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): 2021 IFC Sections Chapter 2 Definitions, 902, 904.1.1, 904.1.1.1, 904.1.1.2, 904.1.1.3

Title: Certification of service personnel for fire-extinguishing equipment, Pre-engineered kitchen fire extinguishing systems, engineered fire suppression systems, Pre-engineered industrial fire extinguishing system

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

Proponent: Ken Brouillette (Seattle Fire Department) and Zachary Tuck (Suppression Systems Inc.)

Title: Technical Code Program Manager

Date: 5/25/2021

3. Designated Contact Person:

Name: Ken Brouillette (Seattle Fire Department)

Title: Technical Code Program Manager

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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) 2021 IFC **Section(s)** Chapter 2 Definitions, 902 904.1.1, 904.1.1.1, 904.1.1.2, 904.1.1.3

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

CHAPTER 2
DEFINITIONS

SPECIAL HAZARDS SUPPRESSION SYSTEMS. This term includes Wet-chemical systems (NFPA 17A), Dry-chemical systems (NFPA 17), Foam systems (NFPA 11), Carbon dioxide systems (NFPA 12), Halon systems (NFPA 12A), Clean-agent systems (NFPA 2001), Automatic water mist systems (NFPA 750), Aerosol fire-extinguishing systems (NFPA 2010), and Explosion prevention systems (NFPA 69).

SECTION 902
DEFINITIONS

SPECIAL HAZARDS SUPPRESSION SYSTEMS.

(Effective July 1, 2024)

904.1.1 Certification of ~~service~~ personnel for alternative automatic fire-extinguishing equipment. ~~Service~~ Personnel performing system design, installation, ~~or conducting system~~ maintenance, programming, or testing on automatic fire-extinguishing systems, other than *automatic sprinkler systems*, shall possess the appropriate ~~ICC/NAFED~~ National Institute for Certification in Engineering Technologies (NICET) *Special Hazards Suppression Systems* certification.

Exception: A current ICC/NAFED certification for Pre-engineered kitchen fire extinguishing system technician is allowed in lieu of NICET Level II or higher *Special Hazards Suppression Systems* technician for the design, installation, inspection/testing or maintenance on pre-engineered kitchen suppression systems.

904.1.1.1 Design: All construction documents shall be reviewed by a NICET Level III Certified Special Hazards Designer or a licensed professional engineer (PE) in Washington prior to being submitted for permitting. The reviewing professional shall submit a stamped, signed, and dated letter; or a verification method approved by the *fire code official* indicating the system has been reviewed and meets or exceeds the design requirements of the state of Washington and the local jurisdiction.

904.1.1.2 Installation: Installation not defined as "electrical construction trade" by chapter 19.28 RCW or “Fire Protection Sprinkler Fitting” by chapter 18.270 RCW, shall be completed by or directly supervised by a NICET Level II or higher *Special Hazards Suppression Systems* technician. Supervision shall consist of a person being on the same jobsite and under the control of a NICET Level II or higher *Special Hazards Suppression Systems* technician.

904.1.1.3 Testing/maintenance: Inspection, testing, commissioning, maintenance, and programming not defined as "electrical construction trade" by chapter 19.28 RCW or "Fire Protection Sprinkler Fitting" by chapter 18.270 RCW, shall be completed by a NICET Level II or higher *Special Hazards Suppression Systems* technician.

~~**904.1.1.1 Pre-engineered kitchen fire-extinguishing systems.** A current ICC/NAFED certification for Pre-engineered kitchen fire-extinguishing system technician is required when performing design, installation, inspection/testing or maintenance on pre-engineered kitchen suppression systems.~~

~~**904.1.1.2 Engineered fire suppression systems.** A current ICC/NAFED certification for engineered fire suppression system technician is required when performing design, installation, inspection/testing or maintenance on kitchen suppression systems engineered fire suppression systems.~~

~~**904.1.1.3 Pre-engineered industrial fire-extinguishing systems.** A current ICC/NAFED certification for pre-engineered industrial fire-extinguishing system technician is required when performing design, installation, inspection/testing or maintenance on kitchen suppression systems pre-engineered industrial fire extinguishing systems.~~

