

August 9, 2011

TO: Members of the MAG Building Codes Committee

FROM: Ken Sowers, Avondale, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Wednesday, **August 17, 2011** - 2:00 pm
Avondale Civic Center
Sonoran Conference Room – first floor, main lobby
11465 W. Civic Center Drive, Avondale
South of the Southeast Corner of Avondale Blvd. and Van Buren St.

PLEASE NOTE THAT THE MEETING WILL BE HELD OFFSITE

A meeting of the MAG Building Codes Committee (BCC) has been scheduled for the time and place noted above. Members of the MAG Building Codes Committee may attend in person, by videoconference or by telephone conference call. Those attending by telephone conference call must make arrangements with Steve Gross at MAG at (602) 254-6300 at least one day prior to the meeting.

Visitor parking is available in the surface parking lot adjacent to the building. Refer to the enclosed map.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Jami Garrison at the MAG office. Requests should be made as early as possible to allow time to arrange for accommodation.

Please be advised that under procedures approved by the MAG Regional Council on June 26, 1996, all MAG committees must have a quorum to conduct business. A quorum is a simple majority of the membership, or 12 people for the MAG Building Codes Committee. If you are unable to attend the meeting, please send a proxy from your jurisdiction or agency to represent you.

If you have any questions or require additional information, please contact Scott Wilken at (602) 254-6300 or swilken@azmag.gov.

TENTATIVE AGENDA
MAG Building Codes Committee Meeting
August 17, 2011

1. Call to Order

2. Introductions

3. July 20, 2011 Meeting Minutes

4. Call to the Audience

Members of the public may request to speak on items that fall under the jurisdiction of the MAG Building Codes Committee (BCC) and are not scheduled on the agenda; or, on items on the agenda for discussion but not for action. A total of 15 minutes will be provided for the Call to the Audience, with a limit of three minutes per speaker, unless the Chair requests an exception to this limit. Those requesting to comment on action agenda items may be provided an opportunity to do so at the time the agenda item is heard.

5. Comments From the Committee

An opportunity will be provided for Building Codes Committee members to present a brief summary of current events. The Building Codes Committee is not allowed to propose, discuss, deliberate or take action at the meeting on any matter in the summary, unless the specific matter is properly noticed in accordance with the Arizona Open Meeting Law.

6. Building Information Modeling

Building Information Modeling (BIM) is one of the newest tools for designing, reviewing, and managing buildings. Russ Sanders from the design firm Orcutt Winslow will provide a broad overview of BIM from programming and conceptual design through design

2. For information.

3. Review and approve the minutes of the July 20, 2011 meeting.

4. For information and discussion.

5. For information and discussion.

6. For information and discussion.

development, presentation, model analysis, trends in construction documentation, uses of the model during construction, and facilities/asset management. Jonathan Widney of Solibri will give a live demonstration of how Building Information Models can be analyzed by rule-based software for quality assurance, ADA compliance, code-compliance, and many other things.

7. Updated MAG Building Codes Committee Membership

We are requesting that Committee members review **Attachment One**, Committee Roster, sent with this agenda. Please forward any changes to Scott Wilken prior to the meeting or provide them at the meeting.

8. Update Survey of Code Adoption

Attachment Two identifies the codes that member agencies have adopted. Please review this information and provide any updates or corrections to Scott Wilken.

9. Topics for Future Agendas

Potential topics for the next meeting will be discussed. Please think of any items of discussion or presentations that you would be interested in hearing about at future meetings.

The next meeting of the MAG Building Codes Committee is scheduled for Wednesday September 21, 2011 at 2:00 p.m. The location will be determined at a later date.

10. Adjournment

7. For information and discussion.

8. For information and discussion.

9. For information and discussion.

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
BUILDING CODES COMMITTEE

July 20, 2011

Avondale Civic Center
11465 W. Civic Center Drive
Sonoran Room
Avondale, Arizona

COMMITTEE MEMBERS

Ken Sowers, Avondale, Chair

Phil Marcotte, Buckeye

*Mike Tibbett, Carefree

*Mike Baxley, Cave Creek

*Martin Perez, 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

*Tom Paradise, Glendale

*Ed Kulik, Goodyear

*Chuck Ransom, Litchfield Park

Tom Ewers, Maricopa County

Steven Hether, Mesa

A-Bob Lee, Paradise Valley

*Dennis Marks, Peoria

Julie Belyeu, Phoenix

*Dean Wise, Queen Creek

Dustin Schroff for Michael Clack,
Scottsdale

A-Michael Williams, Tempe

Dale Crandell for Mario Rochin, Tolleson

Rick DeStefano, Wickenburg

*Jim Fox, Youngtown

Jackson Moll, Home Builders Association

OTHERS IN ATTENDANCE

Jami Garrison, MAG

Scott Wilken, MAG

Chuck Gunn, Mesa

Laura Hyneman, Mesa

Ryan Spillers, Mesa

Michael Dalmulik, Mesa

Randall Westacott, Avondale

Anthony Floyd, Scottsdale

Roger Rotundo, Phoenix

Bruce Dimmig

*Those members neither present nor
represented by proxy.

A-Those members participating via
audioconference

1. Call to Order

Ken Sowers, Chairman, called to order the July 20, 2011 meeting of the MAG Building Codes Committee (BCC) at 2:05 p.m.

2. Introductions

Voting members Michael Williams, Ben Cox, and Bob Lee attended via telephone conference call. All members introduced themselves.

3. January 19, 2011 Meeting Minutes

It was moved by Tom Ewers, seconded by Steven Hether and unanimously recommended to approve the May 18, 2011 meeting minutes.

4. Call to the Audience

There were no comments from the audience. Jami Garrison introduced Scott Wilken, who recently joined the MAG staff as a Regional Planner, and will be taking over staffing the Building Codes Committee in the future.

5. Comments From the Committee

Bob Lee commented that the Arizona Building Officials, AZBO, annual business meeting will be held at the Prescott Resort August 2-4.

Ken Sowers said that the information for the AZBO Fall Educational Institute is now available online. There will be 19 new or updated classes. He said that the fee will be \$100 per day, and it will be at the Prescott Resort October 3-7.

6. Green Building Codes

Roger Rotundo and Anthony Floyd presented an overview of the International Green Construction Code, IGCC, and the National Green Building Standard. Roger Rotundo said that the IGCC is a commercial code developed by the International Code Council, ICC. He said that the IGCC is a highly customizable code that can be adopted by a municipality as desired. He said that in each chapter there are mandatory components and elective components. Municipalities can raise the bar from what is written in the IGCC as needed. He said it is written as an overlay code, in that it goes on top of a municipality's existing code. He said that the heart of the IGCC is sustainable buildings and sustainability. He said that the goal is to increase the lifecycle of buildings to last 200 years rather than 10 years by designing elements that can be replaced as needed without having to replace the whole building.

Anthony Floyd said that the IGCC is a model code that can be adapted and amended by municipalities as needed. He said that the IGCC was created to be a mandatory code, but that Phoenix and Scottsdale adopted the code as a voluntary code. He said that it would be very difficult to adopt the code as mandatory without being able to try it and work with it first. He said that ICC created the IGCC in order to allow its members to have a code that does not conflict with other building codes. He said that the Leadership In Energy and Environmental

Design, LEED, requirements, in some instances, can conflict with existing building codes, and that this code attempts to solve that issue. He said that the American Society of Heating, Refrigerating and Air-Conditioning Engineers, ASHRAE, also recognized a need for a green building standard and developed a code compatible with their existing codes. He also said that ICC and ASHRAE came to an agreement to reference each other's codes in order to not compete and to not confuse the marketplace. He also said that the ICC and the National Association of Home Builders, NAHB, got together to create the National Green Building Standard for residential building. He said that both Phoenix and Scottsdale have adopted versions of the National Green Building Standard. He also introduced the 2008 California Green Building Standards Code, which is a mandatory code created by California.

