MFC News

"Building Understanding"
MFC will find out the truth about buildings and answer the hard questions.

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Volume 1 Issue 3

About MFC News

Myles F. Corcoran and his Team would like to share the best of what we've learned over the past 16 years about well constructed buildings and resolving construction disputes.

Please help us make this a "Construction Community" endeavor by sending us your feedback, comments, wisdom, and tips for future issues. Call 831-476-4502 or Email us at: **mfcnews@mfcbuild.com**.

Wisdom Corner

A water molecule is to 1/16" what a ping pong ball is to a basketball court... the long way.

MFC Staff

WESTCON 2006 Symposium:

Stucco As A Weather Protection System

Thursday, November 2nd 8am-5pm

Save the Date and Register Today!
www.westcon.org

Quote of the Day

"The last WESTCON Symposium (2005) stands as the finest waterproofing focused one day seminar I have ever attended."

Myles F. Corcoran

Product Tip

Our product tip this season is to attend the Westcon Symposium on November 2nd in Berkeley. It is the best single day of education you can get to understand weatherproofing your jobs better. There will be seven industry experts speaking on topics ranging from Product Compatibilities, Flashing Windows, Beams, and Pipes, to Stucco, using Elastomeric coatings, and other Finishes.

This year there will be an expanded vendor area for product review, demonstration, and manufacturer questions during all speaker breaks and lunch. MFC was asked to contribute our Flashing/Sealants test board for display. In addition, the Symposium organizers have built mock-ups and done extensive testing on which they will report. To register or for information:

Call or Fax: 415-451-4897
Email: info@westcon.org
Online: www.westcon.org

MFC Staff

Building Tips

"It's All in the Laps" by Peter J. Kennedy, Inspector Consultant at MFC

One of my pet peeves as an inspector is mis-installed window flashings. Especially this time of year, with the construction industry at full steam, a simple drive around town gives one an opportunity to observe many different flashing techniques, both good and bad. In my informal "drive by" surveys, it seems that many builders are now using "bituthene (TM)" type products. These "Peel and Stick" flashings are a great improvement over traditional techniques using lapped paper products. However, in one critical area, namely the window's sill, it seems that some builders are missing a critical aspect of flashing technique: proper laps.

Everyone knows the story: you've just finished your rough framing, plywood/OSB has been installed, and the carpenters are standing by to install the windows which are the right size, fresh off the truck. There's only one problem: the stucco (or siding) subcontractor is still weeks away, along with their building paper. The key component of the window flashings is that they be integrated into the building's weather-resistive barrier (usually building paper or housewrap). This presents a dilemma for the builder and, potentially, a problem for the building. Add "Peel and Stick" flashings and the potential for leaks increases substantially.

At the head and jambs of a typical window, some flashing methods allow for the flashings to be stuck directly to the sheathing [our office specifies a "sandwich" of paper, window fin, and flashings]. At the sill, however, this is a recipe for leaks. I can't tell you how many jobs I've seen around town where the window installers have left flaps at the jambs and head for tie in, but stuck the sill flashing directly to the sheathing below the window. Without a "flap" at the sill, to tuck the building paper up under it later, this ensures a mis-lap in one of the most critical flashing areas, water-wise.

When the stucco installers arrive with the paper, they go right over the sill flashing, trimming the paper neatly under the window frame, laying it right OVER the window fin and sill flashings. We have seen stucco crews add a second layer of Peel and Stick over the sill of the window, creating the same mis-lap. This completely defeats ALL the window flashings, which now channel water down to the sill, in behind the paper or housewrap, onto the sheathing, down to the plate, and into the building. A lot of time and valuable material has just been wasted. Once paper and lath are complete, it is difficult, if not impossible, to observe whether this has been done correctly. The install looks "nice and tight," the stucco goes on, and all's well... until your client calls next winter with swollen baseboard and damp carpet.

General Contractors should pay special attention to this crucial flashing area. In every window installation detail we are aware of, the window fin, pan, flashing, and paper MUST be properly lapped over each other at the sill. There are many ways to achieve this: leaving the Peel and Stick's backing on or stapling a "flap" of building paper to the sheathing before installing the flashings are two ways.

This can become the classic "Whose job is it, anyway?" problem. Additional coordination is needed between the window installers and paper installers, including timely inspection by the General Contractor. We also recommend that responsibility for flashing the windows be clearly spelled out in writing, in case of issues down the road. Clients should be educated as to how critical the flashings are and why it's worth the extra time and expense. Remember, the fact that we now have "bituthene (TM)" shouldn't change the time honored tradition of proper lapping of materials, especially at critical window sill flashings.

FEATURED ARTICLE

This article was originally published in the 2nd Quarter 2006 issue of ***BUILDER DIGEST Of California****.*

Water, Water Everywhere and Not A Drop Inside
by Patrick S. Simons

The old saying, "those who forget history are doomed to repeat it," is particularly appropriate when considering the building industry's constant battle with our age-old nemesis - water.

Over the years, as part of my development and construction responsibilities, I've had the benefit of overseeing numerous building corrections in various aging apartment properties. Though at times frustrating and challenging, overseeing these building corrections has been an invaluable education. By understanding what has historically caused water infiltration problems in older residential buildings, we can better direct water-tight design of new buildings. As everyone knows, water-tight design is certainly important for apartment builders, but is also of paramount concern for multifamily builders - especially in California.

