



**BRIAN TAYLOR**  
STATE FIRE MARSHAL

August 31, 2026

Mr. Kyle Chandler,  
KC Construction Company LLC  
188 Toronto Trail  
Clyde, NC 28721

**RE: Exterior Wall Envelope Performance Alternative and Fireblocking – 2018 NCRC R703.1.1, R302.11, and R316.6**

Dear Mr. Chandler,

This letter responds to your request for a formal interpretation from the Office of State Fire Marshal (OSFM) dated February 27, 2026, and March 5, 2026, each received by OSFM on the date submitted. Your request is addressed below.

Stated in relevant parts of the documentation received in the request:

“Buncombe County Inspector Keynan Phillips issued a framing inspection failure on February 17, 2026, rejecting a spray polyurethane foam (SPF) assembly at 153 Foxtail Trail, Asheville, NC on two grounds: (1) refusal to recognize Heatlok HFO Pro closed-cell spray foam as an alternative WRB under NCRC R703.1.1 Exception 2, and (2) refusal to recognize the SPF assembly as approved fireblocking under NCRC R302.11.1 Item 7 and R316.6. The county's written denial, issued by Assistant Director Jason Rogers, contains specific, documentable misreadings of the submitted IAPMO UES Evaluation Report ER-565 and ICC-ES Evaluation Report ESR-2847.

I am requesting a formal interpretation from the NCDOT Engineering Division regarding whether our monolithically installed, full-cavity spray foam assembly (Heatlok HFO Pro & Foam-LOK FL500) satisfies the intent and physical requirements of NCRC R302.11 for fireblocking in a Type V post-frame structure.

Buncombe County has incorrectly failed the assembly under R302.11. As detailed in the attached engineering evaluation from Huntsman, the monolithic foam fill eliminates all concealed draft openings, rendering the fireblocking requirement functionally moot. Furthermore, Buncombe County's formal denial letter incorrectly cited ER-565 to claim the product is not approved for Type V construction, ignoring Section 3.0 of the report. “

**Remarks:**

Code sections cited in this letter refer to the 2018 edition of the North Carolina Residential Code (NCRC).

**OFFICE OF STATE FIRE MARSHAL**

1202 MAIL SERVICE CENTER | RALEIGH NC 27699 -1202 | TEL 919.647.0000 | FAX 866.851.6508 | NCOSFM.GOV



Attachment A, a copy of your request for formal interpretation dated February 27, 2026, and March 5, 2026, is attached to this letter for reference.

Attachment B consists of all supporting documentation submitted by the contractor with these requests, including, manufacturer correspondence, technical data, and related materials.

**Code Analysis:**

2018 NCRC Section R703.1.1 – Water Resistance states:

**R703.1.1 Water resistance.** The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a water-resistant barrier behind the exterior veneer as required by Section R703.2 and a means of draining to the exterior water that enters the assembly. Protection against condensation in the exterior wall assembly shall be provided in accordance with Section R702.7 of this code.

**Exceptions:**

1. A weather-resistant exterior wall envelope shall not be required over concrete or masonry walls designed in accordance with Chapter 6 and flashed in accordance with Section R703.4 or R703.8.
2. Compliance with the requirements for a means of drainage, and the requirements of Sections R703.2 and R703.4, shall not be required for an exterior wall envelope that has been demonstrated to resist wind-driven rain through testing of the exterior wall envelope, including joints, penetrations and intersections with dissimilar materials, in accordance with ASTM E331 under the following conditions:
  - 2.1. Exterior wall envelope test assemblies shall include at least one opening, one control joint, one wall/eave interface and one wall sill. All tested openings and penetrations shall be representative of the intended end-use configuration.
  - 2.2. Exterior wall envelope test assemblies shall be at least 4 feet by 8 feet (1219 mm by 2438 mm) in size.
  - 2.3. Exterior wall assemblies shall be tested at a minimum differential pressure of 6.24 pounds per square foot (299 Pa).
  - 2.4. Exterior wall envelope assemblies shall be subjected to the minimum test exposure for a minimum of 2 hours.

The exterior wall envelope design shall be considered to resist wind-driven rain where the results of testing indicate that water did not penetrate control joints in the exterior wall envelope, joints at the perimeter of openings, penetration or intersections of terminations with dissimilar materials.



*Comment: The intent of Exception 2 is to permit an alternative to the requirements for a means of drainage and to Sections R703.2 and R703.4 only where the exterior-wall-envelope design has been demonstrated, through ASTM E331 testing, to resist wind-driven rain. To use this exception, the constructed exterior-wall-envelope assembly must conform to the tested assembly, including the materials, configuration, joints, penetrations, opening perimeters, and intersections with dissimilar materials that affect the assembly's resistance to wind-driven rain. Any variation from the tested assembly that affects those features must be supported by evidence demonstrating equivalent resistance to wind-driven rain.*

2018 NCRC Section R302.11 – Fireblocking states:

**R302.11** Fireblocking. In combustible construction, fireblocking shall be provided to cut off both vertical and horizontal concealed draft openings and to form an effective fire barrier between stories, and between a top story and the roof space.

Fireblocking shall be provided in wood-framed construction in the following locations:

1. In concealed spaces of stud walls and partitions, as follows:
  - 1.1. Vertically at the ceiling and floor levels.
  - 1.2. Horizontally at intervals not exceeding 10 feet (3048 mm) in furred spaces and parallel rows of studs or staggered studs.
2. At interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
3. In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with Section R302.7.
4. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an *approved* material to resist the free passage of flame and products of combustion. The material filling this annular space shall not be required to meet the ASTM E136 requirements.
5. For the fireblocking of chimneys and fireplaces, see Section R1003.19.
6. Fireblocking of cornices of a two-family *dwelling* is required at the line of *dwelling unit* separation.

**R302.11.1 Fireblocking materials.** Except as provided in Section R302.11, Item 4, fireblocking shall consist of the following materials.

1. Two-inch (51 mm) nominal lumber.
2. Two thicknesses of 1-inch (25.4 mm) nominal lumber with broken lap joints.
3. One thickness of 23/32-inch (18.3 mm) wood structural panels with joints backed by 23/32-inch (18.3 mm) wood structural panels.
4. One thickness of 3/4-inch (19.1 mm) particleboard with joints backed by 3/4-inch (19.1 mm) particleboard.
5. One-half-inch (12.7 mm) gypsum board.
6. One-quarter-inch (6.4 mm) cement-based millboard.



7. Batts or blankets of mineral wool or glass fiber or other *approved* materials installed in such a manner as to be securely retained in place.
8. Cellulose insulation installed as tested in accordance with ASTM E119 or UL 263, for the specific application.