Roger Rotundo added that he has observed that all of these separate green building codes are coming together and are on their way to becoming a single standard. Anthony Floyd said that he has seen in this process the best aspects of each of the codes becoming homogenized into one code.

Roger Rotundo discussed the new industries and opportunities that will be created as a result of further standardization and adoption of green building codes across the country.

Anthony Floyd discussed the committee process that took place to create the initial drafts of the IGCC. He said that the ICC went through a rigorous public process to draft the code. He said that one of the big compromises made was with regard to building materials. As an example he said that one of the baseline requirements is that at least 55% of all building materials used have to meet one or more of five properties: 1) has to be a reused material 2) has to contain recycled content 3) has to be recyclable; 4) has to be a bio-based material, like wood, from a sustainably-maintained forest or 5) has to be a local material, from within 500 miles. He said that this was a compromise between all the different building material manufacturing industries.

Bob Lee asked about an objection he had to a section in version 1 of the IGCC. He said that section 503.2.5 required that indigenous materials be both recovered and manufactured. He asked if this had been resolved. Anthony Floyd said that there was discussion about this question at the recent committee hearings, and that this language originally came from LEED. He said that when Scottsdale adopted the code, that portion was loosened up from what was written in version 1. He said that he couldn't remember exactly what the language was in version 2, but he believes that it has been resolved. Bob Lee pointed out that the same language is in version 2. Anthony Floyd responded that he could not remember what the results were of the recent hearings, but that he thought it would be changed for the next version. Bob Lee asked if the Scottsdale amendments to the IGCC are available online. Anthony Floyd responded that they are available online.

Randall Westacott commented that, since the IGCC was adopted by Phoenix and Scottsdale as a voluntary code, what incentives do builders have for complying with the code? Anthony Floyd answered that Scottsdale issues a Green Certificate of Occupancy to any builder who complies with the IGCC. Roger Rotundo commented that Phoenix is doing the same thing, and that they will be maintaining a database of buildings that they have certified as green.

Ken Sowers asked what the added cost will be for a builder to comply with the green building code, and how it compares to constructing a building with LEED certification. Anthony Floyd responded that with LEED there are registration and certification fees, which could be anywhere from a few hundred dollars to \$25,000 to \$30,000 depending on the size of the

project. With the IGCC, he said, a builder doesn't have those fees, and that it is part of the design, review and building process. He said that the energy savings and payback time period will be different for each building depending on the type and use of the building, and that complying with the IGCC could initially cost more or about the same, but the cost savings will be found over time.

Anthony Floyd described the plan verification process that is now used in Scottsdale for the IGCC. The first step, he said, is to meet with the developer to get a common understanding of what is expected, what needs to be provided by the applicant, and what the applicant will need to comply with. The plans are then submitted for review, and the IGCC items are reviewed concurrently with the standard building code items. After that review process, a green building permit is issued. During construction, IGCC items are inspected along with standard building items, but a different checklist is used to keep the two lists separate. Finally, he said, at the end of the project a green certificate of occupancy is issued for the building.

Roger Rotundo passed out a handout that he created for the Phoenix building inspectors that shows the different dial-in codes for IGCC inspection items. This list, he said, helps inspectors verify major required items throughout the building process.

Anthony Floyd said that, in the building community, there are a lot of people asking if the IGCC is competing with or will ultimately replace LEED. He said that this is not the case at all. He said that LEED is a rating system with different achievable levels, while the IGCC, on the other hand, is a minimum baseline code. He said that if a developer wants to get recognized for building green, he would go with LEED certification. Most likely, he said, achieving LEED certification would mean that a builder complied with the IGCC, as well. He described the requirements of IGCC as the floor, while LEED is the ceiling. He said that the U.S. Green Building Council, who maintains LEED, supports the IGCC because they see IGCC as raising the floor of building requirements, which allows them to raise the ceiling with LEED. Roger Rotundo added that, with many of the green building items, there will be a point of diminishing returns. After that point is reached, he said, we will start to see new technology being developed and used in green building.

Anthony Floyd said that the IGCC will be updated every three years as part of the code update process. He discussed the next steps for the IGCC, saying that the ICC will be holding its national conference in Phoenix in this November, and that the final action hearings for the IGCC will take place at that time. He said that the IGCC will be published next year as part of the 2012 I-family of codes.

Chuck Gunn said that Fulton Homes has decided to exceed the IGCC as a selling point for their houses. He said that that the extra cost for the first five houses paid for the extra cost of the next 150 or so houses, and that they have seen materials suppliers lowering their costs, so the extra costs associated with complying with the IGCC is going down. He also said that other homebuilders are starting to follow this trend, as well. He asked if the certification that gets submitted to show IGCC compliance gets submitted with the building plans or at a separate time. Anthony Floyd said that Scottsdale has only adopted the IGCC for commercial construction, not residential, but as a part of that, they are treating the verification process similarly to special inspections. He said that they have created an IGCC Commissioning Certificate that is similar to the special inspections certificate. He said that this form contains various sign-offs that refer to sections of the code that do not get inspected by the City. He said that, at the end of the job, the applicant is required to sign off saying that each item was done.

Roger Rotundo said that Phoenix asks the applicant to come in with a plan on how the IGCC requirements will be met.

Ken Sowers said that Roger Rotundo and Anthony Floyd will be in Prescott presenting at the AZBO conference.

Anthony Floyd said that is available online at the ICC website free of charge.

7. Updated MAG Building Codes Committee Membership

There were no updates.

8. Update on Survey of Code Adoption Document

Steven Hether announced that Mesa has adopted the 2009 edition of the Energy Code with an effective date of January 3, 2012.

Julie Belyeu said that Phoenix is discussing adopting the 2012 ICC codes. She said that they haven't formalized anything, but their proposal would give them an adoption date of January 2013.

Ken Sowers said that he thinks AZBO will be looking at the 2012 codes as well.

Jackson Moll suggested altering the Code Adoption Document in the last column to say 2009 or 2012 ICC Code.

Bruce Dimmig said that the Department of Energy, DOE, is considering making a 2012/2010 combo book available, and that they are gauging how any municipalities are moving to the 2012 codes. He said that if there is enough interest, they will probably publish those and provide them for free to municipalities. He asked for members to let him know their interest so he could get that information back to DOE.

9. Topics for Future Agendas

Ken Sowers asked if any members have ideas for future meeting topics.

Julie Belyeu asked if anyone had a contact for someone who could give a presentation on Building Information Modeling, BIM. Bruce Dimmig indicated that he could find a contact for a presentation like that.

10. Adjournment

Steven Hether made a motion to adjourn and Phil Marcotte seconded the motion. The meeting was adjourned at 3:30 PM.

