



BEBF-149

OKLAHOMA

Uniform Building Code Commission Technical Code Review Committee

Public Comment Form

NOTE: This form and any attachments hereto are subject to the Oklahoma Open Records Act and may be disbursed, upon request, without further notice to the submitter.

INSTRUCTIONS:

1. Please type or print clearly.
2. Form must be signed. Any forms that are not signed or filled out completely, may not be considered.
3. Each requested change must be on a separate form.
4. If the space to show the proposed change or supporting information is not big enough to show the entire change, write the words "See Attached" in the space provided and submit the change on a separate page.

Contact Information:

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Code Change Information:

Will this change increase the cost of construction? Yes No

Which code needs to be revised? IBC

Which section of the code needs to be revised?

Section 423.4 Table _____ Figure _____ Page 15

Proposed Change:

Show the proposed new, revised, or deleted text in Legislative format. Line through text to be deleted and underline text to be added or revised.

10) Section 423.4 Group E occupancies. This section has been modified to require all Group E occupancies with an occupant load over 200 to have a storm shelter constructed in accordance with ICC 500®; and add a fourth exception requiring all additions to existing Group E occupancies comply with the International Existing Building Code®. This section has been modified to read: 423.4 Group E occupancies. All Group E occupancies with an occupant load of 200 or more shall have a storm shelter constructed in accordance with ICC 500®. Exceptions:

(A) Group E day care facilities.

(B) Group E occupancies accessory to places of religious worship.

(C) Buildings meeting the requirements for shelter design in ICC 500®. 16 (D) Additions to Group E occupancies shall comply with the requirements of Section 1106 of the International Existing Building Code®.

Supporting Information:

State the purpose and reason for the change and provide substantiation to support the proposed change.

FEMA strongly supported and applauds OUBCC’s decision to move storm shelter requirements from non-mandatory appendices back into the main bodies of the currently adopted 2018 IBC and IEBC. However, the current amendments to 2018 IBC Section 423.4 and 2018 IEBC Section 1106.1 which increase the minimum occupant load trigger for K-12 schools from 50 to 200 serve to negatively impact public safety of K-12 school children, parents, teachers and beyond, as well as Oklahoma’s ability to compete for FEMA funded mitigation projects. As such, this Public Comment is intended to discourage similar amendments to Oklahoma’s next adopted building codes (i.e., 2021 or 2024 IBC and IEBC).

Public Safety Impacts

Due to short warning times, schools cannot typically evacuate for tornadoes. As such, storm shelters are needed to provide life-safety protection for students and faculty. The 2013 deaths of seven students, who were recovered from a collapsed tornado refuge area at Plaza Elementary School in Moore, OK, underscore the value of storm shelters when compared to designated tornado refuge areas.

Obviously, strong or violent tornadoes can happen anywhere in Oklahoma – not just in Moore. Although many urban and suburban areas in Oklahoma have enrollments large

Signature: DONALD L LEIFHEIT JR Digitally signed by DONALD L LEIFHEIT JR Date: 2023.10.27 13:47:03 -05'00' Date: 10/27/23

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Obviously, strong or violent tornadoes can happen anywhere in Oklahoma – not just in Moore. Although many urban and suburban areas in Oklahoma have enrollments large enough to meet the higher occupant load triggers of the amendments, smaller underserved rural communities often do not meet the increased occupant load triggers and are falling behind every time a new school or addition is built on their campuses without a tornado storm shelter. And while storm shelter costs may seem burdensome for smaller school districts, incorporating tornado storm shelters within new construction is the most cost-efficient opportunity to provide communities with tornado protection.

To be clear, the unamended IBC and IEBC (2018, 2021 and 2024) do NOT require storm shelter construction for existing school buildings, so the following analysis of existing K-12 schools is provided to demonstrate the potential impact of the amendments going forward by assuming that new schools, new school buildings on existing campuses, or additions to existing school buildings will occur on campuses that approximately reflect the current enrollments levels of existing K-12 schools in Oklahoma.

Using the latest school enrollment numbers from the School Site Totals spreadsheet (downloaded from <https://sde.ok.gov/documents/state-student-public-enrollment>) to conservatively estimate the combined occupant loads of classrooms, vocation rooms and offices, there were 1,764 K-12 schools in Oklahoma when the 15 virtual charter schools and two charter schools with zero students are omitted. Out of these 1,764 K-12 schools, only 55 (or 3.1%) had enrollments of less than 50 which would not have met the minimum occupant load trigger for storm shelters if they were built today in Oklahoma without the amendments. Under the code-weakening amendments to 2018 IBC Section 423.4 and 2018 IEBC Section 1106.1, an additional 532 schools (or 30% of all schools) w/ enrollments between 50 and 199 would be constructed without storm shelters. Therefore, based on the latest available enrollment totals

of existing K-12 schools, the current amendments would leave Oklahoma school students and faculty at more than a quarter of new schools or existing campuses with new buildings or new additions to existing school buildings without life-safety protection from tornadoes.

Impacts on FEMA Funding Opportunities

In addition to leaving small K-12 school communities throughout the state vulnerable to the life-threatening effects of tornadoes, the potential negative impacts of code-weakening amendments on the eligibility of state and local FEMA funded projects should also be carefully considered.

Since the 2018 creation of the BRIC Program which provides funding for competitive pre-disaster mitigation projects, FEMA has incentivized the adoption of modern building codes through a system that awards points to BRIC Program applicants that adopt the latest editions of modern building codes as well as the local implementation and enforcement practices, as codified under a BCEGS rating. In the FY 2022 application cycle, maximum points of 20 were allotted to any state (applicant) that had adopted one of the last two editions of the IBC/IRC; points were reduced to 10 or less for states that had older codes in place. If Oklahoma maintains the occupant load trigger amendments from the 2018 IBC Section 423.4 (Section 423.5 in the 2021 & 2024 IBC) and 2018 IEBC Section 1106.1 (Section 303.2 in the 2021 and 2024 IEBC), FEMA may consider that Oklahoma has not adopted the most recent version of the code since it has been weakened, and therefore state projects may not receive as many points and be less competitive in the BRIC National Competition. With the recent release of FY 2023 BRIC Notice of Funding Opportunity, further research is needed to understand the potential impact that this code change may have on application scoring.

This possibility extends to any subapplicant within Oklahoma as well. BRIC recognizes that local jurisdictions also have adopted local building codes, and then are tasked with the implementation and enforcement of not only the mandatory state code, but their own codes as well. In recognition of this work, the BRIC program provides an additional 20 points to those jurisdictions that have gone through the process and received a Building Codes Effectiveness Grading Scale (BCEGS) rating from the ISO that is from 1-5, which FEMA considers to be disaster resistant. If the current amendments to the State's adopted versions of the IBC and IEBC are extended to the next editions, this change may cause jurisdictions throughout the state to have to go through the process to re-rate themselves, increasing the uncertainty of future points eligibility, and the future competitiveness of local projects. This could also move a project from being "application ready" for this current cycle to a much later cycle, thereby increasing the uncertainty of funding.

According to the 2019 Oklahoma State Hazard Mitigation plan, the entire State of Oklahoma is at risk for tornadoes, with a range of Choctaw County observing 26 tornadic events to Osage County observing 103 tornadic events between 1950 and 2019. This information indicates that additional measures to protect the communities within Oklahoma from the effects of

tornadoes should be strengthened, not weakened, as the amended Group E storm shelter requirement occupant load triggers would do.