*Comment: Section R302.11 requires fireblocking in combustible construction to cut off vertical and horizontal concealed draft openings and to form an effective fire barrier between stories and between the top story and the roof space. The locations listed in the section identify where concealed spaces, or interconnections between concealed spaces, may permit the passage of flame and products of combustion.*

*Section R302.11.1 lists the materials that may be used for fireblocking. Item 7 permits batts or blankets of mineral wool or glass fiber, as well as other approved materials, when they are securely retained in place. Where a material is relied upon to provide fireblocking, it must be a material permitted by Section R302.11.1 or be approved for that use under the applicable code provisions.*

2018 NCRC Section R316.6 – Specific approval states:

**R316.6 Specific approval.** Foam plastic not meeting the requirements of Sections R316.3 through R316.5 shall be specifically *approved* on the basis of one of the following *approved* tests: NFPA 286 with the acceptance criteria of Section R302.9.4, FM 4880, UL 1040 or UL 1715, or fire tests related to actual end-use configurations. Approval shall be based on the actual end-use configuration and shall be performed on the finished foam plastic assembly in the maximum thickness intended for use. Assemblies tested shall include seams, joints and other typical details used in the installation of the assembly and shall be tested in the manner intended for use.

*Comment: Section R316.6 provides a specific-approval path for foam plastic that does not meet the applicable requirements of Sections R316.3 through R316.5. Under this section, approval must be based on one of the identified fire tests or on fire tests related to the foam plastic's actual intended end-use configuration. The testing must be performed on the finished foam-plastic assembly as it is intended to be used, at the maximum intended thickness, and must include seams, joints, and other typical installation details. Documentation or testing addressing water penetration, air impermeability, vapor-retarder performance, or other non-fire product characteristics does not establish the fire-test-based specific approval required by Section R316.6. Specific approval under Section R316.6 does not, by itself, establish approval of foam plastic as fireblocking under Section R302.11.1, Item 7.*

## **Conclusions:**

### **1. Exterior-Wall-Envelope Performance Alternative**

Section R703.1.1, Exception 2, allows the requirements for a means of drainage and Sections R703.2 and R703.4 to be omitted only when the exterior wall envelope assembly has been demonstrated, by testing in accordance with ASTM E331, to resist wind-driven rain. The exception applies to the tested exterior wall envelope assembly, not to a foam product by itself.



The proposed exterior wall envelope assembly must match the ASTM E331-tested assembly or be within the test documentation's stated scope, limitations, and conditions of use. The tested assembly must represent the intended wall configuration, including the required representative openings and penetrations and the joints, penetrations, openings, interfaces, and intersections with dissimilar materials that affect resistance to wind-driven rain. Any deviation from the tested assembly that affects resistance to wind-driven rain must be supported by documentation demonstrating equivalent resistance to wind-driven rain for the intended construction.

## 2. Fireblocking and Foam Plastic

Section R302.11 requires fireblocking where completed combustible construction contains a vertical or horizontal concealed draft opening at a location addressed by that section. The determination depends on the completed construction and whether the opening is effectively cut off. Filling a cavity with foam, or the foam's air-impermeability, does not by itself establish that the opening has been effectively cut off.

Section R302.11.1 lists the materials permitted for fireblocking. Item 7 permits mineral-wool or glass-fiber batts or blankets and other approved materials when securely retained in place. Foam plastic is not specifically identified by name as a listed fireblocking material. Where foam plastic is proposed as an "other approved material" under Item 7, the approval must apply to the proposed fireblocking use and installation. Where the proposed foam-plastic material or installation is not approved under Section R302.11.1, its use must be approved as an alternative material, design, or method under the applicable code provisions. Supporting documentation may include an applicable evaluation report, fire-test report, or other technical evidence addressing the proposed fireblocking use and installation.

Section R316.6 applies where foam plastic does not meet the applicable requirements of Sections R316.3 through R316.5. Where it applies, specific approval must be based on qualifying fire testing of the finished foam-plastic assembly in its actual intended end-use configuration, at the maximum intended thickness, including seams, joints, and typical installation details. Documentation addressing water penetration, air impermeability, vapor-retarder performance, or other non-fire product characteristics does not establish the fire-test-based specific approval required by Section R316.6. Specific approval under Section R316.6 does not, by itself, establish approval of foam plastic as fireblocking under Section R302.11.1, Item 7.

This formal interpretation addresses the meaning and application of the cited code provisions. Whether a particular product, evaluation report, test report, or installation complies with those provisions depends on the verified conditions of construction and the scope, limitations, conditions of use, and applicable approvals identified in the supporting documentation.



**OFFICE OF STATE  
FIRE MARSHAL**  
NC DEPARTMENT OF INSURANCE

Sincerely,

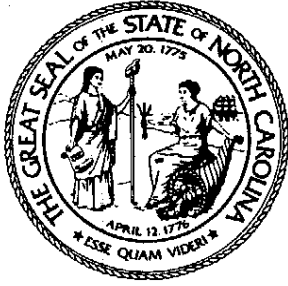
Pak Keung Yip, PE  
Chief Code Consultant  
North Carolina Office of State Fire Marshal

cc: File  
Nathan Childs, NCDOJ, counsel for NC Building Code Council, [nchilds@ncdoj.gov](mailto:nchilds@ncdoj.gov)  
Nicki Shaffer, NCDOJ, counsel for NC Residential Code Council, [wshaffer@ncdoj.gov](mailto:wshaffer@ncdoj.gov)  
David Rittlinger, NCOSFM, Division Chief - Code and Interpretations, [david.rittlinger@ncdoi.gov](mailto:david.rittlinger@ncdoi.gov)



## **Attachment A**





**APPENDIX E  
APPEALS  
NORTH CAROLINA  
BUILDING CODE COUNCIL**  
1429 Rock Quarry Road, Suite 105  
Raleigh, North Carolina 27610  
(919) 647-0008  
david.rittlinger@ncdoi.gov

GS 153A-374, GS 160A-434  
Formal Interpretation by NCDOI ☒ 2/27/2026  
Appeal of Local Decision to NCDOI ☒ X

APPEAL TO NCDOI/NCBCC  
Hearing Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
GS 143-140, GS 143-141  
Appeal of Local Decision to NCBCC \_\_\_\_\_  
Appeal of NCDOI Decision to NCBCC \_\_\_\_\_

**APPELLANT** Kyle Chandler **PHONE** ( 828 ) 545 - 9111 x \_\_\_\_\_  
**REPRESENTING** KC Construction Company LLC  
**ADDRESS** 188 Toronto Trail  
**CITY** Clyde **STATE** NC **ZIP** 28721  
**E-MAIL** builtbykc@gmail.com **FAX** ( \_\_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_

North Carolina State Building Code, Volume 2018 North Carolina - Section R703.1.1 Exception 2; R302.11.1; R316.6  
Residential Code

REQUEST ONE: ☒ [X] Formal Interpretation by NCDOI ☐ [ ] Appeal of Local Decision to NCBCC  
☒ [X] Appeal of Local Decision to NCDOI ☐ [ ] Appeal of NCDOI Decision to NCBCC

Type or print. Include all background information as required by the referenced General Statutes and the attached policies. Attach additional supporting information.

