WHOLE BUILDING AIRTIGHTNESS TRAINING AND CERTIFICATION PROGRAM IS COMING!

ABAA is hard at work to bring the industry the first ever Whole Building Airtightness Training and Certification Program! Anticipated roll-out date for the first training course is early 2022.

Make sure to stay in the loop with any updates!

SIGN UP TO BE NOTIFIED

POSITION PAPER
STOP WATER FROM GETTING INTO YOUR WALLS DURING CONSTRUCTION!

The condition of the substrate that the air barrier material is installed on plays a major role in the long-term success of the air barrier system. Different air barrier materials have different substrate considerations. Substrate considerations typically fall under 4 main categories:

- Moisture content
- Substrate temperature
- Cleanliness
- Surface profile

WHY IS THIS IMPORTANT THAT YOU PROTECT THE TOP OF WALLS?
Each year we see numerous problems and complaints in the air barrier installations across the country due to water entering the wall assemblies. This is primarily due to no protection at the top of the concrete masonry units during the construction process.

The resulting damage to some walls has been significant. In many cases, the air barrier is required to be removed where the air barrier materials have delaminated, blistered and lost adhesion. Often it results in the air barrier system being reapplied. The time and materials to remove and replace the system can be enormous.

Proceeding with the installation of the air barrier system with these undesirable circumstances is significant risk.

WHAT HAPPENS?
In many circumstances, a water-based fluid applied system could re-emulsify, blister and delaminate from the substrate. Self adhered systems can also completely delaminate and form blisters from loss of adhesion.

WHAT SHOULD YOU DO?

1. Specifications
   Ensure that the project specifications require that the walls be properly protected prior to the installation of the air barrier system. It is imperative that the specification be reviewed and adhered to. If it is not clearly outlined in the construction documents, it is important to have this discussion during the bidding process.

2. Mandatory Pre-Construction Meetings
   This should be an agenda item to review with the construction team and outline how this is to be executed, responsibilities and on-going review of the substrate.

3. During Construction:
   It is recommended that the air barrier contractor, general contractor or roofer seal the tops of the walls with either:
   a. Temporary measures (application of self-adhered membrane or flashing) with long UV exposure
   b. Complete the roof installation in all areas where the air barrier is going to be installed on the wall surfaces below

FOR OUR CONCLUSION AND EXAMPLE IMAGES, PLEASE DOWNLOAD & PRINT THE FULL VERSION OF THIS PAPER.

DOWNLOAD FULL ARTICLE
Welcome and thank you for taking the time to read our ABAA quarterly newsletter.

I am continually amazed at everything the volunteers at ABAA are accomplishing. In 2021 we have seen the only Whole Building Airtightness Certification Program come to life. The educational trainings sessions for the program are being planned to start in Q4 of 2021 and the Whole Building Airtightness Certification is anticipated to go live in Q1 of 2022.

Our Certified Air Barrier Specialist (CABS – https://www.airbarrier.org/cabs/) program continues to gain recognition by industry and our association peers, as it has recently been recognized by IIBEC as an option for their points-based application requirement for their CBECxP Program.

Finally, and perhaps most importantly, our industry leading Quality Assurance Program (QAP – https://www.airbarrier.org/qap/) continues to gain recognition by specifiers, architects, and construction managers as the affordable risk avoidance program to assist in ensuring proper air barrier installations are happening out on your projects.

The ABAA is also continuing to be sought out for our high level professional educational courses. Our Learning Unit Café (https://www.airbarrier.org/abaa-learning-unit-cafe/) has more requests coming in every week and is providing education for both small and large groups alike. While our weekly webinars (https://www.airbarrier.org/events/category/webinars/) continue to bring in the top presenters in the nation regarding building enclosures.

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As Chair, I am impressed with the efforts from our Education and Training Committee. They are currently working on presentations and informational programs aimed at strengthening the skills of Construction Managers. Like Contractor Members, soon Construction Managers will see dedicated presentations specifically created to assist in their role of ensuring air barriers are installed properly.

As always, I cannot thank our volunteers enough, especially our dedicated Chairs, for the time they are spending to move the building enclosure industry forward – thank you, you are making a difference in our industry!

Stay safe,

Brian Stroik
Chair: Air Barrier Association of America
American Contractors Insurance Group
Performance Excellence & Quality Consultant
The air barrier installing contractor has sent in their submittal package for review, the building envelope coordination meeting has been held, and installation will begin in a few short weeks. Now, it is time for the air barrier pre-installation meeting where the installation of the specified product is discussed with all contractors associated. It provides the broader team an opportunity for open discussion regarding the air barrier and its complexities to ensure a successful installation.

