



City of Muscatine Construction Appeal & Advisory Board

AGENDA

Wednesday, July 8th, 2026 – 5:30 p.m.

Lower Level Conference Room, City Hall, 215 Sycamore St, Muscatine, Iowa

- 1. Call to Order**
- 2. Approval of minutes from June 10th meeting.**
- 3. Continued discussion and possible action regarding the deletion of or amendment to Section R302.13 Fire Protection of Floors**
- 4. Adjourn**

MINUTES
June 10, 2026 – 5:30 p.m.
Construction Appeal & Advisory Board
Muscatine City Hall – Lower Level Conference Room

Present: Devin Abel, James Miller, Ken Gilkerson, & Tim Kelly
Excused: James Noble
Staff: Seth Gillette, Inspector, Community Development
Nick Morgan, Inspector, Community Development
Jodi Royal-Goodwin, Community Development Director
Sara Schmelzer, Administrative Specialist, Community Development

Devin Abel started the meeting at 5:30 pm.

Minutes: Devin Abel called for a motion to approve prior minutes. All ayes, motion carried.

Todd Hackett of Todd Hackett Construction requests that the Construction Appeals & Advisory Board consider amending R302.13 Fire Protection of Floors out of the City Building Code to reduce building costs. Section R302.13 requires that floor systems are covered with drywall or plywood to protect against fire, ensuring that the floor system remains stable enough for firefighters to enter the building and perform search and rescue. City staff does not support amending Section R302.13 Fire Protection of Floors.

Todd Hackett with Todd Hackett Construction was present to discuss the amendment. Todd stated his main reason for requesting this change is because of the cost savings for clients and because other neighboring cities (Davenport and Cedar Rapids) do not require this. He continued to question why other bigger cities (Des Moines, Cedar Rapids, Davenport) are not requiring this extra protection but we are. He feels like we should change our viewpoint on it since the bigger cities in Iowa are. He also stated that he will do what is decided but he would like to save his clients a couple thousand dollars if he can.

James Miller brought up there are several other ways to have the same outcome by using easier to install products. He tried to print out handouts for the meeting to discuss and was unable to print.

Question was asked if we could reach out to neighboring cities to find out why this isn't a requirement. Nick and Seth said they would reach out before the next meeting.

After a long discussion, James moved to table this topic to the next meeting to give everyone more time to do their own research. Tim Kelly seconded this motion, all ayes motion carried.

During previous discussions in 2023 on updating the adopted building code, City Council requested that we remain in conformance with the state building code.

In 2025 Iowa State Legislature updated the State Building Code by adopting the 2023 version of the National Electric Code, Uniform Plumbing Code, and the International Residential Code. The codes adopted as the State Building Code are considered at minimum the standard to follow for jurisdictions that do not adopt and enforce their own building codes.

To remain in conformance with the State's adopted building code City Code Title 8 must be updated to reflect adoption of the 2024 Model Code Cycle. As the model building codes are updated on a three-year cycle, there are several code changes included in the skip from the 2015 code cycle to the 2024 code cycle.

City staff recommends adopting the building codes in conformance with the state and retaining our currently adopted appendices and amendments.

Seth explained adopting the new 2024 code cycle. He stated that there is language in our current City Code to automatically adopt these codes and asked if there were any further questions.

James Miller asked if we could adopt what the county has adopted for 8-1-4 for post frame buildings. He stated the County has the requirement at 1250 sq ft. Wants to keep in the same line as what the county has set out. No other questions. Thought the 2024 code seemed more relaxed.

Devin asked for motion to approve. Ken moved to accept James' proposed amendment. James seconded. All ayes, motion carried.

Seth asked group about next meeting and if they wanted to meet in July. They all agreed to meet July 8, 2026 at 5:30 pm.

Devin asked for a motion to adjourn. Ken motioned to adjourn; James seconded. All ayes, motion carried.

Meeting adjourned at 6:45 pm.

ATTEST:

Devin Abel, Chairperson
Construction Appeal & Advisory
Board

Respectfully Submitted,

Seth Gillette, Secretary
Inspector



COMMUNITY DEVELOPMENT DEPARTMENT

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Planning • Zoning • Building Safety • Construction Inspection Services • Public Health • Housing Inspections • Code Enforcement

To: Construction Appeal & Advisory Board

From: Seth Gillette

Date: July 8th, 2026

Re: Proposal to amend R302.13 Fire Protection of Floors

EXECUTIVE SUMMARY

During the Construction Appeals and Advisory Board meeting on June 10th, 2026, staff was tasked with contacting the cities that had removed section R302.13 Fire Protection of Floors from their residential building code to determine the reason it was removed. Staff was also asked to review FlameOFF Fire Barrier intumescent paint as an alternative for compliance with the same section.

