

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
BUILDING CODES COMMITTEE

November 19, 2008

Maricopa Association of Governments Office
Cholla Room
Phoenix, Arizona

COMMITTEE MEMBERS

Michael Clack, Scottsdale, Chairperson

Ken Sowers, Avondale

*Phil Marcotte, Buckeye

*Mike Tibbett, Carefree

*Mike Baxley, Cave Creek

A-Alex Banachowski, Chandler

Mary Dickson, El Mirage

*Peter Johnson, Fountain Hills

*John Smith, Gila Bend

* Jo Rene DeVeau, Gila River Indian
Community

A-Ben Cox for Ray Patten, Gilbert

Bryan Woodcox for Deborah Mazoyer,
Glendale

*Ed Kulik, Goodyear

*Chuck Ransom, Litchfield Park

Tom Ewers, Maricopa County

A-Steven Hether, Mesa

Bob Lee, Paradise Valley

Dennis Marks, Peoria

*Tom Wandrie, Phoenix

A-Dean Wise, Queen Creek

Paul Trombley for Forrest Fielder,
Surprise

A-Michael Williams, Tempe

*Mario Rochin, Tolleson

John Stigsell, Youngtown

Rus Brock, Home Builders Association

OTHERS IN ATTENDANCE

Cheryl Mullis, Peoria

A-Bob Sandoval, Mesa

Heidi Pahl, MAG

Bob Palmer, Southwest Gas

Steve Barnes, Pentair Water Pool and Spa

Justine Cornelius, Glendale

Jim Burch, Glendale

Albert Laird, SolarCITY

Ryan Hazen, SolarCITY

Jim Beard, SolarCITY

Jami Garrison, MAG

*Those members neither present nor
represented by proxy.

A-Those members participating via
audioconference

V-Those members participating via
videoconference

1. Call to Order

Michael Clack, Chair, called to order the November 19, 2008 meeting of the MAG Building Codes Committee (BCC) at 2:00 p.m.

2. Introductions

Voting members Alex Banachowski, Steven Hether, Dean Wise, Michael Williams, and proxy Ben Cox attended via telephone conference call. All members introduced themselves.

3. October 15, 2008 Meeting Minutes

It was moved by Bryan Woodcox, seconded by Ken Sowers and unanimously recommended to approve the October 15, 2008 meeting minutes.

4. Call to the Audience

Bob Palmer said that city of Phoenix is no longer requiring a 60 pound test when there is 2 pound delivery at the structure. Bob Lee said the 60 pound test is no longer a requirement for any jurisdiction.

5. Comments From the Committee

Bryan Woodcox said Simpson held a free class on wall bracing in Phoenix on November 18, 2008 and only a few member agencies attended.

Tom Ewers asked if an approved standard plan can be used by someone else, if a letter of authority is given for them to use it. Dennis Marks replied that in Peoria they allow it even though it is a lot of paperwork. Mr. Ewers noted that in the past 9 months due to high foreclosure rates on valley homes, banks are taking over houses and using the builder's standard plan. Mr. Ewers said that Maricopa County thinks this is acceptable as long as the bank has a deed that shows ownership and that the bank and the county are in agreement that the bank is accepting the plan.

Bob Lee announced that the central chapter of the International Code Council (ICC) annual banquet is being held Saturday November 22, 2008 and all interested parties may attend.

Bob Lee announced that Salt River Project (SRP) and Arizona Public Service (APS) are holding a class on photovoltaic systems and the 2005/2008 National Electric Codes, December 3, 2008 in Tempe. Mr. Lee noted that John Wiles from Southwest Development Technology Institute will be presenting.

6. Association of Pool and Spa Professionals (APSP)

Bob Lee said to the best of his knowledge, only Fountain Hills and Paradise Valley are currently enforcing the atmospheric vacuum release requirements of Appendix G of the 2006 International Residential Code (IRC). He said that requirement is in conjunction with the dual drains and separation and the new pool drain covers that are required. Mr. Lee said the Virginia Graeme Baker Pool and Spa Safety Act has an effective date of December 20, 2008.