**REASON:**

Buncombe County Inspector Keynan Phillips issued a framing inspection failure on February 17, 2026, rejecting a spray polyurethane foam (SPF) assembly at 153 Foxtail Trail, Asheville, NC on two grounds: (1) refusal to recognize Heatlok HFO Pro closed-cell spray foam as an alternative WRB under NCRC R703.1.1 Exception 2, and (2) refusal to recognize the SPF assembly as approved fireblocking under NCRC R302.11.1 Item 7 and R316.6. The county's written denial, issued by Assistant Director Jason Rogers, contains specific, documentable misreadings of the submitted IAPMO UES Evaluation Report ER-565 and ICC-ES Evaluation Report ESR-2847. All local remedies have been exhausted. Full technical argument and supporting documentation are provided in the attached Supplemental Technical Addendum.

Signature 

DATE: 2/27/2026

APPEAL TO NCDOI/NCBCC

FORM 3/14/17

## **202.9 Appeals**

**202.9.1 Engineering Division.** A written technical interpretation shall be provided as specified in Section 203.2.1.2. Any person may appeal in writing an order, decision, or determination pertaining to the code or any state building law by filing written notice with the Commissioner of Insurance or his designee within ten (10) days after the order, decision, or determination. A copy of the appeal shall be furnished to each party.  
(General Statutes 143-140, 153A-374 and 160A-434)

### **203.2.1 Interpretations**

**203.2.1.1 Informal Interpretations.** The Engineering Division shall provide informal interpretations on code related matters either by e-mail, letter or telephone. These informal interpretations may be accepted by the local code enforcement official or party requesting the interpretation. Either party may request a formal interpretation of the code.

**203.2.1.2 Formal Interpretations.** Any person may request in writing a formal interpretation of the code. The request shall be addressed to the Chief Code Consultant for the Department of Insurance. The request shall be specific and shall reference the code sections in question. All formal interpretations shall be in writing. A formal interpretation shall be binding on all parties unless appealed to the Building Code Council as specified in Section 201.9.2. Formal interpretations determined to be of a general nature may be posted on the Department website. (General Statute 143-140)

**203.2.2 Appeals.** Any person may appeal in writing an order, decision, or determination of a code enforcement official pertaining to the code or any state building law. The appeal shall be addressed to the Chief Engineer for the Department of Insurance by filing written notice within ten (10) days after the order, decision, or determination. The appeal shall contain the type and size of the building in question, the location of the building, and shall reference the code sections in question. The decision shall be in writing and shall set forth the facts found. The decision rendered shall be based on the technical provisions of the code, public health and safety and shall be construed liberally to those ends. A decision shall be binding on all parties unless appealed to the Building Code Council as specified in Section 201.9.2. A copy of the appeal and written decision shall be furnished to each party. (General Statutes 153A-374 and 160A-434)

**202.9.2 Building Code Council.** The Building Code Council shall hear appeals from the decisions of State enforcement agencies relating to any matter related to the code. Any person wishing to appeal a decision of a State enforcement agency to the Building Code Council shall give written notice of appeal as follows:

**202.9.2.1** Twenty one (21) copies including an original of the Notice of Appeal shall be filed with the Building Code Council c/o NC Department of Insurance, Engineering Division, 325 North Salisbury Street, Room 5\_44, Raleigh, NC 27603 and one (1) copy shall be filed with the State enforcement agency from which the appeal is taken.

**202.9.2.2** The Notice of Appeal shall be received no later than thirty (30) days from the date of the decision of the State enforcement agency.

**202.9.2.3** The Notice of Appeal shall be legibly printed, typewritten or copied and shall contain the following:

- (1) Name, address of the party or parties requesting the appeal.
- (2) The name of the State enforcement agency, the date of the decision from which the appeal is taken, and a copy of the written decision received from the enforcement agency.
- (3) The decision from which the appeal is taken shall be set forth in full in the Notice of Appeal or a copy of the decision shall be attached to all copies of the Notice of Appeal.
- (4) The contentions and allegations of fact must be set forth in full in a clear and concise manner with reference to the sections of the code in controversy.
- (5) The original Notice of Appeal shall be signed by the party or parties filing appeal.
- (6) The Notice of Appeal shall be received by the first day of the month prior to the Building Code Council's quarterly scheduled meeting in order to be placed on the agenda for that meeting. The Chairman may schedule a special meeting to hear an appeal.

**202.9.2.4** Upon the proper filing of the Notice of Appeal, the Building Code Council Secretary shall forward one (1) copy of the Notice of Appeal to each member of the Building Code Council. The Chairman may appoint a Hearing Committee to hear appeals. The Secretary shall send notice in writing to the party or parties requesting an appeal and to the Building Code Council Hearing Committee members at least fifteen (15) days prior to the Hearing Committee meeting. A written decision of the Hearing Committee meeting shall be provided to all Building Code Council Members. The actions of the Hearing Committee shall be final, unless appealed to the full Building Code Council in writing within 30 days of the Hearing Committee's action. If a Hearing Committee consists of at least seven Council members, it will constitute a quorum of the full Council. Further appeals shall be as specified in Section 202.9.3.

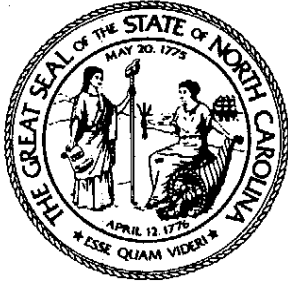
**202.9.2.5** The Building Code Council shall, upon a motion of the State enforcement agency or on its own motion, dismiss appeals for the following reasons:

- (1) Not pursued by the appellant or withdrawn;
- (2) Appeal not filed in accordance with these rules; or
- (3) Lack of jurisdiction.

**202.9.2.6** When the Building Code Council finds that a State enforcement agency was in error in its interpretation of the code, the Building Code Council shall remand the case to the agency with instructions to take such actions as the Building Code Council directs. When the Building Code Council finds on appeal that materials or methods of construction proposed are equivalent to those required by the code, the Building Code Council shall remand the case to the State enforcement agency with instructions to permit the use of such materials or methods of construction. The Building Code Council shall immediately initiate procedures for amending the code to permit the use of such materials or methods of construction.

**202.9.2.7** The Building Code Council shall provide a written decision setting forth the findings of fact and the Building Code Council's conclusions to each party or parties filing the appeal and to the State enforcement agency from which the appeal was taken.

