

Air Barrier Quality Assurance Program

Do it right the first time

Can you see air and water leaks in your new building right away?

Do you want your project finished only to then find out that you have installation deficiencies?

Do you want project delays for re-work due to faulty installation?

Do you want to spend a lot of money down the road on a damaged building envelope?

The ABAA Quality Assurance Program is a risk-management program that addresses the potential issues before and during the installation process. The installation is performed by individuals and companies that are educated and have the experience to properly install air barriers.



Doing it Right the First Time is always the most cost effective

Difference Between Quality Control and Quality Assurance

Quality assurance builds the quality into the project at the front end rather than trying to build in quality at the back end of the project. Due to the confusion that sometimes surrounds these terms, too often one is called on to replace the other with the rationale that “we’ll just hire an inspector later for a couple of thousand dollars”. The problem with this analogy is that finding and fixing mistakes after they are made is expensive and time consuming.

Inspection is often referred to as quality control whereby the quality is “inspected in”. Contractor certification is characterized by a quality assurance or total quality approach to controlling errors and non-conformances. Quality assurance is the prevention of quality problems through planned and systematic activities including documentation - or simply put, the quality is “built in”.

Quality Assurance	Quality Control
<ul style="list-style-type: none"> • Total Approach • Control Errors • Prevention • Systematic 	<ul style="list-style-type: none"> • Inspection

Are there significant costs to errors and defects on a construction project?

The simple answer is - Yes. The further along a project goes, the price increases. Once the project is complete and the air barrier is covered up, the costs become much more significant.

Cost Scenarios	
During Construction	After Construction
Time (GC, Design, trades, Manufacturer) Schedule Maybe remove cladding or insulation Re-work (removal, new material) Additional testing and QC	Time (more than during construction) Remove cladding/Insulation Remove AB Repair Damage (substrate, structure, sheathing) Re-install Material Re-install Cladding Legal Fees

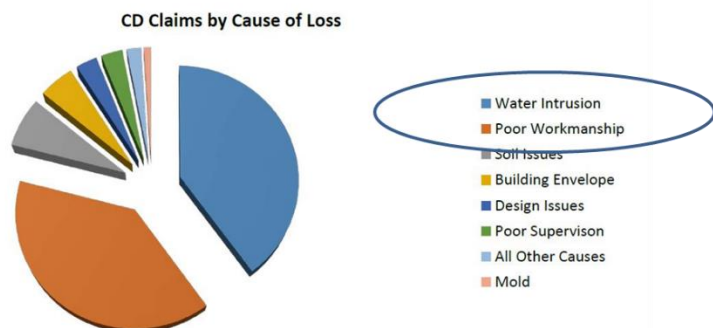
Do I have a risk?

Absolutely. The air barrier is covered over with the exterior cladding and if not done properly, you will have potential problems of moisture damage, increased energy costs, less durable envelope and damage to other wall components.

Workmanship and water intrusion make up 75 % of claims. Air barrier defects are usually always related to workmanship and most likely will result in water/moisture issues.

In 2012, Zurich estimated that the insurance industry spent \$ 5 billion to settle construction defect claims. (about 20,000 claims)

Zurich Construction Defect claims study results



2012 Construction Defect Claims

What are the Components to the Air Barrier Quality Assurance Program

ABAA EVALUATED MATERIAL

A listing of materials which have been tested and confirmed that they meet the requirements set out by ABAA. This saves a tremendous amount of time for the design professional and keeps liability off the design



professional. These evaluated materials are listed in master specifications which provides wording for specifying an air and water resistive

barrier installation.

(Link to find evaluated materials
www.airbarrier.org/technical-information/evaluated-assemblies)



ABAA EDUCATION AND TRAINED CONTRACTORS WILL BID ON THE WORK

Contractors that have met ABAA's requirements and signed agreements to use ABAA certified labor, follow installation guidelines and correct any deficiencies that are listed on the ABAA website. These contractors have the experience, know-how and track record of performing installations. The Design Professional is not required to pre-qualify or try to determine who is qualified and who is not. ABAA Accredited Contractors must meet minimum requirements for insurance, ability for bonding, employ certified installers, and possess the necessary equipment to install and test their work. They should also be trained in the Site Quality Assurance Program and sign a licensing agreement dictating professional conduct and the right to terminate their license should they not meet the requirements of the program.