Three of four cities responded, each citing that the decision was made during the adoptions of the 2012 and 2018 International Residential Codes and driven by their local Home Builders Associations for concerns over cost and future re-finishing issues. During these discussions, Davenport was revealed to have also deleted the section from their code.

The FlameOFF product submitted for review is compliant as a Class A wall or ceiling finish material or as part of a fire-rated assembly, but not as an alternative to section R302.13. It does not carry a fire rating on its own. Testing results vary based on the thickness the product is applied and the substrate it is applied to.

City staff does not support amending Section R302.13 Fire Protection of Floors.

GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED

Does the Construction Appeals and Advisory Board support the removal or amendment of section R302.13 given the reasons provided by other cities in our area.

Does the Construction Appeals and Advisory Board support the use of FlameOFF Fire Barrier Intumescent Paint or similar products as an alternative to Section R302.13?

BACKGROUND/DISCUSSION

The following cities were found to have removed section R302.13 Fire Protection of Floors from their building code and were contacted to determine why they chose to do so:

Iowa City: I emailed Jacob Stahl, Senior Building Inspector. He states that Iowa City skipped the 2012 IRC, adopting the 2015 IRC later, but he wasn't working for the city when the amendment was made so he doesn't know why it was deleted. A former employee of Iowa City and current

third-party inspector contracted by Muscatine, Terry Goerdt, specified that it was removed due to contractor concerns for cost. Iowa City's City Clerk, Kellie Grace provided the transcripts for the February 5th, 2019 meeting where Iowa City adopted the 2018 IRC. The code language was drafted by Tim Hennes, Senior Building Inspector, with input from the Greater Iowa City Home Builders Association. According to the transcripts, their city council did not discuss the amendments and there appears to be no input from their fire department.

Bettendorf: I spoke with Jeremy Peterson, Chief Building Official. He informed me that section R302.13 was removed during the 2012 code adoption with input from the fire department. Davenport and Bettendorf coordinated their 2012 code adoption to have similar amendments, and this amendment was specifically driven by the local Home Builders Associations over concerns regarding the cost and difficulty from pre-wiring basements for future finish so that drywall didn't need to be removed.

Muscatine Fire Department's Assistant Chief Robbie Rock spoke with Bettendorf's Assistant Chief Lawson regarding their input for the decision. The decision predates current staff but it was noted that they would not support the same decision today and that they would be unlikely to reinstate the requirement because they share their code amendments with neighboring cities. Assistant Chief Lawson provided some statistics for our consideration:

1. Finished Basements: Approximately 65% of new dwellings in Bettendorf have finished basements. While not required, this voluntary choice by homeowners reduces the risk to the remaining 35% of new dwellings.
2. Strict Enforcement of R302.7: For the remaining 35% of dwellings, they strictly enforce IRC section R302.7 using 1/2" (**they require 5/8"**) gypsum board. This mandates that enclosed, accessible space under stairways in one- and two-family dwellings be protected to limit fire spread.
3. Incident History: He could not recall any incidents that were negatively impacted specifically by the removal of the code section requiring fire protection for floors.

Cedar Rapids: I emailed Daryl Carson, Chief Building Inspector. His answer was the same as Bettendorf's; the Home Builders Association wanted to remove the section. Jeana Lewie, Council Proceedings Specialist forwarded me the transcripts for their 2012 IRC adoption and their city council didn't specifically discuss the amendments.

North Liberty: I emailed Ryan Rusnak, Planning, Building and Development Director. I did not receive an answer.

James Miller, Construction Appeals and Advisory Board Member, forwarded staff an International Code Council Evaluation Services report/listing (ESR/ESL), several product testing reports, and some data/warranty sheets to review the use of FlameOFF Fire Barrier intumescent paint as an alternate method of compliance for section R302.13.

In summary, FlameOFF Fire Barrier intumescent paint is approvable as a Class A (ASTM E84) wall and ceiling finish material (per R302.9) and as part of a fire rated assembly (ASTM E119). It is not directly approved by the ICC as an alternative method of compliance with Section R302.13 Fire Protection of Floors, which requires that floor assemblies are protected by ½" gypsum wallboard or 5/8" wood structural panel or *equivalent*. Both are considered to have a 15 minute fire-rating per 2015 IBC Table 722.6.2(1).

