Estimating the Job
Calculating reductions in square footage

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Of Wall</td>
<td>10,000 sq ft</td>
</tr>
<tr>
<td>Openings</td>
<td>2,000 sq ft</td>
</tr>
<tr>
<td>Total sq ft of Air Barrier</td>
<td>8,000 sq ft</td>
</tr>
</tbody>
</table>
Costs To Include

- Material
- Labor
- Rigging (scaffolding, etc.)
- Shipping
- Testing
- Union Dues
- ABAA Audit costs and IDF fees
- % of Overheads
- Profit
Degree of Difficulty

Production governed by:

- materials specified or selected
- building type
- joints & junctions
- substrate condition/preparation
- penetrations
- sequence of construction/schedule
- location
- environment

Keeping these factors in mind…..
Costing

Material

• The material must be chosen for its performance for the particular application.

• The type of conditions you have on the jobsite will dictate the choices of material best suited for the particular job.

• Take into consideration the time or times (multiple seasons) you may have installers working on site. This will reduce delays and cure times for product(s).
Costing

Labor

- This factor will almost always be the difference between making a profit or not.
- Having the air barrier team prepared and each team member playing his/her part onsite is instrumental to ZERO delays.
- Factoring in 2.5 days per month for inclement weather is a good rule of thumb. This will help alleviate overtime costs due to weather delays.
- Calculate the hourly rate with maximum daily square footage rates as your guideline.
Costing

Rigging

• The costs associated with scaffolding or lifts will depend on jobsite location and geography of the site.
• Labor costs will decrease with good equipment planning and preparation.
Costing

Shipping

• Depending on the size of the job, the material could be drop-shipped to the location, (less handling).

• **Possible** better terms from the manufacturer, based on the size of the job (how can I use this to pad my bottom line).

• Proper log for on-site quantities are crucial to having control of product being used.
Costing

Testing

- The best way to ensure you are delivering what you charged the client for is by doing accurate testing on a daily basis.
- The ABAA is clear on required daily testing on all product applications.
- One test includes 3 discs per day and should be done along with thickness tests and density tests during installation.
Costing

Union Dues and ABAA Audit/IDF costs

- These are the related cost that must be included in the estimate and will be highlighted or emphasized in the written contract.
- Contracts can contain phrases like, “this contract includes 3 onsite audits”. Reference the audits but leave the price global.
- ABAA’s Industry Development Fund (IDF) is 8.5 cents per sq/ft of air barrier work being applied, (NOT the size of the building).
- Union dues will vary based on the area you are bidding in and will be added to labor costs.
Audit cost/ frequency & IDF

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**Air Barrier Quality Assurance Program, Inc.**

**FREQUENCY & COST OF AUDITS**

Effective September 1, 2011

<table>
<thead>
<tr>
<th>FREQUENCY OF SITE AUDITS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Barrier Contract Square Footage (ft²)</td>
<td>Number of Audits</td>
</tr>
<tr>
<td>Up to 10,000</td>
<td>1</td>
</tr>
<tr>
<td>10,001 to 35,000</td>
<td>2</td>
</tr>
<tr>
<td>35,001 to 75,000</td>
<td>3</td>
</tr>
<tr>
<td>75,001 to 125,000</td>
<td>4</td>
</tr>
<tr>
<td>125,001 to 200,000</td>
<td>5</td>
</tr>
<tr>
<td>200,001 and over</td>
<td>6</td>
</tr>
</tbody>
</table>

**ABAA SPECIFIED PROJECT COSTS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry Development Fund**</td>
<td>$0.085 per square foot of the total air barrier material being installed</td>
</tr>
<tr>
<td>Project Audit Costs Estimates**</td>
<td>$2000 / audit *</td>
</tr>
</tbody>
</table>

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**The Industry Development Fund is used to administer the Quality Assurance Program and to further the industry. You only pay these fees when you are working on an ABAA specified project.**

**These costs are to be included in your pricing of air barrier projects. The number of audits required for a project is based on the air barrier application square footage of the ABAA specified project. The architectural specification audits amount is to be followed, unless it is below the MINIMUM as identified in the above "Frequency of Site Audits" table (QAP program).**

*Audit cost policies: The cost of the audit conducted by ABAA is set at $2000 for all audits. The contractor shall be charged the full cost (exceeds $2000) of the audit when:
- the contractor has not informed the ABAA office of the project at least 15 working days before the audit is required;
- it is deemed that additional audits are required due to non-compliance to the project specifications, manufacturer's instructions or the ABAA Quality Assurance Program.
Costing

• Your overall success will depend on how well you look at the whole sequence of the project, including the terms of payment that you set with your contract.

