

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
BUILDING CODES COMMITTEE

November 20, 2002
Maricopa Association of Governments Office
Saguaro Room
Phoenix, Arizona

COMMITTEE MEMBERS

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| *Unappointed, El Mirage | Armando Rivas, Paradise Valley |
| Ken Sowers, Avondale | Cheryl Levandowski for Dennis Marks, Peoria |
| Mike Tibbett, Carefree | Joe McElvaney for Rick Doell, Phoenix |
| Bob Lee, Cave Creek | *Tim Wegner, Queen Creek |
| Alex Banachowski, Chandler | Tom Barrs, Scottsdale |
| *Unappointed, Fountain Hills | *Forrest Fielder, Surprise |
| *Unappointed, Gila Bend | A- Michael Williams, Tempe |
| *JoRene Deveau, Gila River Indian Community | Mario Rochin, Tolleson |
| A- Ray Patten, Gilbert | *Skip Blunt, Wickenburg |
| Bill Griffith Deborah Mazoyer, Glendale | Bob Cooperider, Youngtown |
| Steve Burger, Goodyear | Tom Ewers, Maricopa County |
| *Chuck Ransom, Litchfield Park | Rus Brock, Home Builders Association Brian Goble, Mesa |

*Those members neither present nor represented by proxy.

A-Those members participating via audioconference

V-Those members participating via videoconference

OTHERS IN ATTENDANCE

Fran Smith, Southwest Gas
Raymond B. Bizal, NFPA
Michelle Green, MAG

Constance Kish, MAG
Heidi Pahl, MAG

1. Call to Order

The meeting was called to order at 2:05 p.m. by acting Chairperson Tom Ewers. Mr. Ewers introduced audioconferencing participants Ray Patten, and, Michael Williams. People at the table then introduced themselves.

2. Approval of October 16, 2002 Meeting Minutes

Mario Rochin moved to accept the minutes as written. The motion was seconded by Bob Lee. The chair asked for comment. Cheryl Levandowski asked if her name should be added to the list of others present since she had attended the meeting. Michelle Green said that it was an oversight and her name would be added to the minutes. The Chair then requested a vote to accept the minutes. The vote passed with one member abstaining.

3. Call to the Public

Mr. Tom Ewers asked if anyone from the public or the committee would like to comment. Fran Smith of Southwest Gas requested to speak about a survey that she is conducting. Ms. Smith stated that Southwest Gas is trying to create a handbook on wood, gas, and pellet stoves, for and by Building Officials. She asked that each member of the committee take a moment of their time to fill out their survey and then return them to her or Michelle when they are done.

Ms Smith then mentioned the Hearth, Patio & Barbeque Expo 2003. She explained that this conference would be held March 5-8, 2003 at the Gaylord Opryland Resort and Convention Center in Nashville, Tennessee. Ms. Smith then handed out the brochures and thanked the committee for their time.

Ray Bizal then introduced himself, explaining that he is a Regional Manager for NFPA who will be sitting in on this meeting. He also mentioned that he had complimentary copies of codes available and would be happy to answer any questions regarding NFPA.

Steve Berger then requested a moment to recognize that Ralph Vasquez, a respected member of this committee, passed away yesterday of leukemia. The acting chair then requested that the committee observe a moment of silence in Ralph Vasquez's honor. A moment of silence was observed prior to continuing with the meeting.

4. Ventless Attics

Bob Lee thanked Mr. Michael Williams of Tempe for forwarding an article about attic ventilation that appeared in the October 2002 ASHRAE Journal. It was written by Mr. Rose & Mr. TenWolde and said, "Hot, dry climates also do not warrant roof-venting requirements for moisture control." "When the foam is located on top of the roof deck, or the roof is made of structural insulated panels, venting is also unnecessary." "No scientific claims have ever been made that attic ventilation is needed for moisture control in hot, humid climates." "Ventilation should be treated as a design option in cold, wet coastal climates and hot climates. Current technical

information does not support a universal requirement for ventilation of attics...” It is their contention that moisture control, i.e. condensation, is the most significant reason for the ventilation requirement.

Others say the major reason is heat build up. No roofing manufacturer has substantiated that a heat build up of 5° to 10° will materially affect shingle durability and Building Science Corp. has documented this is the change of temperature based on actual buildings in Las Vegas.

Mr. Lee also thanked Mr. Forrest Fielder of Surprise for relaying the information that Mr. John Tooley presented in Surprise on September 11, 2002. It is Mr. Tooley’s contention that there is no moisture related benefit in ventilating attics in this climate. His suggestion is to introduce outside air through the heating and cooling equipment to slightly pressurize the condition space.

Mr. Lee indicated that from these sources, it is clear that the proponents for unvented attics are more than just Mr. Rudd and Mr. Lstiburek as he stated last meeting.