MAG BUILDING CODES COMMITTEE MEMBERSHIP AS OF
8/9/2011

ATTACHMENT ONE

Voting Members				
Name	Representing	Telephone #	Fax #	E-mail Address
Ken Sowers (Chair)	Avondale	623-333-4025	623-333-0401	ksowers@avondale.org
Michael Williams (Vice Chair)	Tempe	480 350-8670	480 350-8677	michael_williams@tempe.gov
Phil Marcotte	Buckeye	623-349-6200	623-349-6221	pmarcotte@buckeyeaz.gov
Mike Tibbett	Carefree	480-488-1471	480 488-3845	mike@carefree.org
Mike Baxley	Cave Creek	480-488-6637	480-488-2263	mbaxley@cavecreek.org
Martin Perez	Chandler	480-782-3109	480-782-3110	martin.perez@chandleraz.gov
Mary Dickson	El Mirage	623-876-2932	623-876-4607	mdickson@cityofelmirage.org
Peter Johnson	Fountain Hills	480-816-5110	480-837-3145	pjohnson@fh.az.gov
Ray Patten	Gilbert	480-503-6820	480-497-4923	ray.patten@gilbertaz.gov
Tom Paradise	Glendale	(623) 930-3143	(623) 915-2695	tparadise@glendaleaz.com
Ed Kulik	Goodyear	623-932-3910	623-932-1177	ekulik@goodyearaz.gov
Chuck Ransom	Litchfield Park	623-935-4356	623-935-5427	building@litchfield-park.org
Tom Ewers	Maricopa County	602-506-7145	602-506-3282	tomewers@mail.maricopa.gov
Steven Hether	Mesa	480-644-2039	480-644-4900	steve.hether@mesaaz.gov
Bob Lee	Paradise Valley	480-348-3631	480-951-3751	rlee@paradisevalleyaz.gov
Dennis Marks	Peoria	623-773-7232	623-773-7233	dennis.marks@peoriaaz.gov
Julie Belyeu	Phoenix	602-495-7346	602-495-5430	julie.belyeu@phoenix.gov
Dean Wise	Queen Creek	480-358-3009	480-358-3002	dean.wise@queenecreek.org
Michael Clack	Scottsdale	480-312-7629	480-312-9029	mclack@scottsdaleaz.gov
VACANT	Surprise			
Dale Crandell	Tolleson	623-936-7111	623-936-7117	dcrandell@tollesonaz.org
Rick DeStefano	Wickenburg	928-684-5451 x513	602-506-1580	rdestefano@ci.wickenburg.az.us
Jim Fox	Youngtown	623-933-8286 x117	623-209-3026	jfox@youngtownaz.org
Non-Voting Members				
Name	Representing	Telephone #	Fax #	E-mail Address
Jackson Moll	Home Builders Assn.	602-274-6545	480-556-5478	mollj@hbaca.org
Jim Ricker	Town of Guadalupe	480-505-5380	480-730-3097	jjim@guadalupeaz.org
Alfonso Rodriguez	Fort McDowell Yavapai Nation	480-789-7740	480-789-7798	arodriguez@ftmcdowell.org
Michael McMillan	Brown and Associates	480-991-3751	480-596-5065	mac@brown-and-associates.net
Dennis Dixon (T)	Apache Junction	480-671-5156	480-982-7010	dennisdixon@ajcity.net
Scott Wilken	MAG	602-254-6300	602-452-5098	swilken@azmag.gov

(T) Temporary

Survey of Code Adoption

Jurisdiction	Building	Mechanical	Plumbing	Electric	Residential	Fire	Energy	Existing Building Code	Fuel Gas	Performance	Green Construction	Notes	URL	Anticipated Adopted Date by Council	Anticipated Effective Date for 2009 or 2012 ICC Codes (Month and Year)
Avondale	2009 IBC	2009 IMC	2009 IPC	2008 NEC	2009 IRC	2003 IFC	2009 IECC		2009 IFGC				Avondale	February 2011	July 1, 2011
Buckeye	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2006 IFC	2006 IECC					2006 Fuel Gas Code. Codes adopted 2/20/07, effective 7/1/07	Buckeye		No plans to adopt 2009 codes.
Carefree	2003 IBC	2003 IMC	1994 UPC	2002 NEC	2003 IRC	2003 IFC						Codes became effective July 1, 2006	Carefree		Not going to adopt, staying with 2003.
Cave Creek	2003 IBC	2003 IMC	1994 UPC	2002 NEC	2003 IRC	2003 IFC	2003 IECC						Cave Creek	January/February 2010	July 2010
Chandler	2009 IBC	2009 IMC	2009 IPC	2008 NEC	2009 IRC	2006 IFC	2009 IECC	2009 IEBC	2009 IFGC			Effective July 1, 2011	Chandler		
El Mirage	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2006 IFC	2006 IECC	2006 IEBC	2006 IFGC			1997 ICC/ANSI Accessibility Code with Arizonans with Disabilities Act. New codes will go into effect Jan. 1, 2008 with city amendments.	El Mirage	January/February 2010	July 2010
Fountain Hills	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2006 IFC	2006 IECC					Codes adopted April 17, 2008 with town amendments available on Web site.	Fountain Hills		No plans to adopt 2009 codes.
Gila Bend	1997 UBC	1997 UMC	1997 UPC	1999 NEC	1997 UBC	1997 UFC									Just adopted 2006 IBC.
Gila River	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2003 IFC	None								
Gilbert	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2006 IFC	2006 IECC		2006 IFGC			ADAAG per state requirements	Gilbert	No date	No plans to adopt 2009 codes.
Glendale	2006 IBC	2006 IMC	2006 UPC	2005 NEC	2006 IRC	2009 IFC		2006 IEBC				With city amendments. Effective Sept. 1, 2007	Glendale	No date	No date
Goodyear	2006 IBC	2006 IMC	1994 UPC	2005 NEC	2006 IRC	2006 IFC	2006 Residential					Adopted 5-14-2007.	Goodyear		
Guadalupe	1997 UBC	1997 UMC	1994 UPC	1999 NEC	1997 UBC	1997 UFC									Need phone #
Litchfield Park	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2003 IFC (waiting on Avondale)	2006 IECC		2006 IFGC			Codes effective July 1, 2008	Litchfield Park		
Maricopa County	2009 IBC	2009 IMC	2009 IPC	2008 NEC	2009 IRC				2009 IFGC			WITH MAG/AZBO AMENDMENTS	Maricopa County	Adopted August 18, 2010	Effective date of 10-1-10, but with a grace period to 1-1-11.
Mesa	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2006 IFC	2009 IECC (Effective 1/3/12)	2006 IEBC	2006 IFGC			2006 IBC, IMC, IPC, IRC and 2005 NEC will be effective 2/4/07. Did not adopt the energy code.	Mesa		
Paradise Valley	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2006 IFC	2006 IECC		2006 IFGC			Effective July 1, 2007	Paradise Valley	January/February 2011	July 2011. Considering adopting the 2009 IECC.
Peoria	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2006 IFC			2006 IFGC				Peoria	January/February 2010	July 2010
Phoenix	2006 IBC	2006 IMC	2006 UPC	2008 NEC	2006 IRC	2006 IFC w/ Amendments	2006 IECC	2006 IEBC	2006 IFGC	2006 ICCP for Buildings and Facilities	IGCC Public Version 2	Effective July 2, 2008	Phoenix	Jan 2013	Discussing 2012 ICC, anticipated Jan 2013
Queen Creek	2006 IBC	2006 IMC	2006 UPC	2005 NEC	2006 IRC	2006 IFC	2006 IECC	2006 IEBC				Effective Aug. 7, 2008	Queen Creek		No plans to adopt 2009 codes.
Salt River	2003 IBC	2003 IMC	2003 UPC	2002 NEC	2003 IRC	2003 IFC	None								Need phone #
Scottsdale	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2006 IFC	2006 IECC				IGCC Public Version 2	Effective Sep. 1, 2007, except IPC June 30, 2008	Scottsdale	January/February 2010	July 2010
Surprise	2006 IBC	2006 IMC	2006 IPC	2006 IEC w/ 2005 NEC	2006 IRC	2006 IFC	2006 IECC	2006 IEBC	2006 IFGC			Adopted June 28, 2007	Surprise	January 2010	July 2010