Read More: https://bit.ly/3hAtLWV
Due to our harsh winter climates, builders in Northern Climates have a special appreciation of insulation, air barriers, high performance windows and other tools to ensure an effective building envelope. We usually do not have a say in it, as mother nature reminds us each winter that living in this climate can be a bit harsh. It’s a dry cold right?

It has been said many times that people build energy efficient buildings, not for the money saved each year, but the other benefits of a draft free environment, the reduction in the risk of mold, being able to live comfortably and not be freezing when you get down to very cold temperatures. Saving some money each month ends up just being the icing on the cake. Local electricity prices can be pretty low and so can natural gas, so it has been hard to transform building owners to move to more efficient buildings – there is just not the driving force, other than the building code.

During these cold snaps, condensation issues can arise due to the holes that we were provided, free of charge, by the subtrade working on the envelope. These unintended holes have the ability to transport a significant amount of moisture through the wall assembly via the mechanism of air leakage. The question has become, how much?

I can tell you that owners care about moisture issues more than anything else. This tends to be one of the largest insurance claims in the building industry – water ingress, mold, mildew and rot.

So, can we make a case to building owners to save money on energy, provide a more comfortable indoor environment and be more sustainable by scaring them that they if don’t, they can have moisture problems?

WELL, HELP HAS ARRIVED!

A research program funded by the U.S. Department of Energy (US DOE) and Air Barrier Association of America (ABAA) was conducted by Oak Ridge National Laboratories (ORNL) and the National Institute of Science and Technology (NIST). Together, they developed a free tool to assess the impact that a reduction in leaky a building is will have on moisture movement through the building envelope.

This tool will help quantify both energy savings and moisture transport for a variety of locations across both the U.S. and Canada.

The tool allows for a variety of architectural types and is a very straight forward online calculator to use. With just a few user inputs, you can create a report to help make a case for a more airtight building to save money, energy, carbon output and deal with water. It can be used for both new construction and retrofit construction. Most older building stock is quite “leaky” and would benefit the most from undertaking strategic air sealing. So, let’s take a look at a scenario for a cold climate and what this could mean:

Building Type: Secondary School
Size / floor: One-story with a fairly large square footage footprint of around 210,900 sq.ft
Typical Base Case of Air Leakage: 1.07 cfm/ft² @ 1.57 psf
Better than Energy Code Air Leakage Target: 0.25 cfm/ft² @ 1.57 psf
Energy Savings (electricity and gas): $31,000 per year
Reduction in Moisture Transfer Due to Air Leakage: 2.38 gal/ft²/year (converts to 9 litres)

That is a hole lotta moisture! (see my pun?)

Doing simulations in other cities will show that the energy savings in real dollars will change, depending on the harshness of the climate, but the reduction in moisture transport is pretty close in the majority of cases.

SO, THE MORAL OF THE STORY IS:
If you want to convince an owner to design a more energy efficient building, bring about 5 bottles of pop with you to the meeting and say “imagine pouring this soda into every square foot of building envelope area each year”.

I will bet you they will ask for an energy efficient building. The old bait and switch and they will not even realize it.

TO TRY OUT THIS FREE ONLINE CALCULATOR, GO TO: [https://bit.ly/3ActoZK](https://bit.ly/3ActoZK)
WHAT HAS ABAA BEEN DOING FOR OUR INDUSTRY?

JANUARY THRU SEPTEMBER

ATTENDEES

5900+

CONTINUING EDUCATION UNITS

5900

EVENTS

80

SOME OF THIS PAST QUARTER’S FREE ABAA WEBINARS

• Mock-Ups: The Crash Test Dummy for Building Enclosures
• Air Barrier Shop Drawing Review
• Resolutions to the Most Common Building Science Challenges
• Managing Project Specific Details
• Understanding Difficult Critical Transitions
• Interfacing of Glazing Assemblies
• Multizonal Infiltration Modeling of an Existing Building
• ABAA T0002 Pull Adhesion Test Method
• Through Wall Flashings
• Preconstruction Meetings & Construction Quality

• The Big Disconnect: Roof to Wall Connections
• Waterproofing as the Air Barrier
• BNP Media Webinar; The Real Imperfect Air Barrier Details
• Air Barrier Continuity and Constructability Challenges
• Moisture Durability in Low Slope Roofing
• Five Key Considerations for an Effective Commissioning Process
• Continuity of Control Layers in Building Systems
• It’s Not Raining—Where is the Water Coming From? Moisture Movement in Building Enclosures

HUNGRY FOR MORE EDUCATION?