• Remember that doing the job once and getting paid once is the goal. Having to do extras and not being able to charge for them is normally the fault of the way the contract is worded.

• Cover your overhead and allow for extra costs and you will have a successful, PROFITABLE project.
"I LOVE BEING A BUILDING INSPECTOR."
Air Barrier Systems
Air Barrier Systems

• In order to prepare an estimate you need to look at the physical aspects of day-to-day operations, which allows us to calculate the degree of difficulty.
• This will allow us to charge accordingly...
Air Barrier Systems

When preparing for the substrate you must take the air-tightness into consideration. Once this is determined you can decide on how much “extra” work is required....

Sheet Metal
Crack and joint filler
General joins\spaces between initial substrate.
Air-Tight Drywall
Air-Tight Drywall
Joints & Junctions
Penetrations
Penetrations
Substrates
Substrates
Self-Adhered Membranes
Self-Adhered Membranes

- The pros and cons of the self-adhered membrane...
- **Pros** - Always sure of thickness
  - Usage of material is clearly defined
  - (easy to calculate)
- **Cons** - Labor intensive
  - More cuts more room for error
Liquid Membranes
Liquid Membranes

- The pros and cons of liquid membrane are...
- Pros - Product is monolithic and seamless.
  Fast application with the right gun.
  Easy to repair.
- Cons – Thickness demands a qualified installer.
  Substrate humidity - large factor
Liquid Membranes
Urethane Foam
Urethane Foam

• The pros and cons of SPF are..
  Pros- Monolithic and seamless.
  Strong bond to substrate.
  Added R-value with SPF.
  Cons- Large learning curve for installer.
  Repairs require removal until the Adhered point of the foam then re-spray.
Urethane Foam
Building Type
Building Type
Basic Estimate
Unseen Structural Issues
Estimate

- The scenario is, infiltration into the main entrance roof elevation. The doors and windows are not continuous with the building and require a retrofit as well.
- The main substrate wall is also not sealed with the roof entrance.
- We will open it and see what other details or surprises we can find!
Estimate

- Some of the factors we need,
- The front overall wall is 118 ft.
- Entrance opening is 46 ft.
- Depth of entrance is 16 ft.
- Angled points are 16 ft. and the back distance is 6 ft. on each side
Estimate

These are the basic dimensions of the entrance

6 ft.  46 ft.  6 ft.

16 ft.  16 ft.
Estimate

The basic outline would be 640 sq. ft.
The linear foot needed for the roof flashing and/or membrane would be 46 liner ft.
The steel decking (underside) would also be a sq. footage of 640.
The basics is covered now we must look at penetrations, window openings and detailing work.
Penetrations
Penetrations
Estimate

• After a careful walk through we see some obvious dimensions…
• Window – 3 x 5 (4 windows)
• Door 14 x 8 (counting small attached window extrusions)
• 1 light (façade) (dim. 4” by 4” opening)
• 1 alarm (façade) (dim. 3” by 4” opening)
Estimate

- Penetrations and openings above window near the façade. This will require crack or foam sealant.
- The windows and door themselves will require one component foam after detailing is done.
- All joints from front to back will require a tight seal.
Estimate

• Once all this is completed then we can look at insulation and closing it up.
• Now we will look at the possible items we could use to complete this estimate…

• Have a look closely at the last few photos and then we will pick from the generic list.
Penetrations
Penetrations
Unseen Structural Issues

G.I. Flashing
Weep Holes @ 32" O.C.
Wood Blocking
Fill Voids with Batts
1/2" P.T. Plywood & 2x4 Blocking

Existing Steel Deck

Lap/Wall V.B. with Roof Membrane

Unseen Structural Issues

Lap/Seal V.P.
Existing Structure

Wood Blocking
Scheduling
Creating an Estimate

Workshop

• Let’s take our materials and move into small groups.

• Using the information provided we will build an estimate.

• Have fun and keep in mind all the different factors we have discussed.
Conclusion

• There could be two possible ways to complete this estimate. Keep in mind the Cadillac system will normally give you longer life of the building. The durability of the products combined will give a safer and more efficient building.

• This session was a sample of what is included in our New Estimation course for Air Barriers and Spray Foam.
Thank You