**202.9.3 Superior Court.** Whenever any person desires to appeal a decision of the Building Code Council or a decision of a State or local enforcement agency, he may appeal either to the Wake County Superior Court or the Superior Court of the county in which the proposed building is to be situated in accordance with the provisions of Chapter 150B of the General Statutes.  
(General Statute 143-141(d))



**APPENDIX E  
APPEALS  
NORTH CAROLINA  
BUILDING CODE COUNCIL**  
1429 Rock Quarry Road, Suite 105  
Raleigh, North Carolina 27610  
(919) 647-0008  
david.rittlinger@ncdoi.gov

GS 153A-374, GS 160A-434  
Formal Interpretation by NCDI ☒ \_\_\_\_\_  
Appeal of Local Decision to NCDI ☐ \_\_\_\_\_  
Hearing Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
GS 143-140, GS 143-141  
Appeal of Local Decision to NCBCC \_\_\_\_\_  
Appeal of NCDI Decision to NCBCC \_\_\_\_\_

**APPELLANT** Kyle Chandler **PHONE** ( 828 ) 545 - 9111 X \_\_\_\_\_  
**REPRESENTING** KC Construction Company LLC  
**ADDRESS** 188 Toronto Trail  
**CITY** Clyde **STATE** NC **ZIP** 28721  
**E-MAIL** builtbykc@gmail.com **FAX** ( \_\_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_

North Carolina State Building Code, Volume 2018 North Carolina- Section R302.11 (Fireblocking) & R316.6 (Specific Approval)  
Residential Code

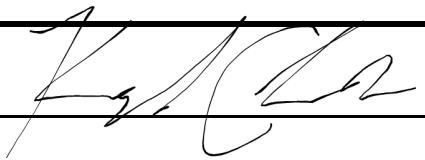
REQUEST ONE: ☒ [ X ] Formal Interpretation by NCDI ☐ [ ] Appeal of Local Decision to NCBCC  
☒ [ X ] Appeal of Local Decision to NCDI ☐ [ ] Appeal of NCDI Decision to NCBCC

Type or print. Include all background information as required by the referenced General Statutes and the attached policies. Attach additional supporting information.

I am requesting a formal interpretation from the NCDI Engineering Division regarding whether our monolithically installed, full-cavity spray foam assembly (Heatlok HFO Pro & Foam-LOK FL500) satisfies the intent and physical requirements of NCRC R302.11 for fireblocking in a Type V post-frame structure.

**REASON:**

Buncombe County has incorrectly failed the assembly under R302.11. As detailed in the attached engineering evaluation from Huntsman, the monolithic foam fill eliminates all concealed draft openings, rendering the fireblocking requirement functionally moot. Furthermore, Buncombe County's formal denial letter incorrectly cited ER-565 to claim the product is not approved for Type V construction, ignoring Section 3.0 of the report. Please see the attached Supplemental Technical Addendum for full details.

Signature 

DATE: 3/5/26

APPEAL TO NCDI/NCBCC

FORM 3/14/17

## **202.9 Appeals**

**202.9.1 Engineering Division.** A written technical interpretation shall be provided as specified in Section 203.2.1.2. Any person may appeal in writing an order, decision, or determination pertaining to the code or any state building law by filing written notice with the Commissioner of Insurance or his designee within ten (10) days after the order, decision, or determination. A copy of the appeal shall be furnished to each party.  
(General Statutes 143-140, 153A-374 and 160A-434)

### **203.2.1 Interpretations**

**203.2.1.1 Informal Interpretations.** The Engineering Division shall provide informal interpretations on code related matters either by e-mail, letter or telephone. These informal interpretations may be accepted by the local code enforcement official or party requesting the interpretation. Either party may request a formal interpretation of the code.

**203.2.1.2 Formal Interpretations.** Any person may request in writing a formal interpretation of the code. The request shall be addressed to the Chief Code Consultant for the Department of Insurance. The request shall be specific and shall reference the code sections in question. All formal interpretations shall be in writing. A formal interpretation shall be binding on all parties unless appealed to the Building Code Council as specified in Section 201.9.2. Formal interpretations determined to be of a general nature may be posted on the Department website. (General Statute 143-140)

**203.2.2 Appeals.** Any person may appeal in writing an order, decision, or determination of a code enforcement official pertaining to the code or any state building law. The appeal shall be addressed to the Chief Engineer for the Department of Insurance by filing written notice within ten (10) days after the order, decision, or determination. The appeal shall contain the type and size of the building in question, the location of the building, and shall reference the code sections in question. The decision shall be in writing and shall set forth the facts found. The decision rendered shall be based on the technical provisions of the code, public health and safety and shall be construed liberally to those ends. A decision shall be binding on all parties unless appealed to the Building Code Council as specified in Section 201.9.2. A copy of the appeal and written decision shall be furnished to each party. (General Statutes 153A-374 and 160A-434)

**202.9.2 Building Code Council.** The Building Code Council shall hear appeals from the decisions of State enforcement agencies relating to any matter related to the code. Any person wishing to appeal a decision of a State enforcement agency to the Building Code Council shall give written notice of appeal as follows:

**202.9.2.1** Twenty one (21) copies including an original of the Notice of Appeal shall be filed with the Building Code Council c/o NC Department of Insurance, Engineering Division, 325 North Salisbury Street, Room 5\_44, Raleigh, NC 27603 and one (1) copy shall be filed with the State enforcement agency from which the appeal is taken.

**202.9.2.2** The Notice of Appeal shall be received no later than thirty (30) days from the date of the decision of the State enforcement agency.

**202.9.2.3** The Notice of Appeal shall be legibly printed, typewritten or copied and shall contain the following:

- (1) Name, address of the party or parties requesting the appeal.
- (2) The name of the State enforcement agency, the date of the decision from which the appeal is taken, and a copy of the written decision received from the enforcement agency.
- (3) The decision from which the appeal is taken shall be set forth in full in the Notice of Appeal or a copy of the decision shall be attached to all copies of the Notice of Appeal.
- (4) The contentions and allegations of fact must be set forth in full in a clear and concise manner with reference to the sections of the code in controversy.
- (5) The original Notice of Appeal shall be signed by the party or parties filing appeal.
- (6) The Notice of Appeal shall be received by the first day of the month prior to the Building Code Council's quarterly scheduled meeting in order to be placed on the agenda for that meeting. The Chairman may schedule a special meeting to hear an appeal.

**202.9.2.4** Upon the proper filing of the Notice of Appeal, the Building Code Council Secretary shall forward one (1) copy of the Notice of Appeal to each member of the Building Code Council. The Chairman may appoint a Hearing Committee to hear appeals. The Secretary shall send notice in writing to the party or parties requesting an appeal and to the Building Code Council Hearing Committee members at least fifteen (15) days prior to the Hearing Committee meeting. A written decision of the Hearing Committee meeting shall be provided to all Building Code Council Members. The actions of the Hearing Committee shall be final, unless appealed to the full Building Code Council in writing within 30 days of the Hearing Committee's action. If a Hearing Committee consists of at least seven Council members, it will constitute a quorum of the full Council. Further appeals shall be as specified in Section 202.9.3.

**202.9.2.5** The Building Code Council shall, upon a motion of the State enforcement agency or on its own motion, dismiss appeals for the following reasons:

- (1) Not pursued by the appellant or withdrawn;
- (2) Appeal not filed in accordance with these rules; or
- (3) Lack of jurisdiction.