Sample our Learning Unit Café, an online menu of our most requested air barrier courses that any architectural firm, BEC, CSI, or AIA chapter can schedule at their convenience.

The menu consists of both Live and On-Demand presentations and all are 1 LU/HSW, and many are GBCI.

For more information, please visit our website: https://www.airbarrier.org/abaa-learning-unit-cafe/
2021 UPCOMING INSTALLER TRAINING

SPRAYED POLYURETHANE FOAM INSTALLER TRAINING

- Dec 7-9, 2021 Virtual
- May 10-12, 2022 Reston, VA

SELF-ADHERED & FLUID APPLIED TRAINING

- Oct 5-7, 2021 Virtual
- Nov 16-18, 2021 Virtual
- May 10-12, 2022 Reston, VA

FIELD AUDITOR TRAINING

- Oct 26-28, 2021 Virtual
- Nov 16-18, 2021 Virtual
- May 10-12, 2022 Reston, VA

REGISTER YOUR TEAM & GET CERTIFIED!

www.airbarrier.org/education/installer-courses/

2021 UPCOMING WEBINARS

- Sept 23 – The Elusive Subcontractor Responsible for Transitions
- Sept 30 – What Makes Rainscreen Walls Work?
- Oct 07 – Why Willis Carrier Forever Changed Buildings
- Oct 07 – The Integrated Building Envelope: Design and Installation of Sheet Applied Air Barriers
- Oct 14 – Alchemy of Architecture
- Oct 15 – The Big Disconnect – Roof to Wall Connections
- Oct 21 – Introduction to Existing Building Retrofits
- Nov 03 – The Elusive Subcontractor Responsible for Transitions
- Nov 08 & 09 – The Big Disconnect: Roof to Wall Connections
- Dec 14 – ABAA Update
- Dec 16 – Architectural Koyaanisqatsi: 10-yr, 100-yr, 1000-yr buildings

FOR DETAILS ON UPCOMING FREE WEBINARS, VISIT THE ABAA WEBSITE!

www.airbarrier.org/events/category/webinars/

ON-DEMAND WEBINARS AVAILABLE NOW

- Trust, But Verify – Quality Control For Your Air Barrier - https://bit.ly/3kcae0j
- The Importance Of Wall To Roof Connections For The Air Barrier - https://bit.ly/3lnziyl
- Game Plan To Getting Air Barriers Right - https://bit.ly/3loz5zq

UPCOMING SYMPOSIUMS AND PRESENTATIONS

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ABAA members are encouraged to participate in the Building Envelope Campaign. The BEC provides a new building envelope assessment tool for determining your building’s BEP-value and identifying areas for potential envelope improvement.

For the introduction to the campaign, click below:

“**IIBEC** is happy to recognize the **CABS** (Certified Air Barrier Specialist) certification as one of the options for their points-based application requirements for the **IIBEC Certified Building Enclosure Commissioning Provider (CBECxP®)** program.”

**The goals of the Building Envelope Campaign are to better the industry by:**

- Motivate action and increase awareness of the value of investing in high-performance building enclosure technologies for both new and existing commercial buildings,
- Recognize leaders adopting and achieving high performing building enclosure systems, and
- Demonstrate and document energy and cost savings with integrated design, construction, commissioning, and maintenance from the implementation of high performing enclosure systems.

**The benefits of joining the Building Envelope Campaign include:**

- Achieve energy savings through an improved building envelope
- Get technical assistance from Oak Ridge National Laboratory
- Gain recognition for your organization’s participation
- Win a national award from the U.S. Department of Energy

**U.S. DEPARTMENT OF ENERGY (DOE) BUILDING ENVELOPE CAMPAIGN**

The Air Barrier Association of America (ABAA) has joined with other industry leaders—the AIA, IIBEC, and the IFMA—as an organizing partner of the U.S. Department of Energy (DOE) Building Envelope Campaign.

LINK TO THIS PROGRAM BELOW: https://ec.ornl.gov/
This historic renovation project included AVB of masonry back up walls that transitioned to numerous dissimilar materials at or below various exterior facade types including terracotta, stone, metal panels, glazing systems, and roofing. Coordination, communication, and precise execution were key to the project’s success for IS1, and affected sub trades. > MORE

ABAA is always looking for ways to promote the QAP with projects such as these. If you have a QAP project to showcase, email Louise at:

lhardman@airbarrier.org

Projects will be reviewed and upon acceptance, will be showcased on our weekly email and social media outlets.