Survey of Code Adoption

Jurisdiction	Building	Mechanical	Plumbing	Electric	Residential	Fire	Energy	Existing Building Code	Fuel Gas	Performance	Green Construction	Notes	URL	Anticipated Adopted Date by Council	Anticipated Effective Date for 2009 or 2012 ICC Codes (Month and Year)
Tempe	2006 IBC	2006 IMC	2006 IPC	2008 NEC	2006 IRC	2006 IFC	2006 IECC	2006 IEBC	2006 IFGC			Effective 1/12/2009	Tempe		
Tolleson	2006 IBC	2006 IMC	2006 IPC	2005 NEC w/ 2006 IEC	2006 IRC	2006 IFC	2006 IECC					2006 Fuel Gas Code, 2006 IPMC, 2006 NEAC. Codes adopted 2/20/07, effective 7/1/07.	Tolleson	January/February 2010	July 2010
													2006 IFC Amend.		
Wickenburg	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2003 IFC	2006 IECC	2006 IEBC	2006 IFGC				Wickenburg		No plans to adopt 2009 codes.
Youngtown	2006 IBC	2006 IMC	2006 IPC	2005 NEC	2006 IRC	2006 IFC			2006 IFGC				Youngtown	November 2010	January 2011

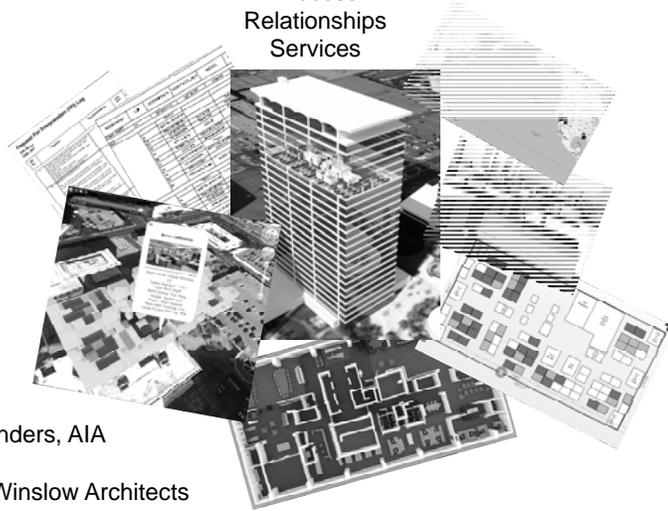
This is intended to be used as a guide, for the selected codes, as to what other agencies have adopted or intend to adopt.

Last updated August 9, 2011 by Scott Wilken, MAG

Source: MAG Building Codes Committee Members

Architecture in the Age of Information

Design
Process
Relationships
Services



Russ Sanders, AIA
Director
Orcutt | Winslow Architects

orcutt|winslow
ARCHITECTURE PLANNING INTERIOR DESIGN



Programming

orcutt|winslow
ARCHITECTURE PLANNING INTERIOR DESIGN



Conceptual Design

orcutt|winslow
ARCHITECTURE PLANNING INTERIOR DESIGN



Onuma Planning System

orcutt|winslow
ARCHITECTURE PLANNING INTERIOR DESIGN

Laser Scanning



Image source: Precision 3D

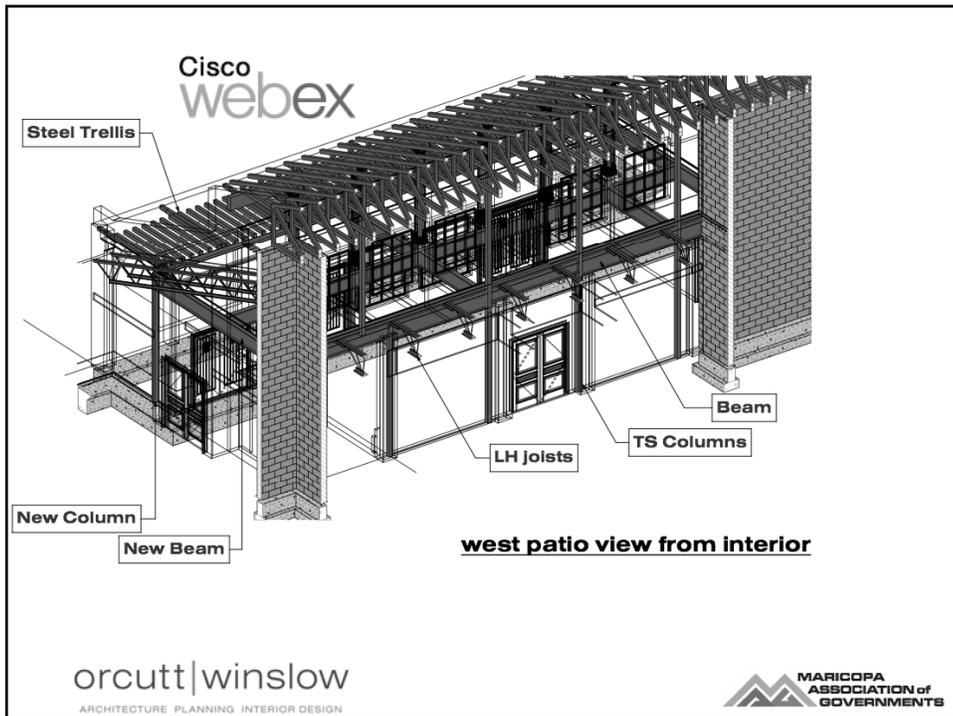
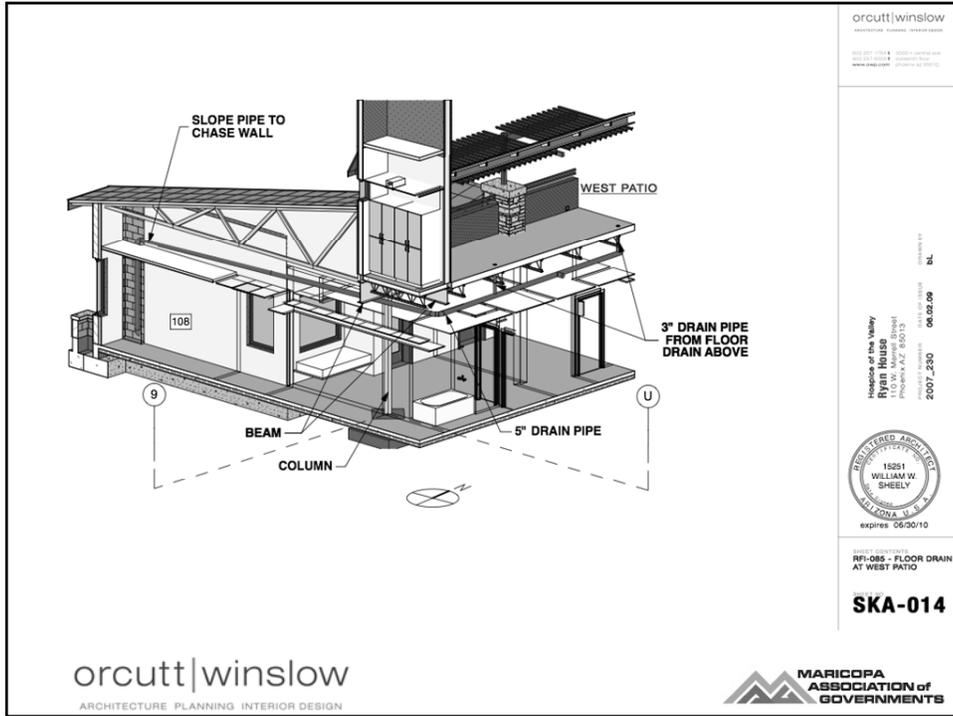
orcutt|winslow
ARCHITECTURE PLANNING INTERIOR DESIGN