FlameOFF Fire Barrier does not carry a fire-rating of its own and is reliant on the substrate or assembly it is applied to to perform in accordance with the tested standards. The product was tested for 10 minutes without ignition when applied 15 Wet Mils to 5/8" SPF plywood, lasted 11 minutes when applied to 11/16" OSB and 2x8 wood floor joists, and 2.55 minutes when applied 20 Mils DFT with 2 Mils DFT of compatible primer to 9/16" Plywood. According to the American Wood Council, typical I-Joist web thickness is either 3/8" or 7/16" thick.

The following pages include my observations of and clipped excerpts from the materials reviewed:

According to its technical data sheet, FlameOFF Fire Barrier paint is a water-based intumescent coating and is tested in accordance with ASTM E119/UL 263 for use in listed fire-rated assemblies. The product is recommended for use with specific substrates that are part of a tested assembly and does not carry a fire rating on its own.

Selection & Specification Data

Generic Type A water-based intumescent coating that consists of a vinyl acetate resin.

Description A decorative, thin-film intumescent designed for fire protection of Wood & Gypsum substrates for interior use requiring ASTM E119/CAN ULC S-101, ASTM E84/CAN ULC S-102

Features

- Tested to ASTM E119/UL 263 standards
- Decorative aesthetic coating with a durable, architectural finish
- Well suited for residential and commercial applications
- Ideal for applications where additional layers of gypsum cannot be installed.
- Compatible with latex/acrylic topcoats
- Thin film coating offers an attractive solution to alternative fireproofing materials
- Low VOC and LEED compliant
- Easily repaired

Recommended DFT + Coverage Rates

Rating	5/8" Type X Gypsum	1/2" Regular Gypsum	Wood
Class A*	15 mils DFT 75 sq ft/gal	15 mils DFT 75 sq ft/gal	10 mils DFT 113 sq ft/gal
Class A, 30 min extended*	15 mils DFT 75 sq ft/gal	X	20 mils DFT 56 sq ft/gal
1 hour*	30 mils DFT 37 sq ft/gal	30 mils DFT 37 sq ft/gal	30 mils DFT 37 sq ft/gal
2 hour*	45 mils DFT 25 sq ft/gal	X	X

* ASTM E84 Class A, E2768 30 min extended Class A, E119 1 & 2 hour ratings.
 ** Substrates listed are part of a tested assembly and are not considered rateable in all conditions. Contact FlameOFF® Tech Support with questions.

The product has been evaluated by the International Code Council in Listing Report ESL-1192 and is a compliant wall and ceiling finish material based on its surface burning characteristics when applied to unfinished 5/8" thick spruce pine fir plywood or 5/8" thick Type X gypsum wallboard.

Product: FLAMEOFF FIRE BARRIER PAINT
Listee: FLAMEOFF COATINGS, INC.

Evaluation: FlameOff Fire Barrier Paint is a water-based intumescent coating and was evaluated when applied to unfinished spruce pine fir plywood in accordance with US DOC PS-1 and CSA O151 and Type X gypsum board in accordance with ASTM C1396, at minimum coating thicknesses; and tested in accordance with the following standards:

- ASTM E84-16, ASTM E84-2013A and ASTM E84-09, Standard Test Method for Surface Burning Characteristics of Building Materials, ASTM International.
- UL 723-2008 (revisions through August 2013) and UL 723-2008 (revisions through September 2010), Standard for Test for Surface Burning Characteristics of Building Materials, Underwriters Laboratories, Inc.
- CAN/ULC-S102-10, Standard Method of Test for Surface Burning Characteristics for Building Materials and Assemblies, ULC Standards.

Findings: FlameOff Fire Barrier Paint, when applied to unfinished spruce pine fir plywood (complying with US DOC PS-1 and CSA O151) and Type X gypsum board (complying with ASTM C1396) at a minimum coating thickness of 15 wet mils per 107 ft²/gallon and 20 wet mils per 80 ft²/gallon (381 µm per 2.63 m²/L and 508 µm per 1.96 m²/L), respectively, have a flame-spread index and a smoke-developed index as specified in Table 1 below based on testing in accordance with ASTM E84 / UL 723 and CAN/ULC-S102; and as referenced in the applicable sections of the following code editions below.

ESL-1192 specifies that the product is compliant with section R302.9 of the 2015 International Residential Code, which requires that all wall and ceiling finishes meet minimum surface burning characteristics. The report only addresses conformance with the above listed standards and code sections and only applies to the materials listed in the report.

Installation: The FlameOff Fire Barrier Paint shall be installed in accordance with the FlameOff Coatings, Inc.'s published installation instructions and applicable codes.

