STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

Washington State Energy Code Development

Standard Energy Code Proposal Form

Jan 2022

Log No. 24-GP1-025 Vers. 3
Revised 5/20/25

Code being amended: X Commercial Provisions ☐ Residential Provisions

Code Section # _WSEC - C402.1.2_____

Brief Description:

This code change proposal brings ACI-TMS CODE 122.3 into the WSEC. ACI-TMS CODE 122.3-24 provides the necessary information to appropriately determine the thermal performance of a multitude of concrete and masonry systems. It expands upon ASHRAE 90.1 and provides data and methods to determine the properties of concrete and masonry for use in computer modelling, including but not limited to DOE 2, EnergyPlus and ComCheck.

This proposal is submitted with support of the Northwest Concrete Masonry Association (NCMA), Concrete Masonry & Hardscapes Association (CMHA) and the National Ready Mixed Concrete Association (NRMCA).

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.)

WSEC:

C402.1.2 Assembly *U*-factor, *C*-factor or *F*-factor based method. *Building thermal envelope* opaque assemblies shall have a *U*-, *C*-, or *F*-factor not greater than that specified in Table C402.1.2. Commercial buildings or portions of commercial buildings enclosing Group R occupancies shall use the *U*-, *C*-, or *F*-factor from the "Group R" column of Table C402.1.2. Commercial buildings or portions of commercial buildings enclosing occupancies other than Group R shall use the *U*-, *C*-, or *F*-factor from the "All Other" column of Table C402.1.2. The *U*-factors for typical construction assemblies are included in Appendix A. These values shall be used for all calculations. Where proposed construction assemblies are not represented in Appendix A, values shall be calculated in accordance with the ASHRAE *Handbook of Fundamentals* using the framing factors listed in Appendix A where applicable and shall include the thermal bridging effects of framing materials.

Exception: U-factors of concrete and masonry construction determined in accordance with ACI/TMS 122.3.

Purpose of code change:

SEE ATTACHMENT

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

☐ Addresses a critical life/safety need.

☐ The amendment clarifies the intent or application of the code.

X Addresses a specific state policy or statute.
(Note that energy conservation is a state policy)

☐ Consistency with state or federal regulations.

☐ Addresses a unique character of the state.

☐ Corrects errors and omissions.

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

☐ Single family/duplex/townhome	**X** Multi-family 4 + stories	Institutional
☐ Multi-family 1 – 3 stories	**X** Commercial / Retail	Industrial

Your name	Kerry Sutton, PE	Email address	Kerry.Sutton@concrete.org
Your organization	American Concrete Institute (ACI)	Phone number	734-673-2195
Other contact name	Steve Szoke, PE		

Economic Impact Data Sheet

Is there an economic impact: ☐ Yes **X** 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.

Use of the code will not incur additional expenses in commercial building design and construction but helps to ensure the consistent and most appropriate methods are used for determining compliance where building assemblies are constructed using concrete or masonry. More energy efficient commercial buildings will ultimately reduce energy costs, decrease greenhouse gas emission and reliance on fossil fuels, and manage energy demand.

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

N/A this Code provides an alternative design path.

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

N/A this Code provides alternative design path.

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

N/A

Small Business Impact. Describe economic impacts to small businesses:

N/A

Housing Affordability. Describe economic impacts on housing affordability:

N/A

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:

SEE ATTACHMENT

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.