5. **Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.**
This is an existing WA State amendment with proposed changes to align certifications for not only service personnel, but designers and installers as well. The proposed amendment utilizes nationally recognized NICET certifications for Special Hazards Suppression Systems which encompasses NFPA 11, 12, 12A, 13, 16, 17, 17A, 25, 70, 72, 68, 69, 750, & 2001. This proposed amendment also aligns with NICET certifications for Section 903 "Automatic Sprinkler Systems" and Section 907 "Fire Alarm and Detection Systems". The exception allows current ICC/NAFED certification holders to continue to provide installation and service to Kitchen Fire Suppression systems which was originally the intent of this WA State Amendment. The proposal also includes a new definition for Special Hazards Suppression Systems.

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:

Level 1 application cost: $230.00, 140 minute exam time limit
Level 2 application cost: $300.00, 170 minute exam time limit
Total labor to achieve level 2 = 5.2 hours
Our average technician wage is $38.00 per hour
Cost = $727.60

The exam is administered at Pearson-vue testing centers. Most every major city has one. Depending on your location you will have travel time, parking costs, etc.

If there is an economic impact, use the tool 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.

Provide your best estimate of the construction cost (or cost savings) of your code change proposal? (See OFM Life Cycle Cost **Analysis tool** and **Instructions;** use these **Inputs**. **Webinars on the tool can be found Here and Here**)

$Click here to enter text./square foot (For residential projects, also provide $Click here to enter text./ dwelling unit)

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

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

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.

Supporting Documentation

Field	Requirement	Testing and Certification Requirements	Type of work performed by certificate holder
Fire Alarm Design	WAC 907.10.2 Design Review NICET Fire Alarm Systems Level III (or a licensed PE in Washington)	NICET Fire Alarm Level III or ESA/NTS Certified Fire Alarm Designer (CFAD) Level III Fire in fire alarms, or a licensed professional engineer (PE); Certification requires a minimum of five years of relevant experience and a personal recommendation. Requires a passing score on an examination, and payment of a fee	Design fire alarm systems, supervising station alarm systems, public emergency alarm reporting systems, fire warning equipment and emergency communications systems (ECS)
Fire Alarm Inspection/ testing/maint	WAC 907.10.3 All inspection, testing, maintenance and	NICET Fire Alarm Level II or ESA/NTS Certified Fire Alarm Technician	Inspecting and Testing of fire alarm systems, supervising station alarm systems, public emergency alarm reporting

enance	programing not defined as "electrical construction trade" by chapter 19.28 RCW shall be completed by a NICET II in fire alarms.	(CFAT) Level II; certification requires a minimum of two years of relevant experience. Requires a passing score on an examination, and payment of a fee	systems, fire warning equipment and emergency communications systems (ECS).
Fire Alarm Installation	Washington Electrical EL01 or EL06	Per RCW/WAC requirements.	Installation of fire alarm systems, supervising station alarm systems, public emergency alarm reporting systems, fire warning equipment and emergency communications systems (ECS).
Fire Sprinkler Level 1 Design	WAC 212-80-093 (i) Have satisfactorily passed with a final score of eighty percent or better an examination administered by the director, or present a copy of a current certificate from the National Institute for Certification in Engineering Technologies showing that the applicant has achieved Level 2 certification in the field of water-based fire protection system layout; or (ii) Be a Washington licensed professional engineer.	NICET Water-based fire protection system layout Level II; certification requires a minimum of two years of relevant experience. Requires a passing score on an examination, and payment of a fee	Designs NFPA 13D fire sprinkler systems or inspection, testing, maintenance (NFPA 25) for NFPA 13D
Fire Sprinkler Level 2 Design	WAC 212-80-093 (i) Present a copy of a current certificate from the National Institute for Certification in Engineering Technologies showing that the applicant has achieved a Level 2 in the field of water-based fire protection systems layout; or (ii) Be a Washington licensed professional engineer.	NICET Water-based fire protection system layout Level II; certification requires a minimum of two years of relevant experience. Requires a passing score on an examination, and payment of a fee	Designs NFPA 13D, 13R or certain NFPA 24 (Restricted to only certain NFPA 13R systems, see WAC 212-80-018 (1)(b)) fire sprinkler systems or inspection, testing, maintenance (NFPA 25) for NFPA 13D or 13R
Fire Sprinkler Level 3 Design	WAC 212-80-093 (i) Present a copy of a current certificate from the National Institute for Certification in Engineering Technologies showing that the applicant has achieved a Level 3 in the field of water-based fire	NICET Water-based fire protection system layout Level III or Level IV; certification requires a minimum of five years of relevant experience. Requires a passing score on an examination, and payment of a fee	Designs NFPA 13, 13D, 13R or 24 fire sprinkler systems or inspection, testing, maintenance (NFPA 25) for NFPA 13, 13D or 13R