Mr. Lee explained the requirements in the Act. He said this will be required of all jurisdictions by December 20 of this year. He said pool builders have been advised of the change in the law. He said the older version of drain covers are off the market. He said pool builders have been installing dual drains and separation for some time. He mentioned that the atmospheric vacuum release will be required in future. He distributed a diagram he created of a non mechanical system for the Town of Paradise Valley vacuum breaker SVRS. He explained the diagram.

Justine Cornelius said Glendale has had several phone calls in regard to this Act from customers asking if they would be in compliance. She said that the Act does preempt all State laws so Glendale will be in compliance with this Act. She noted that all public pools will have to be retrofitted. She asked for input on how ICC and other jurisdictions were handling this issue. Bob Lee asked if Scottsdale was planning to enforce these new requirements. Michael Clack said that Scottsdale did adopt this chapter in the IRC. Mr. Clack said that entrapment avoidance was discussed in Minnesota at the ICC meeting and he believes it will be part of 2009 codes. Bob Lee said the code change proposal passed but it essentially went back to the 2003 code language. Michael Clack said that Scottsdale has not had discussions with pool builders and therefore they may not be currently enforcing these new requirements. Ken Sowers asked for a copy of the law. MAG staff made copies and distributed to members.

Steve Barnes introduced himself. Mr. Barnes discussed the Virginia Graeme Baker federal law created when a little girl died from being held down by a pool drain. Mr. Barnes noted that all public swimming pools will need to be updated to require new drain covers and suction systems.

Steve Barnes explained the federal law. He gave the specific code. He said all drain covers have to be tested and certified by national testers. Michael Clack said this act is applicable retroactively to public pools. Mr. Barnes said this law does not apply to residential pools without state legislation being written.

Steve Barnes said new drain covers may not have enough flow capacity to handle the pool pump. Michael Clack asked for clarification on how some systems pass the test but do not meet the standard flow rating. Mr. Barnes reported that the effect is to know what size drain cover supports each pool pump. Steve Barnes explained that there may not be a drain that exactly fits your pool.

Bob Lee said in the 2006 IRC the atmospheric vacuum release system is currently required but in the 2009 code this language will not be there. Steve Barnes said the 2009 I-codes will not have the suction entrapment language; it will be replaced with a single reference to the APSP ANSI 7 suction entrapment avoidance standard and has the same requirements as the Federal Act. Bob Lee clarified that in the 2009 if they have dual drain with a 3 foot separation then any kind of mechanical system is not going to be required. Steve Barnes replied correct, not in that situation, but it could be required in other situations. He explained other significant impacts of APSP ANSI 7. He explained the intent of ANSI 7.

Bob Lee asked if ANSI 7 was the same as ASME A112. Steve Barnes said no it is not the same; he referenced ASME A.19.8 and 19.17.

Bob Lee asked what a gravity drainage system looks like. Steve Barnes described it. Bob Lee asked if the reservoir could be buried. Steve Barnes said yes, the idea is that if you block the drain, the pump continues to function.

Cheryl Mullis asked if there are drain photos that MAG BCC members can share with pool companies. Steve Barnes replied that pool companies should be referred to the following Web sites: apsp.org and cpsc.gov with a search on pool and spa. Michael Clack thanked Mr. Barnes for his informative presentation.

7. 2009 I-Codes

Michael Clack said that committee members will be requested to discuss an initiative to reach consensus in unison on the 2009 I-codes, prior to the jurisdiction adoption of these codes.

Bob Lee said traditionally the MAG BCC has recommended that each jurisdiction consider and adopt the newest edition of the I-codes. He said the 2009 editions are going to be published early next year. He recommends continuing this procedure so that when city councils are approached regarding code adoption that there is uniformity across the valley.

