



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

Washington State Energy Code Development Standard Energy Code Proposal Form

Log No. 24-GP1-146 Rev 5/19/25

Code being amended: ☒ Commercial Provisions ☐ Residential Provisions

Code Section # **C410.1, C410.3 and C405.1**

Brief Description:

This proposal clarifies that warehouse cooler and freezer spaces are required to have floor insulation in the same manner as walk-in coolers and freezers.

It also adds language from the 2018 WSEC-C that was inadvertently omitted in the 2021 WSEC-C that clarifies that envelope assembly elements not governed by Section C410 shall comply with the applicable requirements in C402.

Update in Section C405.1 corrects a section reference.

Proposed code change text: (Copy the existing text from the Integrated Draft, linked above, and then use underline for new text and ~~strikeout~~ for text to be deleted.)

C410.1 General. Walk-in coolers, walk-in freezers, refrigerated warehouse coolers, refrigerated warehouse freezers, and refrigerated display cases shall comply with this Section. Where the envelope assemblies of these spaces comprise any portion of the building thermal envelope, these assemblies shall also comply with all applicable requirements of Section C402, substituting the R-values or U-factors required by Section C410.3.

C410.3 Walk-in coolers, walk-in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers. Site-assembled and site-constructed *walk-in coolers*, ~~((and))~~ *walk-in freezers*, ~~((and))~~ *refrigerated warehouse coolers*, and *refrigerated warehouse freezers* shall comply with the following:

- Automatic door-closers shall be provided that fully close walk-in doors that have been closed to within 1 inch (25 mm) of full closure.
Exception: Automatic closers are not required for doors more than 45 inches (1143 mm) in width or more than 7 feet (2134 mm) in height.
- Doorways shall be provided with strip doors, curtains, spring-hinged doors or other method of minimizing infiltration when doors are open.
- Walk-in coolers* and *refrigerated warehouse coolers* shall be provided with wall, ceiling, and door insulation of not less than R-25 or have wall, ceiling and door assembly *U*-factors no greater than U-0.039. *Walk-in freezers* and *refrigerated warehouse freezers* shall be provided with wall, ceiling and door insulation of not less than R-32 or have wall, ceiling and door assembly *U*-factors no greater than U-0.030.
Exception: Insulation is not required for glazed portions of doors or at structural members associated with the walls, ceiling or door frame.
- The floor of *walk-in coolers* and refrigerated warehouse coolers shall be provided with floor insulation of not less than R-25 or have a floor assembly *U*-factor no greater than U-0.40. The floor of *walk-in freezers* and refrigerated warehouse freezers shall be provided with floor insulation of not less than R-28 or have a floor assembly *U*-factor no greater than U-0.035.

Exception: Insulation is not required in the floor of a *walk-in cooler* or refrigerated warehouse cooler that is mounted directly on a slab on grade floor.

5. Transparent fixed window and reach-in doors for *walk-in freezers* and windows in *walk-in freezer* doors shall be provided with triple-pane glass, with the interstitial spaces filled with inert gas or be provided with heat-reflective treated glass.
6. Transparent fixed window and reach-in doors for *walk-in coolers* and windows for *walk-in coolers* doors shall be provided with double-pane or triple-pane glass, with interstitial space filled with inert gas, or be provided with heat-reflective treated glass.
7. Envelope assembly elements not governed by this section, including but not limited to glazed windows and doors separating walk-in and warehouse cooler spaces from conditioned space and perimeter slab edge insulation, shall comply with the thermal envelope requirements in Section C402.
8. Evaporator fan motors that are less than 1 hp (0.746 kW) and less than 460 volts shall be provided with electronically commutated motors, brushless direct-current motors, or 3-phase motors.
9. Condenser fan motors that are less than 1 hp (0.746 kW) shall use electronically commutated motors, permanent split capacitor-type motors or 3-phase motors.
10. Antisweat heaters that are not provided with antisweat heater controls shall have a total door rail, glass and frame heater power draw of not greater than 7.1 W/ft² (76 W/m²) of door opening for *walk-in freezers* and not greater than 3.0 W/ft² (32 W/m²) of door opening for *walk-in coolers*.
11. Where antisweat heater controls are provided, they shall be capable of reducing the energy use of the antisweat heater as a function of the relative humidity in the air outside the door or to the condensation on the inner glass pane.
12. Lights in *walk-in coolers*, *walk-in freezers*, *refrigerated warehouse coolers* and *refrigerated warehouse freezers* shall either be provided with light sources with an efficacy of not less than 40 lumens per watt, including ballast losses, or shall be provided with a device that automatically turns off the lights within 15 minutes of when the *walk-in cooler* or *walk-in freezer* space is not occupied.

SECTION REFERENCE CORRECTION

C405.1 General. Electrical power and lighting systems and power generation shall comply with this section.

General lighting shall consist of all lighting included when calculating the total connected interior lighting power in accordance with Section C405.4.1 and which does not require specific application controls in accordance with Section C405.2.5

Lighting installed in *walk-in coolers*, *walk-in freezers*, *refrigerated warehouse coolers* and *refrigerated warehouse freezers* shall comply with the lighting requirements of Sections ~~C410.2~~ C410.3 and C410.4.

Purpose of code change:

Clarify code intent for refrigerated spaces.

Your amendment must meet one of the following criteria. Select at least one:

- | | |
|---|---|
| <input type="checkbox"/> Addresses a critical life/safety need. | <input type="checkbox"/> Consistency with state or federal regulations. |
| <input checked="" type="checkbox"/> The amendment clarifies the intent or application of the code. | <input type="checkbox"/> Addresses a unique character of the state. |
| <input type="checkbox"/> Addresses a specific state policy or statute.
(Note that energy conservation is a state policy) | <input type="checkbox"/> Corrects errors and omissions. |

Check the building types that would be impacted by your code change:

☐ Single family/duplex/townhome

☒ Multi-family 4 + stories

☒ Institutional

☒ Multi-family 1 – 3 stories

☒ Commercial / Retail

☒ Industrial

Your name **Lisa Rosenow**

Email address **lrosenow@evergreen-tech.net**

Your organization **Evergreen Technology Consulting**

Phone number **360-539-5202**

Other contact name [Click here to enter text.](#)

Economic Impact Data Sheet

Is there an economic impact: ☐ Yes ☒ No

Briefly summarize your proposal's primary economic impacts and benefits to building owners, tenants, and businesses. If you answered "No" above, explain your reasoning.

This is a clarifying proposal based on draft SBCC official opinions. It does not add a new prescriptive or mandatory requirement or associated costs.

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

Provide your best estimate of the **annual energy savings** (or additional energy use) for your code change proposal?

[Click here to enter text.](#)KWH/ square foot (or) [Click here to enter text.](#)KBTU/ square foot

(For residential projects, also provide [Click here to enter text.](#)KWH/KBTU / dwelling unit)

Show calculations here, and list sources for energy savings estimates, 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:

Does not change the scope of requirements that require plan review verification or inspection.

Small Business Impact. Describe economic impacts to small businesses:

No change.

Housing Affordability. Describe economic impacts on housing affordability:

No change.

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:

NA

Instructions: Send this form as an email attachment, along with any other documentation available, to:
sbcc@des.wa.gov. For further information, call the State Building Code Council at 360-407-9255.

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