STATE OF WASHINGTON

# STATE BUILDING CODE COUNCIL

TAG Approved
As Modified
5/12/22
21-GP2-086

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):**
**WSMC**

**Title:**
**Smoke Filtration**

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

**Proponent:** **Austin Bonnes, Rushing**
**Title:** **Mechanical Engineer**
**Date:** **4/8/2022**

**3. Designated Contact Person:**

**Name:** **Austin Bonnes**
**Title:** **Mechanical Engineer**
**Address:** **1725 Westlake Ave N Suite 300, Seattle, WA 98109**

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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.

   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)** WSMC **Section(s)** **605.5**

   Enforceable code language must be used. Amend section to read as follows:

See proposed a new section 605.5 below in red, to align with Seattle Mechanical code.

**605.5 Smoke filtration capability**. Air handlers and energy recovery ventilators serving occupiable spaces each with individual capacity greater than 500 cfm shall provide fan capacity and a filter box capable of housing a filter with a minimum efficiency reporting value (MERV) of not less than 13.

**Exception**: Air handlers that process 100 percent recirculated air with no outdoor air are not required to comply with this section.

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.

To improve ventilation in building by allowing filter boxes to be sized in order to accommodate MERV 13 filters, which can capture a larger portion of smoke particulates and other VOCs. This does not require all filter boxes to be equipped with MERV 13, but just requires filter boxes have the capability to be changed in the future to MERV. This is mainly for when there is a major smoke event, or forest fire that produces smoke, that the air into the building can be properly filtered without major redesign or wait times in the future.

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

   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.
      a. There is no addition Life Cycle cost, this is a very small initial first cost change. We are literally talking $5-25 add (or more if filter box is more custom, but that is not common) for every filter box. Most residential and office projects only have a handful of OSA (outside supply air) air handlers that provide more than 500 CFM of OSA.

   b. ***Construction Cost.*** Provide your best estimate of the construction cost (or cost savings) of your code change proposal.

      Less than $.01 /square foot

      (For residential projects, also provide $1-2/ dwelling unit)

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

      From a typical project with just over 100 unit we see: There are 8 units that qualify for filter box to be increased inside. That is 8units * $25 = $200 total. $200 total/ #of units - $2.

      @200 Total / 45,000 square footage of building = $0.0045 / sq ft

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

      Inspectors will need to visually see the filter box and verify the capability to house a MERV 13 filter.

d. ***Small Business Impact.*** Describe economic impacts to small businesses:

Very small, typical small business will need 1 or 2 air handlers, that bring in OSA so the most add they see is $25-50 add. However the ability to have clean air during a smoke event would help to keep customers and employees in a business healthy and happy will add more benefit.

e. ***Housing Affordability.*** Describe economic impacts on housing affordability: Very small, see cost above. In low income housing, there may also be less air handlers, so even less than typical.

f. ***Other.*** Describe other qualitative cost and benefits to owners, to occupants, to the public, to the environment, and to other stakeholders that have not yet been discussed:

The ability to have clean air during a smoke event would help to keep customers and employees in a business healthy and happy will add more benefit. In office settings for example, studies have proven that increased filtration and improved air quality will have occupants perform work and conginitive tasks better, have less health issues, and be happier in general

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.**