Bob Lee made a motion to recommend that each jurisdiction consider adopting the 2009 family of codes as published by the ICC with an effective date of July 1, 2010. Bryan Woodcox questioned the effective date of July 1, 2010. Steve Hether said it costs city of Mesa about \$40,000 to go through the code adoption process. Steve Hether said each jurisdiction has budget constraints and may not adopt codes by July 1, 2010. Ken Sowers said it is understood that July 1, 2010 is a target date and that it does not need to be in the motion for the motion to be effective. The goal is to encourage uniformity across the region.

Bob Lee amended the motion to recommend that each jurisdiction consider adopting the 2009 family of I-codes as published by the ICC. Steve Hether seconded the motion and a roll call vote was taken, with all members attending voting in favor of the motion and city of Tempe abstaining.

Rus Brock said the Home Builders Association (HBA) appreciated the jurisdictions' ability to maintain uniformity. Mr. Brock said that every three years as the jurisdictions go through the code adoption cycle, the HBA maintains a spreadsheet tracking when each jurisdiction goes or is going to city council for adoption. He asked if MAG staff could take over this task in future. Bob Lee said this spreadsheet would benefit others, such as apartment associations and school districts. Michael Clack said he would find value in this task being done by MAG and posted on the MAG web site.

8. Suggested Guidelines from the MAG BCC 1991 to Present

The Chairman announced that this item has been pulled from the agenda and may be revisited at a future meeting.

9. Photovoltaic System Connections

Bob Lee said that SolarCITY gave a presentation a month ago at their facility in Phoenix and it was well attended. He said SolarCITY reviewed their thoughts on a good submittal and

provided one line and three line diagrams for photovoltaic. Mr. Lee referred committee members to Attachment One. He asked for input on photovoltaic system connections to the Service Entry Section. He asked for clarification of the National Electric Code (NEC) Articles 690 and 240.21 with regards to disconnects and taps.

Albert Laird, Regional Operations Director of SolarCITY, provided information on photovoltaic system connections. Mr. Laird distributed two documents: Appendix M: Service Entrance Conductor Taps for Utility-Interactive Inverter Systems, a summary of the codes that govern tapping into the service entry section, and a SolarCITY diagram used for installation.

Bob Lee asked why a company would do a supply side tap over a load side tap. Albert Laird replied that if all of circuit breakers are used the customer can get line side tap on the supply side without replacing their electric panel. He noted this is a more cost effective option for the customer.

Bob Lee read NEC section 690.64a. Mr. Lee asked if it is necessary to have an additional breaker on the load side or supply side tap since there is a utility disconnect downstream of the photovoltaic meter. Albert Laird said the breakers provided are inside the panel as it is the easiest place to tap into the main service panel. He said the AC disconnect is required by the utility company. He noted that the utility company requires safety redundancy. He explained the equipment used. He said the utility companies review in detail each photovoltaic diagram prior to the jurisdiction review of these drawings.

Jim Burch announced that he does the electrical plan review for the city of Glendale. He noted that the utility company wants some autonomy, they do not want to go into a customers panel board to work on a meter. He said the utility company wants it to be the same way every time so it is easy for their field workers to understand. Albert Laird noted that the Fire Department also wants a clearly labeled photovoltaic meter so they can flip the disconnect easily.

Bob Lee asked why the utility company would work on a photovoltaic meter downstream of their area of responsibility. Jim Burch replied it may be part of a revenue generating activity to monitor amount of electricity that the user is producing.

Albert Laird explained that the Arizona Corporation Commission (ACC) enforces having a dedicated photovoltaic meter as part of the checks and balance of the net metering process. The owner has a dedicated photovoltaic meter and the utility company has a bi-directional meter. If there is ever a dispute about the bill and the amount of electricity generated by the photovoltaic system then the utility company uses data from the 2 meters to resolve the dispute.

Bob Lee said the disconnects downstream of the bi-directional meter should be the responsibility of the local jurisdiction, not the public utility. He said he would like to eliminate needless redundancy, as it wastes the customer's money. Jim Burch agreed.

Ryan Hazen explained SolarCITY's reason for installing a disconnect with a supply side tap.