Mr. Lee went on to explain that there are several problems with vented attics in our climate:

- Energy costs are higher in buildings with ventilated attics.
- The vent openings are prohibited in the Urban/Wildland Interface Fire Code.
- The vent openings make sound mitigation measures less effective.
- The vent openings allow for the introduction of dust and sand in high wind areas.

In all his research Bob has found nothing that substantiates the need for attic venting in our climate, even though it is required under IRC Section R806. That research includes the decades old information received from the roofing manufacturers association.

Currently, the MAG Building Codes Committee Interpretation of Section 1505.3 of the Uniform Building Code of 1996 has an exception which states, “Attic ventilation is not required for an enclosed rafter space formed where ceilings are applied directly to the underside of the roof rafters provided insulation is installed against the roof sheathing without an air space between the roof sheathing and the insulation, and a vapor retarder not exceeding 1 perm is installed on the room side of the insulation.”

Several respondents, to Bob’s survey of several weeks ago regarding how enforcement of ventless attics is currently handled, recognized ventless attics when an architect or engineer “designed” such an attic. Bob questioned what criteria were used? What designing was done other than to remove the ventilation openings? What do they know that we don’t?

Bob then asked, so, what should the committee do?

Mr. Lee proposed that the committee more clearly define what an attic is. The UBC did not define the word "Attic" but currently the IRC defines an attic as, "The unfinished space between the ceiling joists of the top story and the roof rafters." Since we don't typically see either ceiling joists or roof rafters in our area, I think we have modified that definition in practice to read, "The unfinished space between the bottom chord of a truss of the top story and the top chord of that truss."

Bob's suggestion is to modify the definition of "Attic" to read, "The unfinished space between the insulation of the top story and the roof sheathing." He felt that this would recognize that in those circumstances where there is no such space, there would be no ventilation requirement. This would give some specific guidelines so that anyone, not just registrants, that wanted to benefit from the energy savings of an unvented attic, could follow.

Mr. Lee had previously spoken with Mr. Anthony Floyd of Scottsdale who suggested that there be an exception that recognizes the climatic conditions of our area. This exception would be noted in IRC Section R806.1.

Mr. Lee indicated that to address the vapor retarder required by the MAG Building Codes Committee Interpretation of Section 1505.3 of the Uniform Building Code, the committee has recognized that the exception to IRC Section R322, which requires a vapor retarder on the warm-in-winter side of the insulation, applies in our area. The exception states that a vapor retarder is not required, "in construction where moisture or freezing will not damage the materials." Mr. Lee believes this recognition does extended to this circumstance.

Bob Lee moved to change the definition of attic to read as he suggested above. The motion was discussed.

Tom asked if the exception is not already in the I-Code.

Cheryl indicated that the IBC referred to patio covers, which are very different.

Bob stated that there are a number of exceptions, the one Cheryl referred to is exception # 3 and it is exception #4 that I am referring to.

Cheryl asked if you need drywall in that scenario.

Bob replied by saying that the exception does not specifically say drywall although it does say rafters, not trusses.

Cheryl asked what the difference is, if it is a connected truss if the ceiling is lower on a scissor truss.

Bob responded by saying that the space between Drywall and insulation is, in a sense, semi-conditioned.

Cheryl responded by saying that it was her understanding that there is no such thing as semi-conditioned space.

Bob responded by explaining that you say it is conditioned or vented space whereas semi-conditioned space is something in between.

Anthony stated that energy experts say that we do not need to do this but it is conflicting with the code. Anthony explained that what Bob is trying to do is create consistency in approach.

Armando added that if a unit is in the attic wouldn't you need ventilation in the attic?

Anthony responded by concurring adding that mechanical equipment located in the attic space would require ventilation.

Armando added that the insulation would then need to be kept up in some way.

Joe stated that if the purpose of the vent is to release moisture, are we then open ourselves up to mold problems if we decide that attics do not have to be vented? Joe stated that it seems that we used to vent attics, based on good science, presumably for a good reason, and now we have lost the science, so we are willing to allow unvented attics again.

Joe asked if it was possible to make a house so tight that air cannot escape thereby creating other problems. He said for example, smoke control has become too good so that people cannot get out. Joe asked if there had been any numbers thrown out about the impact.

Bob replied explaining that mold required 23% humidity to grow in the first place and then it required a moisture content of at least 19% to be maintained for a long period of time. Without a leaking pipe or some other source of water mold is not an issue in this climate. It is possible to build a very tight house that can produce energy savings.

Joe McElvaney asked if there were any figures available that indicate the amount of savings that could be achieved by building a tighter house.

Bob Lee responded by stating that the amount of savings varied but people have reported saving \$100 to \$200 a month on their bills.

Anthony raised a concern about liability with running ducts within the air-conditioned space. Anthony also added to the discussion of mold by stating that water can leak anywhere it does not have to be an attic.

