markup, the cost is approximately \$10,000-15,000 to install an elevator shunt trip. There are additional costs to install heat detection for operating the shunt trip at the top of shaft and elevator equipment room of around \$2,000-3,000 depending upon the building. Fire sprinkler would also need to be provided to meet NFPA 13 at a cost of \$2,000-\$5,000 depending upon the building.

This is a conservative projection of the cost, and it could be more or less depending upon the particular building.

Show calculations here, and list sources for costs/savings, or attach backup data pages

Information on costs were obtained by retailers of the equipment to be provided for a commercial installation and general historical permit fees costs for installation.

List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application:

The amount of time for plan review and inspection will be reduced with the removal of the requirement. This would reduce the time for inspection and plan review based on the impact to the permit fee for fire alarm and fire sprinklers.

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

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