Bob Lee said he was hopeful to receive an opinion from John Wiles on this issue as his interpretation varies from the APS interpretation.

Albert Laird said that until the rules are changed by APS there is no solar company that will install a system without the redundancy of the disconnects. Ryan Hazen said it is also required that they have a fuse or disconnect device. Bob Lee said that the utility disconnect downstream from the photovoltaic meter is required to be non-fused and that might be the reason why there is a need for the other disconnect, to provide over current protection. Ryan Hazen said they have been installing fused disconnects in the supply side connections. Mr. Hazen explained the redundant load side connections. Bob Lee said he believes cities and towns are doing the load side properly.

Jim Burch said that APS wants to have their own switch they can pull if something goes wrong. He noted that APS wants a clear scope of responsibility for their maintenance staff at APS.

Bob Lee asked that this topic be on the January MAG BCC agenda. The committee agreed. Michael Clack said he would like to hear from APS so that the MAG BCC understands why APS is doing this. Albert Laird said APS does not want to participate in a public process. Bob Lee said APS has not been very flexible and consequently will not be able to share information at a future MAG BCC meeting. Michael Clack asked if SRP is taking the same position as APS. Albert Laird stated SRP usually takes the same stance as APS. Albert Laird suggested setting up a meeting at APS to discuss this issue with APS management. Bob Lee and Michael Clack expressed that they would like to go to APS to discuss this issue further to garner greater understanding.

Bryan Woodcox asked if any changes are being made to their systems since the SolarCITY training. Albert Laird replied that minor changes are being made continually but no major changes have been made. He said they are using the same equipment.

Albert Laird explained that city of Tempe was concerned that a photovoltaic racking system could void the warranty of the tile roof. The roofing manufacturer reassured city of Tempe that photovoltaic does not void the warranty of the roof. He noted that the paperwork at SolarCITY was changed to reflect the roof warranty issue.

10. Interpretation of ARS 9-467c.

Michael Clack said that John Stigsell from Youngtown requested that a discussion on the interpretation of ARS 9-467c be held so Mr. Stigsell could gather input from MAG BCC members. Michael Clack reminded that an initial discussion on this topic was held at the October meeting as part of agenda item 10. Mr. Stigsell described ARS 9-467c.

Dennis Marks said the way he interprets it is that a building official cannot refuse to issue a permit to a homeowner because they have a non permitted structure already on their property that they were not aware of. He said a building official can enforce violations of the non permitted structure. He said not every violation requires a permit if it is correctable without major work. He said the city of Peoria has done the investigation and correction at the same time they were doing the new permit and almost 99% of the time homeowner is grateful for the building official's efforts. Michael Clack said he approaches this on a case by case basis as the current homeowner more than likely is not the person who did the non permitted work on the house. Mr. Clack said he ensures there is not a building safety issue and that the house is structurally safe. He gave the example of a homeowner putting in a gas water heater that is

not vented properly and the building official discovers this is a violation and it is unsafe so needs to be rectified. Dennis Marks said non permitted work should have been caught in title search or home inspection. Mr. Marks said most times the work is more than 5 years old and so long as there is no visible structural deficiencies. Dean Wise read the law and provided his interpretation of the law.

11. MAG Building Inspectors/Plans Examiners (BI/PE) Forum Update

Cheryl Mullis had no update, but that there would be a meeting in January 2009.

12. Updated MAG Building Codes Committee Membership

No changes were provided. Michael Clack asked that members forward any changes to Heidi Pahl.

13. Update Survey of Code Adoptions

Dean Wise reported that the Town of Queen Creek adopted the 2006 series of I-codes and 2005 NEC. Michael Clack encouraged members to send any code changes to Heidi Pahl.

14. Topics for Future Agendas

No topics were provided.

15. Adjournment

Dennis Marks made a motion to cancel the December MAG BCC meeting, Bob Lee seconded and the motion carried unanimously. The meeting adjourned at 3:29 p.m.