	protection systems layout; or		
Fire Sprinkler Level U	WAC 212-80-093	Pass an exam	Supervises or performs the underground installation of fire sprinkler system piping
Fire Sprinkler Inspection, Testing Technician (ITT) Employed by an Inspection & Testing Contractor	WAC 212-80-093 (i) Possess a National Institute for Certification and Engineering Technologies Inspection, Testing and Maintenance Level 2 or Level 3 certification or American Society of Sanitary Engineers 15010 Field Technician Certification; and (ii) Perform work consistent with the employing contractor's licensing level.	NICET Inspection and Testing of Water-Based Systems Level II or Level III OR American Society of Sanitary Engineers 15010 Field Technician Certification. Certification requires a minimum of two years of relevant experience. Requires a passing score on an examination, and payment of a fee	Performs inspection or testing on NFPA 13R or 13, wet and dry pipe fire protection systems only
Fire Sprinkler Inspection, Testing Technician (ITT) Employed by a Level 2 Contractor	WAC 212-80-093	NICET Inspection and Testing of Water-Based Systems Level II or Level III OR American Society of Sanitary Engineers 15010 Field Technician Certification. Certification requires a minimum of two years of relevant experience. Requires a passing score on an examination, and payment of a fee	Performs inspection, testing and maintenance on NFPA 13R or 13, wet and dry pipe fire protection systems only
Fire Sprinkler Inspection, Testing Technician (ITT) Employed by a Level 3 Contractor	WAC 212-80-093	NICET Inspection and Testing of Water-Based Systems Level II or Level III OR American Society of Sanitary Engineers 15010 Field Technician Certification. Certification requires a minimum of two years of relevant experience. Requires a passing score on an examination, and payment of a fee	Same as ITT above and includes the testing of other fire protection systems such as preaction, deluge, foam, or fire pump
Fire Sprinkler Journey-level Sprinkler fitter certification	WAC 212-80-093 (i) Provide evidence on the forms provided by the director of at least eight thousand hours of trade related fire protection sprinkler system experience in installation and repair; (ii) Not have more than three thousand hours of	Certification requires a minimum of four years of relevant experience. Requires a passing score on an examination.	Installs and repairs NFPA 13D, 13R, or 13 fire sprinkler systems

	the required eight thousand hours of experience in residential sprinkler fitting; and (iii) Satisfactorily pass an examination provided by the director with a final score of eighty percent.		
Alternative Automatic Fire Extinguishing Systems Design	WAC 51-54A-0904	NICET Special Hazards Suppression Systems Level III; Certification requires a minimum of five years of relevant experience and a personal recommendation. Requires a passing score on an examination, and payment of a fee	Designs NFPA 11, 12, 12A, 16, 17, 17A, 70, 72, 75, 76, 750, 2001 alternative extinguishing systems.
Alternative Automatic Fire Extinguishing Systems (Special hazards) Installation, Inspection, Testing Technician	WAC 51-54A-0904	NICET Special Hazards Suppression Systems Level II; Certification requires a minimum of five years of relevant experience and a personal recommendation. Requires a passing score on an examination, and payment of a fee	Installs, inspects, tests and repairs NFPA 11, 12, 12A, 16, 17, 17A, 70, 72, 75, 76, 750, 2001 Alternative-fire extinguishing systems.