Conditions of Listing:

1. The listing report addresses only conformance with the standards and code sections noted above.
2. Approval of the product's use is the sole responsibility of the local code official.
3. The listing report applies only to the materials tested and as submitted for review by ICC-ES.
4. The FlameOff Fire Barrier Paint described in this listing report is produced under a quality control program with inspections by ICC-ES.

The product testing reports by QAI Laboratories (Test Report No: RJ4203-2) and Commercial Testing Company (Report Number 21-06133) confirm the Class A Flame Spread Classification in the ICC Evaluation Services Listing (ESL-1192). In the QAI Laboratories report, the product was applied 15 Wet Mils thick to $\frac{5}{8}$ " Thick SPF Plywood and did not ignite within 10 minutes. In the Commercial Testing Company report the product was applied 20 mils DFT (Dry Film Thickness) with 2 Mils of FlameOFF Wood Primer to $\frac{9}{16}$ " plywood and ignited at 2.55 minutes, spreading 1.41 feet.

Continues on the next page.

The product testing report by Guardian Fire Testing Laboratories confirms that the product meets the testing standard (ASTM E119) for a 1-hour fire rating with no load applied when applied to a floor/open ceiling assembly utilizing dimensional lumber joists and 11/16" OSB Sheathing.

This report describes the results obtained when a floor/open ceiling assembly was coated with 30 mil thickness of FlameOFF FCI Intumescent Coating.

The floor/ open ceiling assembly consisted of:

2" x 8" wood joists, spaced 16" O.C. and 2" x 8" wood rim headers;
11/16" O.S.B. sheathing;
3/4" tongue and groove hardwood flooring

The assembly was built to a small scale.

There was no load on the assembly.

The test standards used were: ASTM E-119, ULC S-101 and NFPA 251.

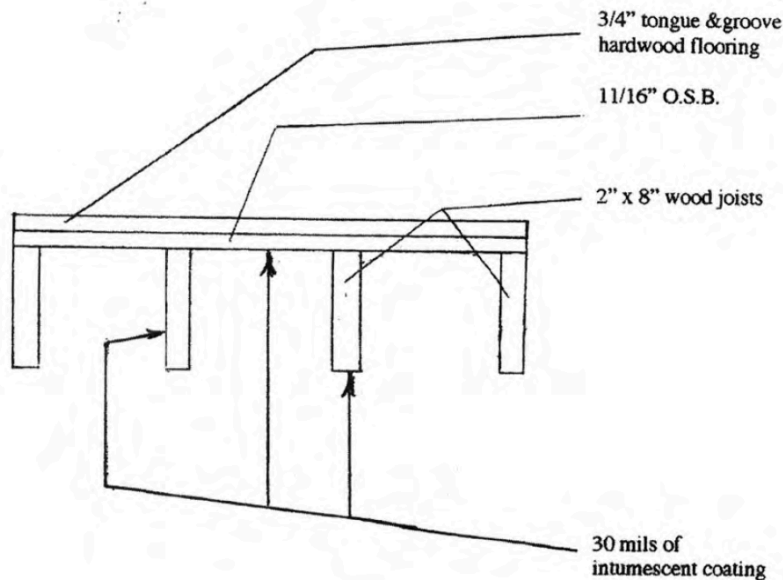
The test was terminated at 1 hour.

Assembly Drawing

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Cross Sectional View

Floor/Open Ceiling



The product started to fall away from the assembly at 11 minutes, and fell away in larger patches at 20 minutes.

Observations

Test Start Time: 11:30am

0:00 Test Start

11:00 pieces of intumescent coating falling off

15:45 crackling sound

20:00 large amounts of intumescent pieces on floor of furnace

23:30 crackling sounds

28:00 can hear crackling thru hardwood floor

32:00 tiny amounts of steam leaking thru hardwood floor

47:30 loud crack sound on top

50:00 glowing between T/C's 2 and 3 unexposed side

52:00 glowing area getting larger,

53:00 opening 1/8" x 4"

56:00 continued flaming in 3 spots

57:00 covered up holes with sheet metal, glowing near knobs in hardwood flooring, gas off South burner

59:00 glowing between T/C's 5 & 6 and at T/C 5

60:00 gas off

The FlameOFF application guide specifies that the product can be used on steel, gypsum, and wood substrates in wall and ceiling assemblies needing to comply with ASTM E119 and the warranty generally waives the seller of any liability by stating that the buyer is responsible for the proper application of the product in accordance with fire, safety, or building codes, and following the application guide and submittal specifications.