ABAA EDUCATED AND CERTIFIED LABOR FORCE



ABAA Certified Installers have been trained and certified to do the installation. These installers have the related trade experience and are trained in various air and water resistive barrier systems installation requirements. Installers need a minimum 3000 hours of documented work experience in air barrier /water resistive barrier or related trades in order to qualify for certification. Certification is provided for various material types and dependent on experience.

ON THE JOB – DOCUMENTATION AND QUALITY CONTROL

Each ABAA specified project is required to have at least one Certified Installer on site, at all times. It is not a matter of simply having a site foreman (that is only on the site infrequently, if at all) trained. Certification is provided to the actual individuals that are performing the work and are onsite all the time.

Installers are required to perform a visual inspection of the substrate, prior to the installation of material, to confirm the substrate is properly prepared. The installer is also required to perform a visual inspection on the completed installation for that day and fix any deficiencies.

Depending on the installed and adhered materials, each are subject to a pull adhesion test, as well as thickness and density test. The installer is required to perform at least one adhesion test (consisting of three separate disc pulls) on the area installed for the day.

The Certified Installer is also required to document the entire installation process on “daily job site reports”. Daily Job Site Reports are submitted to the Site Quality Assurance Program office monthly, and are provided to the general contractor/construction manager and design professional.

PROJECT AUDITS

Every ABAA specified project has a minimum of one site audit conducted. The number of audits performed on a specific project is determined on the total square footage of air barrier material being installed. For example, a project with up to 10,000 square feet of air barrier material applied would require one audit conducted (per the ABAA Site Quality Program). Additional audits may be performed due to non-compliance by the contractor/installer, if specified in the contract documents or if the owner, architect or general contractor request more. In all cases, the cost of the audit is the responsibility of the ABAA Accredited Contractor.

The scope of the ABAA Field Auditor is to confirm compliance with project specifications, manufacturer’s installation guidelines and the ABAA Site Quality Assurance Program. This includes confirming if the installer is meeting the manufacturer’s instructions for substrate preparation, compatible materials, and actual application and repair procedures.

The ABAA Field Auditors are typically industry consultants, engineers, or auditor agencies and are overseen by a QAP management team. Each audit goes through a quality control review prior to being issued. The first responsibility of the Auditor is to document compliance to the Site Quality Assurance Program and manufacturer’s installation guidelines. The second responsibility of the Auditor is to provide solutions to site issues and act as a resource for installers to do a better job. Once the audit is completed, an audit report and photo log is forwarded to the Site Quality Assurance Program office for review, filing, and distribution to the Owner, Architect, Manufacturer, and General Contractor and Accredited Contractor. A punch list will be left on-site with the air barrier contractor and general contractor.

CONFLICT RESOLUTION

If any concern arises on a project from the Design Professional or Owner, a dispute resolution process is in place to deal with problems. The Site Quality Assurance Program has a system for handling complaints regarding a material or installation.

TECHNICAL SUPPORT

Independent 3rd party support is provided to the construction team to address issues, provide guidance, and be an on-going resource.

How do I get the ABAA Quality Assurance Program ?

It needs to be specified in the contract documents. It can be done numerous ways, but this is one way to capture everything you need:

“Obtain primary ABAA Evaluated Materials from a single ABAA Evaluated Manufacturer and implement the ABAA quality assurance program utilizing ABAA accredited contractors, ABAA certified installers and ABAA site audits”

Does it cost money ?

Yes. \$ 0.085 per square foot of air barrier installed plus cost of audits (\$2,000 ea.)

To find out exactly how much the QAP will cost for your project, you can use our online calculator.

www.airbarrier.org/qap/qap-calculator