**202.9.2.6** When the Building Code Council finds that a State enforcement agency was in error in its interpretation of the code, the Building Code Council shall remand the case to the agency with instructions to take such actions as the Building Code Council directs. When the Building Code Council finds on appeal that materials or methods of construction proposed are equivalent to those required by the code, the Building Code Council shall remand the case to the State enforcement agency with instructions to permit the use of such materials or methods of construction. The Building Code Council shall immediately initiate procedures for amending the code to permit the use of such materials or methods of construction.

**202.9.2.7** The Building Code Council shall provide a written decision setting forth the findings of fact and the Building Code Council's conclusions to each party or parties filing the appeal and to the State enforcement agency from which the appeal was taken.

**202.9.3 Superior Court.** Whenever any person desires to appeal a decision of the Building Code Council or a decision of a State or local enforcement agency, he may appeal either to the Wake County Superior Court or the Superior Court of the county in which the proposed building is to be situated in accordance with the provisions of Chapter 150B of the General Statutes.  
(General Statute 143-141(d))



## **Attachment B**



# HUNTSMAN

## BUILDING SOLUTIONS

March 2, 2026

KC Construction Company, LLC  
188 Toronto Trail  
Clyde, NC  
28721  
Attn: Mr. Kyle Chandler-Proprietor

Re: Heatlok® HFO Pro- Water-Resistive Barrier (WRB)

Dear Mr. Chandler,

This letter serves to confirm that Heatlok® HFO Pro has been tested in accordance with ASTM E331-**Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference** with dimensions equaling 64ft<sup>2</sup> under a minimum differential pressure of 15lb/ft<sup>2</sup> for a minimum test exposure of 2-hours by third party, independent, accredited laboratory Intertek.

The International Residential Code, Section R703.1.1-**Water Resistance, Exception: 2**, states that compliance with R703.2-**Water-Resistive Barrier** and R703.4-**Flashing** shall not be required when it has been demonstrated to resist wind-driven rain in accordance with ASTM E331. Wall assemblies shall be a minimum of 4ft x 8ft (32ft<sup>2</sup>) and shall be tested at a minimum differential pressure of 6.24lb/ft<sup>2</sup> for a minimum testing exposure of 2 hours. Tests are deemed acceptable when no water penetration is observed during the test exposure. The results on a minimum of 1.25-inches of Heatlok® HFO Pro as tested in accordance with ASTM E331 showed that there was no water leakage under the prescribed conditions and duration of the test. (See attached figures)



## HUNTSMAN BUILDING SOLUTIONS TEST REPORT

SCOPE OF WORK  
ASTM E2357 AIR LEAKAGE and ASTM E331 TESTING ON HEATLOK HFO PRO

REPORT NUMBER  
L4520.01-801-44 RO

Fig.1-Intertek Scope of Work

### SECTION 8

#### TEST SPECIMEN DESCRIPTION

**Product Type:** Heatlok HFO Pro

**Series/Model:** 1.25" Closed-Cell Spray Foam Insulation

**Wall #1:** Opaque Wall

#### Product Size:

| OVERALL AREA:                              | WIDTH       |        | HEIGHT      |        |
|--------------------------------------------|-------------|--------|-------------|--------|
|                                            | millimeters | inches | millimeters | inches |
| 5.9 m <sup>2</sup> (64.0 ft <sup>2</sup> ) |             |        |             |        |
| Overall Size                               | 2438        | 96     | 2438        | 96     |

Fig. 2-Assembly Dimensions



**Test Specimen #1:** Opaque

| TITLE OF TEST                                               | RESULTS        | ALLOWED    | NOTE |
|-------------------------------------------------------------|----------------|------------|------|
| Water Penetration, ASTM E331<br>per AC 71 at 720Pa (15 psf) | 120<br>minutes | No leakage |      |

**General Note:** All testing was performed in accordance with the referenced standards.

**Fig.3-Testing Results**

#### **SECTION 9** **CONCLUSION**

The mock-ups tested met the specified performance requirements set forth in ASTM E2357-11 and AC71 / ASTM E331.

**Fig.4-Conclusion**

In summary, Heatlok® HFO Pro has been evaluated and is in compliance with the requirements of the IRC Section R703.1.1, Exception 2 as a result of testing in accordance with ASTM E331 under the prescribed requirements showing no water leakage through the assembly and as such meets the intent of the building code for a water-resistive barrier when applied at a minimum thickness of 1.25-inches.

With warm regards,

**Paul Warren**  
Building Science and Engineering Manager



**Mobile:** 520-610-6216 | **Email:** [paul\\_warren@huntsman.com](mailto:paul_warren@huntsman.com)

**Huntsman Building Solutions**

# HUNTSMAN

## BUILDING SOLUTIONS

March 3, 2026

KC Construction Company, LLC  
188 Toronto Trail  
Clyde, NC  
28721  
Attn: Mr. Kyle Chandler-Proprietor

Re: Heatlok® HFO Pro and Foam-Lok FL500- Wall Assembly at 153 Foxtrail Trl., Asheville, NC 28806-  
Fire Blocking Requirements

Dear Mr. Chandler,

This letter serves to confirm that you have described the application Heatlok® HFO Pro spray applied polyurethane foam insulation directly to the corrugated exterior metal siding at the floor/ceiling intersections followed by a full cavity fill application of Foam-Lok FL500 spray applied polyurethane foam insulation.

The 2024 North Carolina State Residential Code, Section R302.11: Fireblocking, states: ***“In combustible construction, fireblocking shall be provided to cut off both vertical and horizontal concealed draft openings and to form an effective fire barrier between stories, and between the top story and the roof space.*”**

The 2024 North Carolina State Residential Code, Section 202, defines Fireblocking as follows, “Building materials or materials approved for use as fireblocking, installed to resist the free passage of flame to other areas of the building through concealed spaces.”

The primary purpose of fire blocking is to prevent the vertical movement of flames, smoke, and gases within a building. Fire blocking achieves this by sealing off **gaps and hidden spaces**, which helps contain the fire to its original area. This containment provides occupants with more time to evacuate and allows firefighters to have more time to respond.

Moreover, fire blocking restricts the flow of oxygen, which is crucial for a fire to grow and spread. By limiting the airflow, fire blocking effectively slows down the combustion process, thereby aiding in the suppression of the fire.

The application described above includes a spray foam air impermeable insulation filled wall cavity inclusive of an air impermeable spray foam applied at the floor/ceiling intersections with the exterior wall. With the elimination of airspace, draft openings, gaps and hidden spaces resulting from this monolithically occupied wall assembly with spray polyurethane foam insulation renders an assembly containing no potential for vertical or horizontal concealed draft openings, the functionality surrounding the requirement for fireblocking, and as such Section R302.11 of the 2024 North Carolina State Residential Code is not applicable to this specific application.