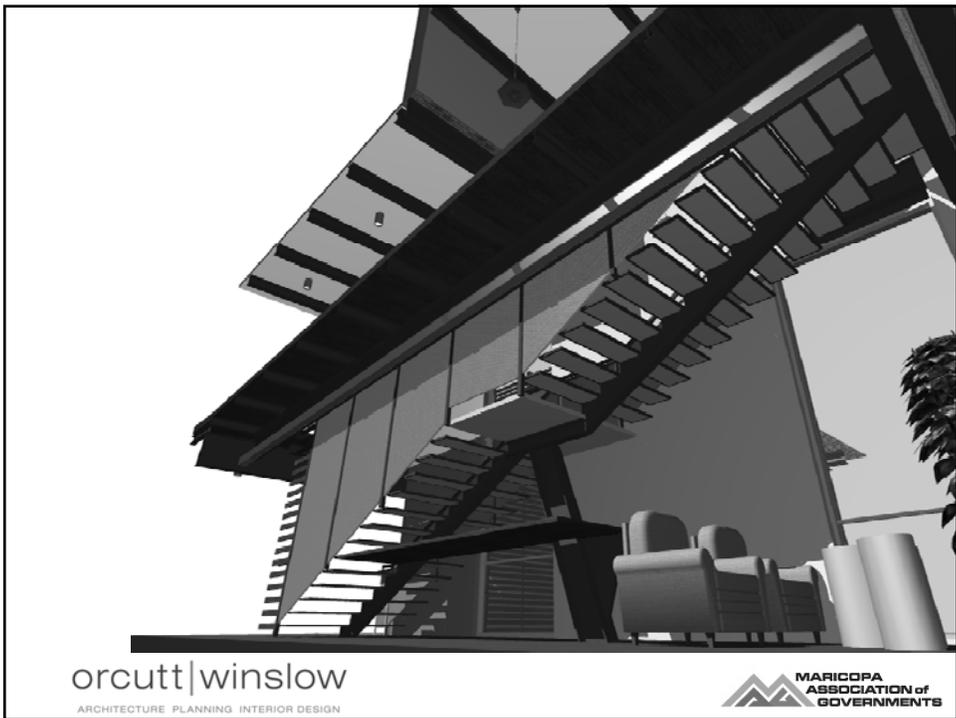


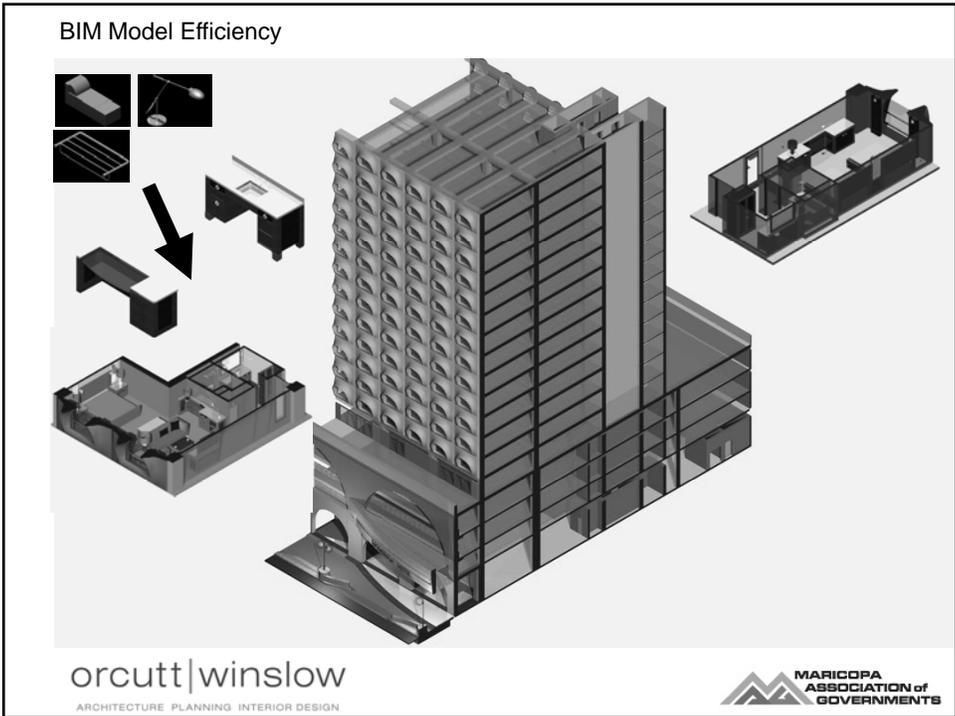
Design Development

orcutt|winslow
ARCHITECTURE PLANNING INTERIOR DESIGN



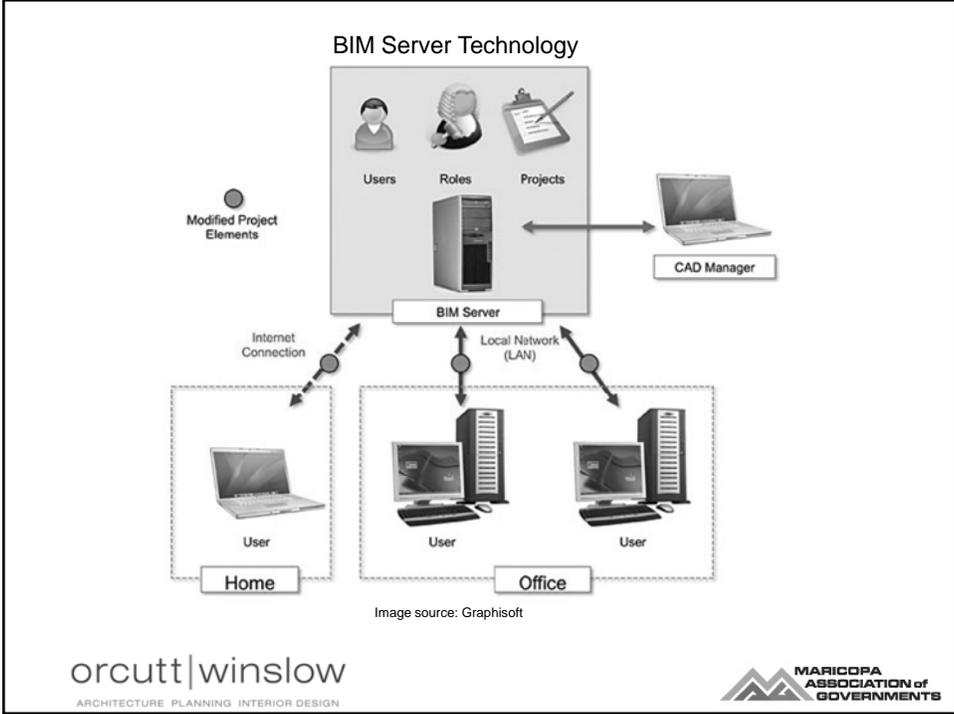


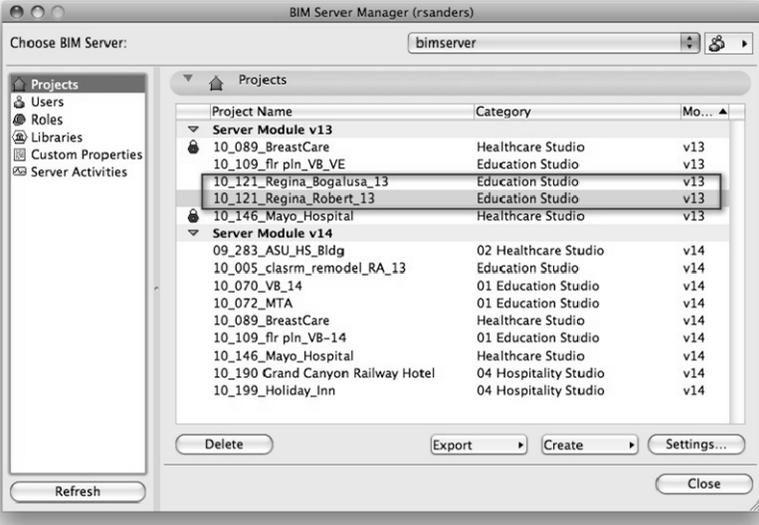




Collaboration

orcutt|winslow
ARCHITECTURE PLANNING INTERIOR DESIGN

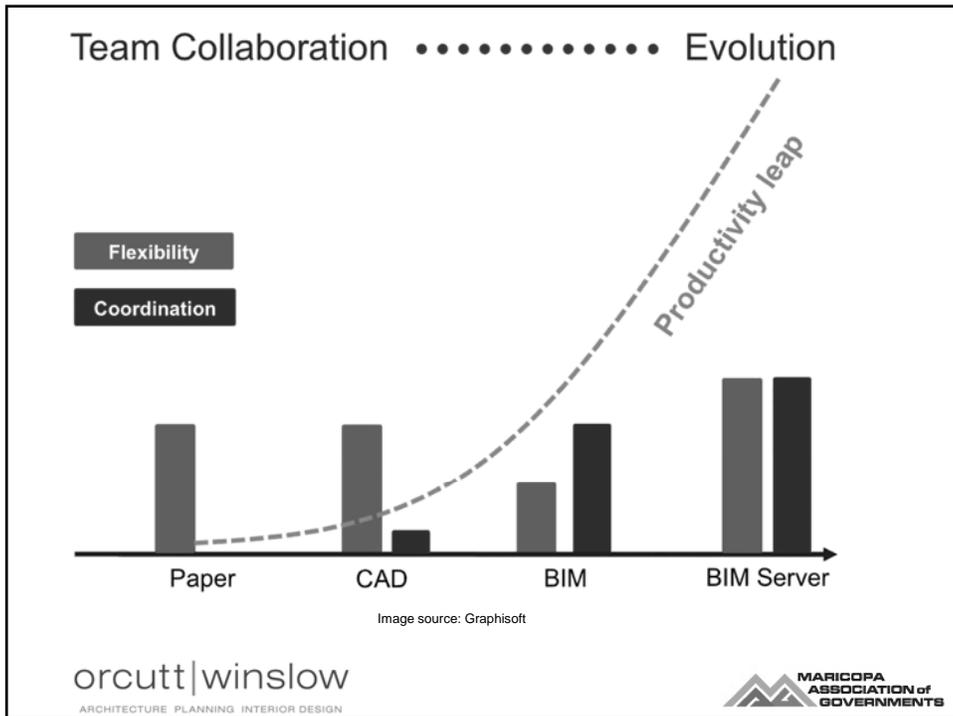




The screenshot shows the 'BIM Server Manager (rsanders)' window. It features a sidebar with navigation options: Projects, Users, Roles, Libraries, Custom Properties, and Server Activities. The main area displays a list of projects under the 'Projects' folder. The list includes 'Server Module v13' and 'Server Module v14', each with several sub-projects. The sub-projects are listed with their names, categories, and versions. For example, under 'Server Module v13', there are projects like '10_089_BreastCare' (Healthcare Studio, v13) and '10_121_Regina_Robert_13' (Education Studio, v13). Under 'Server Module v14', there are projects like '09_283_ASU_HS_Bldg' (02 Healthcare Studio, v14) and '10_190 Grand Canyon Railway Hotel' (04 Hospitality Studio, v14). At the bottom of the window, there are buttons for 'Delete', 'Export', 'Create', 'Settings...', 'Refresh', and 'Close'.

orcutt|winslow
ARCHITECTURE PLANNING INTERIOR DESIGN

MARICOPA ASSOCIATION of GOVERNMENTS

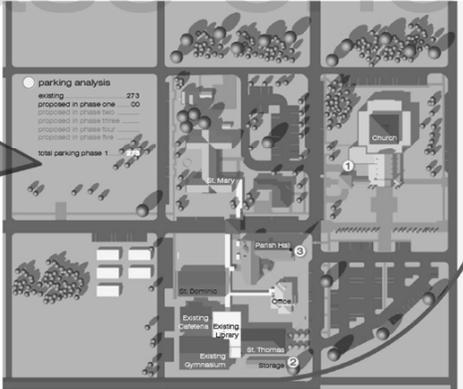


phase one



parking analysis

existing	273
proposed in phase one	00
proposed in phase three	
proposed in phase four	
total parking phase 1	273



- 1 porte cochere and accessible route (in progress)
- 2 storage building 1800' storage building
- 3 parish hall remodel phase 1 including first floor restrooms, refinishing wood floor and annex improvements



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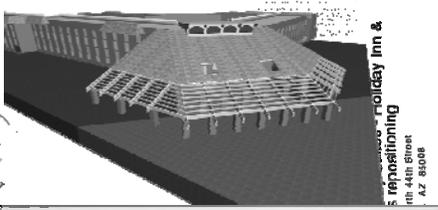




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rehabilitating - roadway inn & 4th Street AZ State







Notes and specifications from a project meeting or document.