Last issue, we tried to put ourselves in the shoes of our prospective buyer or renter for design purposes. Keep your walking shoes on. Now, we'll take a walk around a typical Type V residential building as if we were a little molecule of H_2O:

Roof Complexity

The simple fact is that the simplest roof designs are the most reliable. Each valley and angle is an opportunity for water to find its way into an attic. Of course, the problem is that cities

and home buyers (or renters) want more than a basic pitched A-frame roof on a four-walled box. Mean-while, our architect friends, in their efforts to help, are sometimes all too eager to create the next Sydney Opera House. This is where the role of project management becomes critical. The aesthetics of the roofline must be balanced with its constructability. Minimize the number of valleys, angles, gables, etc. while still retaining an interesting elevation appropriate in addressing the desires of the market and the city.

Flashing Details

Since we're in the business of building marketable residential product, a project will always need some articulation in the exterior envelope whether in the roof, walls, balconies, or all of the above. That's where flashing details come into play. Even if you have built thousands of detached units with standard flashing details, pay special attention to your flashing details for attached units. Don't be shy about asking seemingly dumb questions of your architect if you think some of the details might have some holes (pardon the pun).

Building Wrap

If your roof is doing its job, the next stop for water will be your exterior walls. Again, comprehensive construction drawing details are essential. Make sure your superintendent is taking a few minutes each day to inspect the building wrap before the lath and plaster or siding is installed. Especially in today's hectic construction environment, laborers can sometimes get lax in properly completing their work. Make sure that the paper is overlapping top to bottom, that wall corners are properly overlapped, that window and door openings are properly flashed, that staple work is not shoddy, and that there are no gaps anywhere.

Wall Penetrations

In addition to windows and doors, each building will likely need penetrations for utilities, meters and air conditioning lines. Standard multifamily design usually places the utility penetrations in gangs at one end of a building, and the air conditioning lines are usually spaced around the building at each unit. This area also requires comprehensive construction drawing details and regular field inspection.

EIFS

A short note on Exterior Insulation and Finishing System (EIFS). While the manufacturer information I've read seems to indicate empirical evidence that EIFS is reliable, my few experiences with its application have been mixed. Though the technical aspects of EIFS seem to adequately address water-proofing, my experience indicates that its success is much more dependent on the skill of the contractor than traditional exterior wall systems. Furthermore, if using EIFS, you should read the fine print in your construction defect insurance policy, as companies have been carving out certain coverages relating to EIFS installation.

Grading

You'd be amazed at how many times I've seen a disconnect between the finished floor elevation and the fine grading around a foundation. The resultant ponding adjacent to building slabs can eventually wick its way into the exterior wall or interior floors causing chronic humidity

and the dreaded "M" word. The main thing here is to review the fine grading plans to ensure positive slope from the foundation to some sort of planned drainage inlet. Then, make sure the superintendent is spending some time during construction verifying adequate positive slopes from the building.

Foundation Planting and Irrigation

Being mindful that the goal is to keep water away from the building, we don't need to add more water to the mix than the elements naturally do! Make sure that plant material requiring heavy irrigation is not located within two to three feet of the foundation. Also, ensure that the proper irrigation heads are specified for their respective locations. As with grading, the superintendent needs to inspect while the work is being performed in order to ensure that the laborers are locating the plant materials correctly, installing the irrigation heads correctly, and are not making detrimental changes to the drainage pattern or inadvertently plugging drainage inlets.

Unit Ventilation

No matter what we do as builders to keep water out of the units, the residents will need to bathe, cook and do laundry. Couple those normal life processes with the increasingly airtight windows and doors of modern energy-conscious design, and chances dramatically increase for internally generated water issues. Here again, questions need to be asked early in the design process. Is there enough mechanical ventilation for the likely resident household size? Is it necessary to add a passive ventilation system based on the floor plans?

Peer Review and Inspection

In addition to the active involvement of you and your staff, the cheapest insurance of all is hiring a reliable water-proofing firm to review the plans of your design team prior to pulling permits. The best kind of consultants in this area are those who also handle forensics and building reconstruction, as they will be able to apply their experience in what doesn't work to making sure that your designs do work. Another belt-and-suspenders approach that can provide rewards beyond its price is hiring a water-proofing firm to periodically inspect the job during critical points of construction.

Buyer/Renter Education

Once the building is completed and people move in, a number of maintenance and housekeeping responsibilities need to be continuously followed. Thus, resident education becomes an exceptionally important facet of risk mitigation for a builder. Make sure that your buyers or renters are made aware of their housekeeping responsibilities including using the ventilation systems you provided, periodically opening windows, and immediately correcting or reporting signs of water infiltration. Additionally, if it's a condo or townhome project, make sure that the homeowners association budget adequately addresses required maintenance for the building. Stay dry!

Patrick S. Simons is Executive Vice President Chief Development Officer at Atherton-Newport Investments. Simons is responsible for all development and construction operations for the company nationwide. The Atherton-Newport portfolio totals over 3,000 units and spans the nation. He can be reached at (949) 833-1411 or psimons@atherton-newport.corn.

The start of the MFC Telephone Seminar Series
has been postponed due to the important WESTCON* Symposium:

Stucco As A Weather Protection System

Thursday, November 2, 2006

8am - 5pm (lunch included, registration 7:30 am)

at the Golden Gate Fields Turf Club in Berkeley

Vendor Showcase During All Breaks and Lunch

*WESTCON is the Western Construction Consultants Association.

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