**With warm regards,**

**Paul Warren**  
Building Science and Engineering Manager

**HUNTSMAN**  
BUILDING SOLUTIONS

Mobile: 520-610-6216 | Email: [paul\\_warren@huntsman.com](mailto:paul_warren@huntsman.com)

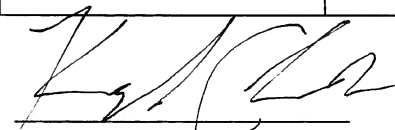
**Huntsman Building Solutions**



BUNCOMBE COUNTY  
PERMITS & INSPECTIONS  
30 VALLEY STREET  
ASHEVILLE, NC 28801

### INFORMAL INTERNAL REVIEW PROCESS FORM

|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                             |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| *Name/Phone number                                                           | Kyle Evan Chandler                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (828)545-9111               |
| *Address                                                                     | 188 Toronto Trail, Clyde, NC 28721                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |
| *Case Number                                                                 | BLD2025-01146                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                             |
| *Email                                                                       | Builtbykc@gmail.com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                             |
| *Address of inspection                                                       | 153 Foxtail Trl., Asheville, NC 28806                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                             |
| *Date of inspection                                                          | 2/16/26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |
| *Type of inspection                                                          | Framing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |
| *Name of Inspector                                                           | Keynan R. Phillips (and Supervisory Staff)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |
| *Inspection result                                                           | Failed - Inspector demanding a prescriptive WRB (house wrap) on a performance-tested post-frame assembly. Inspector explicitly directed the removal of all installed exterior metal siding to apply the wrap to each individual 2x6 perlin, which would result in tens of thousands of dollars in unwarranted damages and undue hardship.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |
| *Supporting evidence vs Inspection decision<br>(Attach supporting documents) | <p>NCRC R104.11 (Alternative Materials): This section mandates that the building official shall approve alternative methods of construction when substantiated by approved reports that comply with the intent of the code.</p> <p>Recognition of IAPMO UES: IAPMO UES is an ANSI-accredited product certification body (Accreditation #0202). Questioning its accreditation is a deviation from established NCRC standards.</p> <p>ESR/ER Currency: The provided UES ER-565 (valid through March 2026) and ICC-ES ESR-2847 (Revised May 2024) are current, recognized documents governing this project.</p> <p>R703.1.1 Exception 2: This section permits the omission of a prescriptive WRB for assemblies demonstrated to resist wind-driven rain through testing in accordance with ASTM E331.</p> <p>ASTM E331 Testing: UES ER-565 confirms the Heatlok HFO Pro was evaluated per AC377, which requires the specific water-penetration testing necessary to satisfy ASTM E331.</p> <p>Approved Alternative WRB: The foam serves as the "other approved water-resistive barrier" described in Section R703.2 of the 2018 NCRC.</p> |                             |
| *this form submitted via<br>(hand delivery/email/fax)                        | Email                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                             |
| <b>Remainder of form to be completed by Supervisor</b>                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                             |
| Supervisor name/number                                                       | Jason Rogers, Assistant Director                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 828-250-5384                |
| Date of Submittal                                                            | 2-19-2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Date of review<br>2-20-2026 |
| Summary of findings                                                          | The inspection revealed no Water- Resistant Barrier in accordance with section R703 of NCRC. The supporting documents are not acceptable as an alternate (see attached letter).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                             |
| Date sent to Applicant                                                       | February 27, 2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                             |

  
(Signature)

2/19/26

(Date)

Kyle Chandler

(Printed Name)

I UNDERSTAND MY REVIEW WILL BE NOT BE PROCESSED IF THIS FORM IS NOT COMPLETE, ALL AREAS WITH "\*" WERE COMPLETED BY MYSELF. I ALSO UNDERSTAND A DECISION WILL BE REACHED WITHIN A REASONABLE AMOUNT OF TIME AS PER North Carolina G.S. 143-140 (a)



## Permits & Inspections

Bob Haynes  
*Director*

February 25, 2026

Kevin Evan Chandler  
188 Toronto Trail  
Clyde, NC 28721

Re: Technical Interpretation Pursuant to N.C. Gen. Stat. § 143-140

Dear Mr. Chandler:

On February 16, 2026, Buncombe County Permit and Inspection's staff provided a consultation visit at 153 Foxtail Trail, Asheville, North Carolina. The inspector advised that the building did not have a water-resistant barrier ("WRB") as required by 2018 North Carolina State Building Code: Residential Code, R703.1.1 Water Resistance.

On February 19, 2026, you requested a technical interpretation of the inspector's decision that the building does not have a WRB, pursuant to N.C. Gen. Stat. Stat. § 143-140.

After review, I have confirmed that the building does not have a WRB as required by R703.1.1.

After reviewing your supporting evidence, Heatlok® HFO PRO Spray-Applied Polyurethane Foam Plastic Insulation cannot be utilized. IAMPO Uniform Evaluations Services ("UES") Evaluation Report Number 565, 1.0 Recognition states "...exterior walls of Types I-IV construction..." This building is a Type V construction and makes the use of Heatlok® non-complaint for this construction type, as identified in NC Building Code, Section 602: Construction Classification.

Additionally, FOAM-LOK FL 500 Spray Foam Insulation is not an acceptable WRB. ICC-Evaluation Services ("ICC") Evaluation Report Number 2847, 4.2 Application states "...the insulation must be protected from the weather during and after application." Furthermore, 5.0 Condition of Use, 5.12 states "a vapor retarder must be installed as required by the applicable code." NC Residential Code, R703.1.1 Water Resistance requires a WRB.

In conclusion, Heatlok® is not acceptable compliance for NC Residential Code, R703.1.1 because it is specifically disqualified, as it does not have testing in compliance with the type of construction for this structure.

FOAM-LOK FL 500 is not acceptable compliance because its use requires compliance with the NC Residential Code, R703.1.1 and the building does not have a WRB.

Sincerely,

A handwritten signature in black ink that reads "Jason R. Rogers".

Jason R. Rogers  
Assistant Director, Permits and Inspections  
35 Woodfin Street, Asheville, NC 28801  
828-250-5384  
jason.rogers@buncombenc.gov





BUNCOMBE COUNTY  
PERMITS & INSPECTIONS  
30 VALLEY STREET  
ASHEVILLE, NC 28801

### INFORMAL INTERNAL REVIEW PROCESS FORM

|                                                                              |                                                                                                                                                |                          |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| *Name/Phone number                                                           | Kyle Evan Chandler                                                                                                                             | (828)545-9111            |
| *Address                                                                     | 188 Toronto Trail, Clyde, NC 28721                                                                                                             |                          |
| *Case Number                                                                 | BLD2025-01146 inspection #: 1402217                                                                                                            | No case number available |
| *Email                                                                       | Builtbykc@gmail.com                                                                                                                            |                          |
| *Address of inspection                                                       | 153 Foxtail Trl., Asheville, NC 28806                                                                                                          |                          |
| *Date of inspection                                                          | 2/11/26                                                                                                                                        |                          |
| *Type of inspection                                                          | Building Frame                                                                                                                                 |                          |
| *Name of Inspector                                                           | Keynan R. Phillips, Edward Braun (and Supervisory Staff)                                                                                       |                          |
| *Inspection result                                                           | Failed                                                                                                                                         |                          |
| *Supporting evidence vs Inspection decision<br>(Attach supporting documents) | "See Attached Addendum A for Code Citations and Engineering Evaluation Reports."                                                               |                          |
| *this form submitted via<br>(hand delivery/email/fax)                        | Email                                                                                                                                          |                          |
| Remainder of form to be completed by Supervisor                              |                                                                                                                                                |                          |
| Supervisor name/number                                                       | Jason Rogers                                                                                                                                   | 828-250-5360             |
| Date of Submittal                                                            | 2-26-2026                                                                                                                                      | Date of review 3-4-2026  |
| Summary of findings                                                          | The Fire blocking is not installed in compliance with the NCRC and the product proposed do not comply for an alternative method (see Attached) |                          |
| Date sent to Applicant                                                       | 3-4-2026                                                                                                                                       |                          |