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BIM Analysis

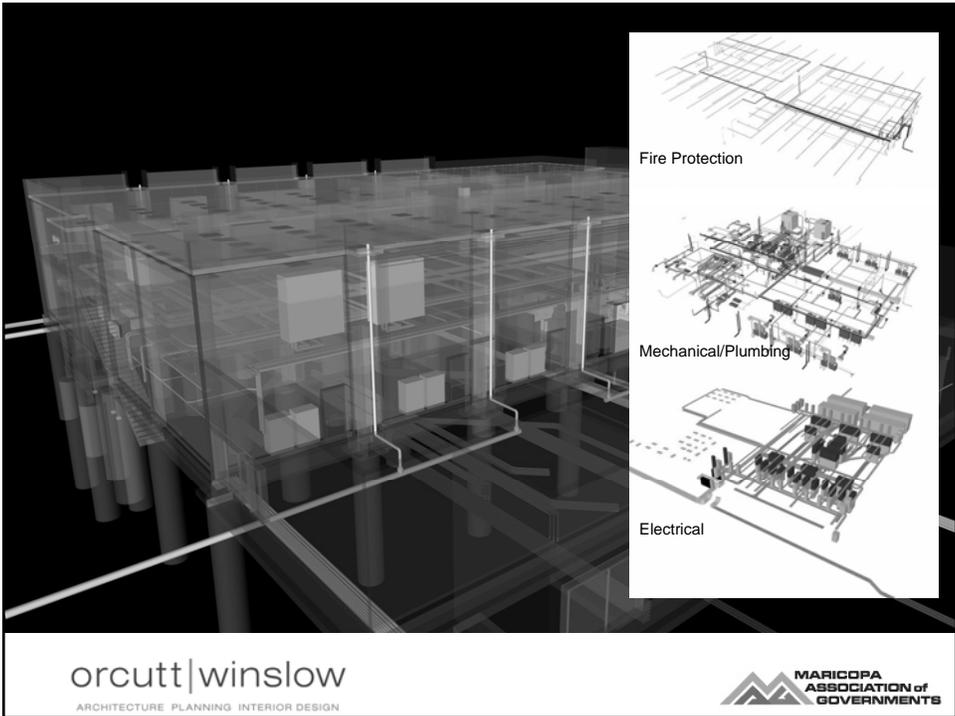
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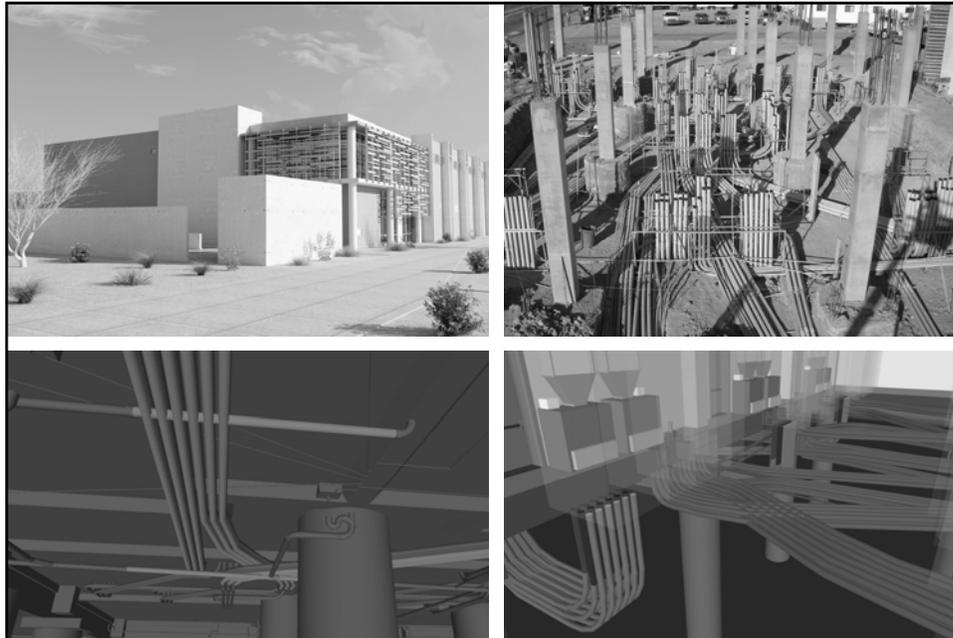


REGULARLY OCCUPIED SPACES = 13,626 SQFT
SPACES WITH VIEWS TO THE OUTDOORS = 12,882 SQFT
12,882 / 13,626 SQFT = 94%

Item	Description	Severity
1	Room 101: Ceiling height is 10'0" which is less than the required 10'6" for a 10'0" ceiling. The room is 10'0" x 10'0" x 10'0".	Warning
2	Room 102: Ceiling height is 10'0" which is less than the required 10'6" for a 10'0" ceiling. The room is 10'0" x 10'0" x 10'0".	Warning
3	Room 103: Ceiling height is 10'0" which is less than the required 10'6" for a 10'0" ceiling. The room is 10'0" x 10'0" x 10'0".	Warning
4	Room 104: Ceiling height is 10'0" which is less than the required 10'6" for a 10'0" ceiling. The room is 10'0" x 10'0" x 10'0".	Warning
5	Room 105: Ceiling height is 10'0" which is less than the required 10'6" for a 10'0" ceiling. The room is 10'0" x 10'0" x 10'0".	Warning

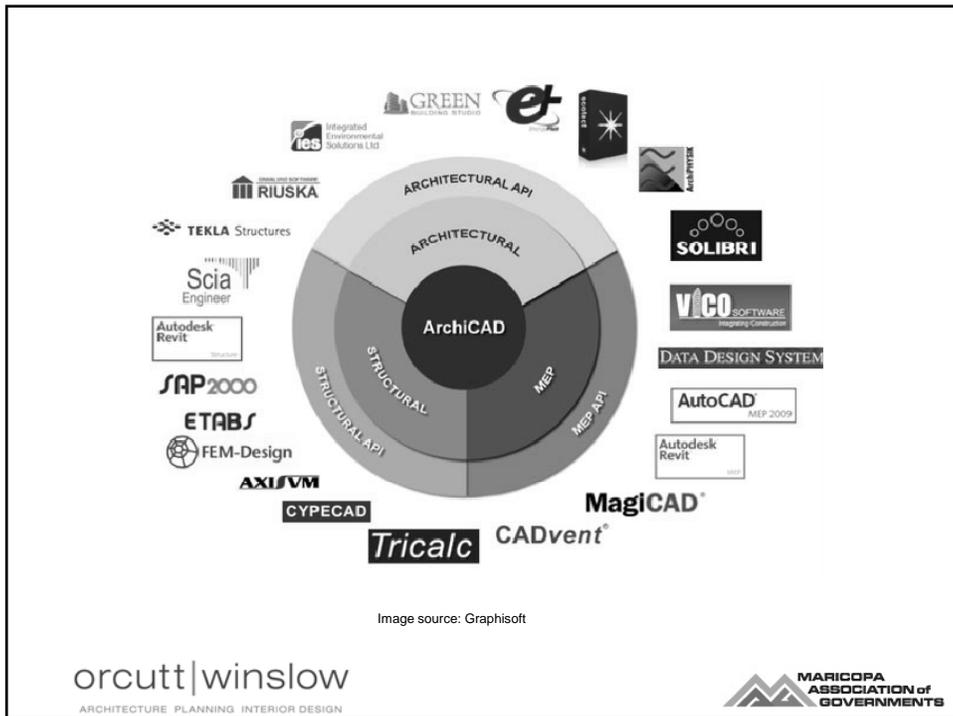
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Architectural API
ARCHITECTURAL
ArchiCAD
STRUCTURAL
STRUCTURAL API
MEP
MEP API
MAGI
SOLIBRI
VICO SOFTWARE
DATA DESIGN SYSTEM
AutoCAD
MEP 2009
Autodesk
Revit
MagiCAD®
Tricalc CADvent®

Image source: Graphisoft

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Reports

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VP Office

Room Name: VP Office
 Category: Faculty/Staff Area
 Function: Private Office for the VP of Student Services

Detailed Room Requirements

Programmed Quantity:	2
Programmed Area:	286 sqft
Total Programmed Area:	560 sqft

CONTRACTS

DQ	1	Second Floor	450
DQ	1	Second Floor	282
DQ	1	Second Floor	324
DQ	1	Second Floor	304
DQ	1	Second Floor	322
DQ	1	Second Floor	376
DQ	1	Second Floor	387
DQ	1	Second Floor	388
DQ	1	Second Floor	389
DQ	1	Second Floor	390
DQ	1	Second Floor	391
DQ	1	Second Floor	392
DQ	1	Second Floor	393
DQ	1	Second Floor	394
DQ	1	Second Floor	395
DQ	1	Second Floor	396
DQ	1	Second Floor	397
DQ	1	Second Floor	398
DQ	1	Second Floor	399
DQ	1	Second Floor	400