Tom asked if Bob's request for change was for MAG Building Codes Committee or if Bob was requesting a code change.

Bob replied that this is just for the MAG Building Codes Committee to take a position on.

Tom asked if that is the case, and the committee changes the definition of attic, then that change needs to be coordinated with other parts of the code to make sure it makes sense.

Steve added that the concept is ok but the definition is of some concern for example getting away from a chord to a ceiling joist.

Joe noted his curiosity as to how the homebuilders feel about this. Mr. Rus Brock replied that he wasn't sure how the members of his organization felt but he would attempt to find out.

Cheryl stated that of the approximately 100 homebuilders she deals with in her jurisdiction only one of them does this. She questioned whether the committee would want to make this kind of change for one homebuilder.

Bob then explained that he gets several requests for ventless attics in Cave Creek. Also he added that when he conducted his survey on the issue he found that 9 of 14 jurisdictions allowed ventless attics under some circumstances. He continued by explaining that the goal is to have consistency and uniformity allowing ventless attics in some way.

Anthony commented on the ability to create the thermal barrier necessary if you run vents along the roof deck you will get less penetration through the insulation.

Tom suggested that perhaps the committee could redefine it and look at a local policy that went with it because he could see that people would begin to use the space for storage or other purposes for which it was never intended. He indicated that the paper side of the insulation should always be against the roof sheathing.

Bob indicated that the original intent is that this would be a simple exception.

Tom reminded people that we are here to help make this work for Bob and the committee. The committee should support one another in our efforts and the committee will work with Bob to make sure that the committee comes up with a good option that meets everybody's needs.

Tom asked if there is anyone on the committee objecting to working on this subject with Bob Lee. No one objected.

Bob decided to withdraw the motion he had made until more work can be done on the issue. He stated that the consensus that the group is generally supportive of the concept is helpful.

Tom indicated that perhaps the committee might be prepared to vote on this issue at the next meeting.

5. AZBO Code Review & Development Committee Report of Final Actions for 2001-2002.

This item appears to have been skipped.

6. Possibility of Southwest Gas Hosting a Luncheon for the Building Codes Committee

Mr. Ewers explained that at the last meeting we asked for ideas for people to speak at a luncheon hosted by Southwest Gas. Joe McElavaney suggested that they could discuss the issue of installing gas pipes under concrete. Tom noted that the topics do not necessarily have to be related to gas. Bob suggested that it would be helpful to address the question of whether or not appliance connectors going through the vertical part of a cabinet should be considered as a connector passing through a wall. Michelle suggested that Charlie Gohman of the Arizona Department of Energy could present the work that he has done with infrared cameras to find potential problems with construction that lead to higher cooling and heating bills. It was decided that Michelle would take these ideas back to Fran and discuss the logistics of the lunch and report back to the committee.

7. Legislative Issues

There were no legislative issues to discuss.

8. Updated MAG Building Codes Committee Membership

The membership list will once again be e-mailed every month. It was noted by Bob that the updated roster is useful to have when building officials need to contact one another. Michelle stated that she would be happy to e-mail the roster.

9. City of Phoenix Presentation of Progress Towards Adoption of NFPA 5000

Joe McElvaney presented on behalf of the City of Phoenix. He circulated a table that showed which subcommittees have been formed, who is on each committee, when they meet and what chapters they are responsible for. More information is available on the City of Phoenix website www.ci.phoenix.az.us. First, click on by department on the left and then click on the Development Services Department, where you will find a section devoted to NFPA 5000 adoption.

10. Proposed Projects for the Building Inspectors and Plans Examiners Committee

Cheryl provided an update on the items that were discussed at their November meeting. The following is a list of the topics that were discussed.

1. Exiting through intervening rooms
2. Wire sizing as per NEC Table 310-16 and IRC Table E3605.1
3. Gas testing - is flex included in the gas testing
4. Post-tension slabs/special inspection policies
5. Residential inspection checklist
6. Redlines acceptable on plans - yes or no
7. Insulfoam R-Gard use with stucco systems

Cheryl said that she would make a copy of their meeting minutes available to the building codes committee. She indicated that the subcommittee is meeting bi-monthly with the next meeting scheduled for January 21 at 1:30 pm.

11. Topics for Future Agendas

Tom explained that about 45 minutes of the next agenda would be devoted to the demonstration of what the County has available in terms of mapping and information. He also noted that next month's meeting will be on a Monday December 16, 2002 in the Cholla Room.

Tom asked that anyone with any other ideas regarding agenda items for the next meeting pass them along to Michelle Green.

12. Adjournment

The next meeting will be December 16 in the Cholla Room. Steve Berger made the motion to adjourn, Mario Rochin seconded the motion and the meeting was adjourned at 3:15 pm.