  
(Signature)

2/19/26  
(Date)

Kyle Chandler  
(Printed Name)

I UNDERSTAND MY REVIEW WILL BE NOT BE PROCESSED IF THIS FORM IS NOT COMPLETE, ALL AREAS WITH "\*" WERE COMPLETED BY MYSELF. I ALSO UNDERSTAND A DECISION WILL BE REACHED WITHIN A REASONABLE AMOUNT OF TIME AS PER North Carolina G.S. 143-140 (a)



## Permits & Inspections

Jason Rogers  
*Director*

March 3, 2026

Kevin Evan Chandler  
188 Toronto Trail  
Clyde, NC 28721

Re: Technical Interpretation Pursuant to N.C. Gen. Stat. § 143-140

Dear Mr. Chandler:

On February 16, 2026, Buncombe County Permit and Inspection's staff provided a consultation visit at 153 Foxtail Trail, Asheville, North Carolina. The inspector advised that the building did not have proper Fire Blocking as required by 2018 North Carolina State Building Code: Residential Code, R302.11.

On February 26, 2026, you requested a technical interpretation of the inspector's decision that the building does not have proper fire-block installed, pursuant to N.C. Gen. Stat. Stat. § 143-140.

After review, I have confirmed that the building does not have a fire-block as required by R302.11.

After reviewing your supporting evidence, Heatlok® HFO PRO Spray-Applied Polyurethane Foam Plastic Insulation cannot be utilized. IAMPO Uniform Evaluations Services ("UES") Evaluation Report Number 565, 1.0 Recognition states "...exterior walls of Types I-IV construction..." This building is a Type V construction and makes the use of Heatlok® non-complaint for this construction type, as identified in NC Building Code, Section 602: Construction Classification.

Additionally, Heatlok® HFO PRO does not have specific testing and no test results have been supplied to show that this is an acceptable end use for fire- blocking material in accordance with NC Residential Code section 316.6 (7).

In conclusion, Heatlok® is not acceptable compliance for NC Residential Code, R302.11 because it is specifically disqualified, as it does not have testing in compliance with the type of construction for this structure and does not have specific testing approval showing the end use as fire block material.

Sincerely,

A handwritten signature in black ink that reads "Jason R. Rogers".

Jason R. Rogers  
Director, Permits and Inspections  
35 Woodfin Street, Asheville, NC 28801  
828-250-5384  
jason.rogers@buncombenc.gov



# WRB ADDUMDUM

**PURPOSE OF THIS ADDENDUM** This addendum supplements the formal interpretation request previously submitted to the North Carolina Office of the State Fire Marshal (NCOSFM) and the North Carolina Department of Insurance (NCDI). Its purpose is to present the complete, consolidated technical argument demonstrating that the closed-cell spray foam assembly installed at **153 Foxtail Trail, Asheville NC 28806** is compliant with the 2018 North Carolina Residential Code as an alternative Water-Resistive Barrier (WRB) under NCRC R703.1.1 Exception 2.

## **SECTION 1: THE WRB DISPUTE - COMPLIANCE UNDER NCRC R703.1.1 EXCEPTION 2**

**1.1 The Controlling Code Pathway** NCRC R703.1.1 Exception 2 provides that compliance with the prescriptive WRB requirements of Sections R703.2 and R703.4 (including house wrap or 30-lb. felt paper) shall not be required for an exterior wall envelope that has been demonstrated to resist wind-driven rain through testing in accordance with ASTM E331.

**1.2 How the Installed Assembly Satisfies Exception 2** The Heatlok HFO Pro closed-cell spray foam assembly satisfies NCRC R703.1.1 Exception 2 on three independent, documented grounds:

- **Ground 1 - Direct ASTM E331 Testing:** As confirmed by the attached project-specific engineering letter from Paul Warren (Building Science and Engineering Manager, Huntsman Building Solutions), Heatlok HFO Pro was tested by Intertek in accordance with ASTM E331. The assembly was tested at a differential pressure of 15 psf (exceeding the 6.24 psf code requirement) for 2 hours, resulting in zero water leakage. The manufacturer explicitly confirms this satisfies the intent and requirement of IRC/NCRC R703.1.1 Exception 2.
- **Ground 2 - Air Impermeability (ER-565 Section 4.6):** Heatlok HFO Pro is classified as air-impermeable at a minimum installed thickness of 1 inch. We are installing it at 1.5 inches thick. Spray foam physically conforms to and fills every corrugation void in the metal siding, providing a superior, tested moisture control layer that a prescriptive house wrap (which cannot seal corrugation ribs) cannot replicate.
- **Ground 3 - Class II Vapor Retarder (ER-565 Section 4.7):** Heatlok HFO Pro qualifies as a Class II vapor retarder. The 3-sided encapsulation of the horizontal framing members integrates the 2x6 purlins into a completely sealed system. By utilizing this air-impermeable material to physically prevent interior, moisture-laden air from reaching the back of the metal panels and mixing with exterior air, it entirely eliminates the temperature differential and condensation threat (the dew-point mechanism). This neutralizes the precise moisture accumulation hazard that a prescriptive WRB requirement is designed to prevent.

**1.3 Why the Inspector's Directive Cannot Be Justified** Inspector Phillips verbally directed that house wrap or 30-lb. felt paper be applied to every individual horizontal framing member prior to the installation of the corrugated metal siding. This directive requires the complete removal of all installed exterior metal siding and roofing, resulting in tens of thousands of dollars in unwarranted damages. This undue financial hardship is being imposed to force the installation of a vapor-permeable, air-resistive wrap that is measurably inferior to the air-impermeable, E331-tested assembly already in place.

**SECTION 2: BUNCOMBE COUNTY'S DOCUMENTED ERRORS** The following table identifies the specific, documentable errors made by Buncombe County inspectors and supervisors regarding the WRB:

- **Error 1 - UES Accreditation:** The county claimed IAPMO UES is not an accredited agency. **Correction:** IAPMO UES is accredited by ANAB under ISO/IEC 17065 (Accreditation #0202). NCRC §104.11.1 requires acceptance of reports from approved accredited sources.
- **Error 2 - ER Currency:** The county claimed ER-565 was not current. **Correction:** The current ER-565 (Revised 03/07/2025) is valid through 03/31/2026.
- **Error 3 - Type V Construction:** Assistant Director Jason Rogers' formal denial letter stated ER-565 §1.0 limits the product's use to Types I-IV construction. **Correction:** ER-565 §3.0 (Product Use) explicitly states the product is approved for Types I, II, III, IV, and V construction and one-and-two-family dwellings. The denial misread §1.0 in isolation and ignored the explicit Type V approval in §3.0.
- **Error 4 - Product Conflation:** The county claimed Foam-LOK FL500 is not an approved WRB. **Correction:** The applicant never claimed it was. The WRB alternative is the closed-cell Heatlok HFO Pro (ER-565), which encapsulates the exterior envelope. The open-cell FL500 is simply cavity fill.

**SECTION 3: PRECEDENT AND CONSISTENCY** The identical assembly—closed-cell Heatlok HFO Pro applied as an alternative WRB on a post-frame structure with corrugated metal siding—has been reviewed and approved under the 2018 NCRC in the following neighboring jurisdictions: Haywood County, Jackson County, Swain County, McDowell County, and Madison County. Buncombe County's position is an isolated outlier.

**SECTION 4: FORMAL REQUEST TO THE NCOSFM** The applicant formally requests written interpretations on the following specific questions:

1. **WRB Alternative Confirmation:** Does the application of Heatlok HFO Pro, which has successfully passed ASTM E331 water penetration testing with zero leakage at 15 psf for 2 hours, satisfy the performance requirements of NCRC R703.1.1 Exception 2 as an alternative to a prescriptive WRB in a post-frame assembly with corrugated metal siding?
2. **Agency Accreditation:** Does IAPMO UES (ANAB Accreditation #0202) qualify as an approved agency under NCRC Section 104.11.1?

**CONCLUSION** The assembly at 153 Foxtail Trail is compliant with the 2018 North Carolina Residential Code. WRB compliance is established through the direct performance pathway of NCRC R703.1.1 Exception 2, backed by third-party ASTM E331 testing data provided by the manufacturer. Buncombe County's denial is based on incomplete readings of the evaluation reports and specific, documentable factual errors regarding building types and testing standards. The applicant has exhausted all local remedies in good faith and respectfully requests that the NCOSFM issue its written interpretation at the earliest possible opportunity so that construction may resume.

Respectfully submitted,

Kyle Chandler Owner,

KC Construction Company LLC

## SUPPLEMENTAL TECHNICAL ADDENDUM: FIREBLOCKING COMPLIANCE

**Date:** March 5, 2026

**Project Location:** 153 Foxtail Trail, Asheville, NC 28806

**Contractor:** KC Construction Company LLC

**Subject:** NCRC R302.11 Fireblocking Compliance via Monolithic Foam Cavity Fill

**Materials:** Heatlok® HFO Pro (ER-565) & Foam-Lok™ FL500 (ESR-2847)

**1. EXECUTIVE SUMMARY** This addendum serves as the formal technical justification for the alternative fireblocking method utilized at the aforementioned project. Buncombe County has issued a formal denial (dated March 3, 2026) under the prescriptive requirements of NCRC Section R302.11. This document, supported by project-specific engineering analysis from the manufacturer, demonstrates that the installed spray-applied polyurethane foam (SPF) assembly entirely eliminates the physical hazard (concealed draft openings) that R302.11 is intended to mitigate, achieving strict compliance through equivalent performance under NCRC R104.11.

**2. REFUTING THE COUNTY'S MARCH 3 DENIAL LETTER** Director Jason Rogers' formal denial letter cites two specific reasons for failure, both of which are factually incorrect:

- **Error 1 - Type V Construction:** The denial states ER-565 §1.0 limits the product to Types I-IV construction. **Correction:** ER-565 §3.0 (Product Use) explicitly states the product is approved for Types I, II, III, IV, and **V construction** and one-and-two-family dwellings. The denial misread §1.0 in isolation.
- **Error 2 - Specific Material Testing:** The denial claims the foam lacks "specific testing" as an end-use fireblock material. **Correction:** This fundamentally misunderstands the physics of the assembly and the intent of the code. As detailed below, the assembly does not act as a traditional "fireblock" inside a cavity; rather, it *eliminates the cavity entirely*.

**3. CODE ANALYSIS & INTENT** The statutory requirement for fireblocking is detailed in **NCRC R302.11**, which states:

*"In combustible construction, fireblocking shall be provided to cut off both vertical and horizontal concealed draft openings..."*

The primary, physics-based intent of the code is to prevent the "chimney effect" by restricting the flow of oxygen, flames, and smoke through empty void spaces within a wall cavity.

**4. SYSTEM DESIGN & APPLICATION** The exterior envelope at this project consists of a post-frame metal structure. To address the fireblocking requirements of R302.11, the following assembly was utilized:

- **Traditional Plate Blocking:** Dimensional wood fireblocking is fully installed at all top and bottom wall plates to effectively separate stories and the roof space.
- **Intersection Sealing (The Disputed Area):** The local inspector's sole point of failure relates to the minor intersection between the horizontal 2x6 purlins and the exterior corrugated metal. Because rigid wood blocking cannot physically conform to or seal corrugated metal ribs, Heatlok® HFO Pro (closed-cell SPF) was applied directly to the metal siding at these intersections to provide a superior, air-impermeable draft stop.
- **Full Cavity Fill:** Foam-Lok™ FL500 (open-cell SPF) was subsequently installed as a full cavity fill, removing all remaining concealed spaces.

**5. MANUFACTURER ENGINEERING JUSTIFICATION** As detailed in the attached project-specific engineering letter authored by Paul Warren, Building Science and Engineering Manager at Huntsman Building Solutions:

- **Elimination of Concealed Spaces:** By monolithically occupying the wall cavity, all hidden gaps, airspaces, and draft openings are physically eliminated.
- **Neutralization of the Hazard:** Because fire requires oxygen and a pathway to spread, the complete removal of void spaces neutralizes the threat of vertical flame and smoke movement.
- **Functional Compliance:** Mr. Warren's engineering analysis concludes: *"With the elimination of airspaces, draft openings, gaps and hidden spaces... the functionality surrounding the requirement for fireblocking, and as such Section R302.11... is not applicable to this specific application."*

**6. CONCLUSION** The prescriptive demand to install dimensional lumber or other traditional fireblocking materials inside a wall cavity that contains zero concealed draft openings is an arbitrary enforcement of a code provision that is physically moot for this specific assembly. Furthermore, traditional wood blocking is already installed at the required top and bottom plates. The monolithic installation of foam completely resists the free passage of flame and smoke, exceeding the baseline safety intent of NCRC R302.11. We respectfully request that the NCOSFM affirm this manufacturer-engineered application as an approved alternative method of construction under NCRC R104.11.