USE

ACCESS: Limited to single user and visitors
 Security Req. cat. White
 Method of lock: Key lock on door
 Normal building

SECURITY

Use Space Method: Refer to other drawings
 Standard Area:
 Standard Impact:

REQUIREMENTS

VIEWING:
 Views:
 Natural Light:

ROOM FINISHES

Finish Level: High
 Floor Type: Marble
 Wall Type: Marble
 Ceiling Type: Standard

TECHNICAL REQUIREMENTS

MECHANICAL
 Ventilation Requirement: 2.5 CFM
 Control: Indirect
 Design Humidity: 50%
 Special Requirements: none

PLUMBING
 Plumbing Required: NO

ELECTRICAL
 Power:
 Data:
 Phone:
 Other: 200 WATT/RECORDING UNIT

HEATING
 Lighting Type:
 Task Light: Fluorescent
 Required @ all work surfaces
 Room Level: General

NOTES:

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Presentation

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Design Validation



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RESIDENTIAL HIGHRISE

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Construction Documents

"Traditional"

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24 GA. PREFINISHED CAP FLASHING.
 SHIM SPACE TOP OF FASCIA (UNLESS TO MATCH TOP OF MASONRY PARAPET BEYOND).
 24 GA. PREFINISHED CONCRETE EDGEBEAM PANELS.
 2X NAILER ATTACH TO MASONRY & DECK EDGE ANGLE.
 CONTINUOUS CLEAR.
 5/8" PLYWOOD GUTTER SUPPORT.
 3/8" 20 GA. CSJ TRACK & SLIDE 1/2" 2x2" FOR FASCIA SUPPORT.
 ANGLE AND ATTACHMENT PER STRUCTURAL.
 3/8" CSJ 20 GA. 1/2" 2x2" O.C.
 CONTINUOUS 3/8" THICK STEEL WITH TUBE STEEL BEAMS/RIEBERS.

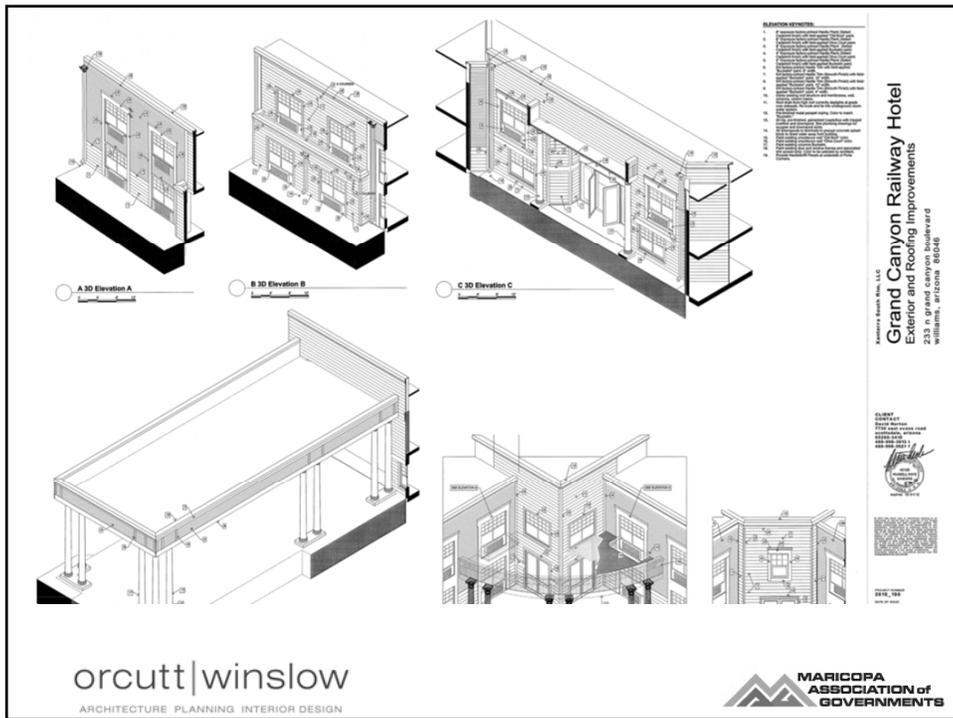
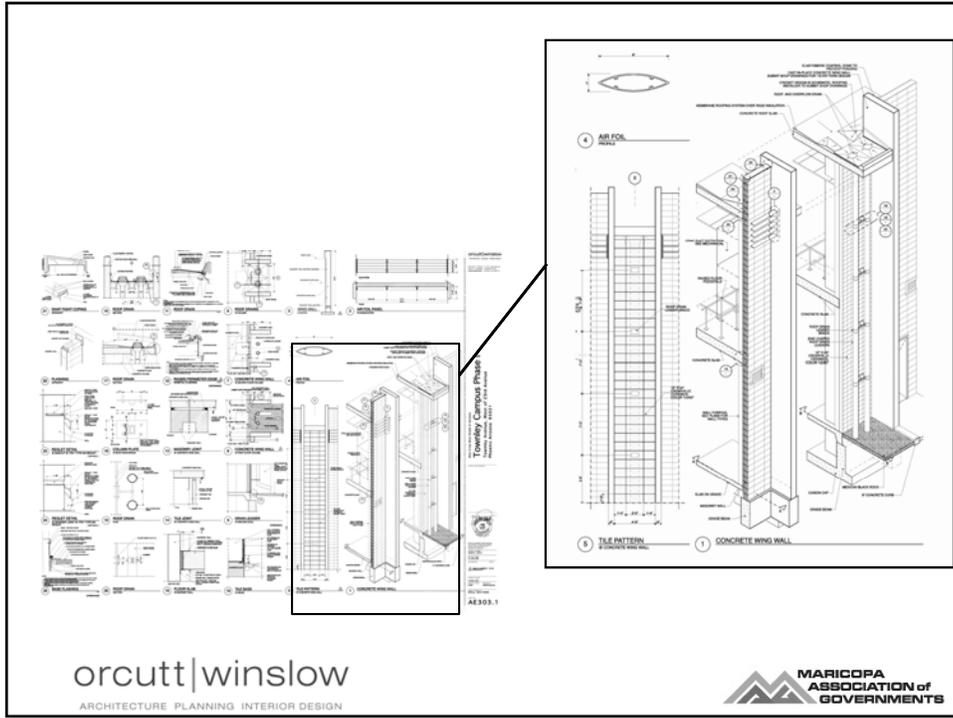
4A WINDOW/HEAD @ DECK
4B WALL PANEL @ SIDEWALK
4C ENTRY CANOPY RAKE EDGE
4D DRIP EDGE @ LOW ROOF
5A MECH. SCR. TERMINATION
5B DOOR HEAD SUPPORT
5C DRIP EDGES/OFFSET
5D GYM CONCEALED GUTTER
5E MECH. SCREEN TRANSITION

GUTTER DETAIL @ GYM
 FASCIA FRAMING @ NON HSS LOCATION

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Valley View Elem. Gym Addition
 8220 S. 7th Avenue, Phoenix, AZ 85040
 kiva® 09-3601



Construction

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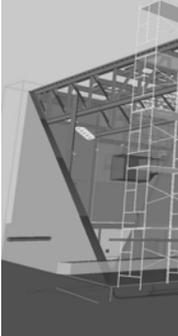


Image source: Mortenson

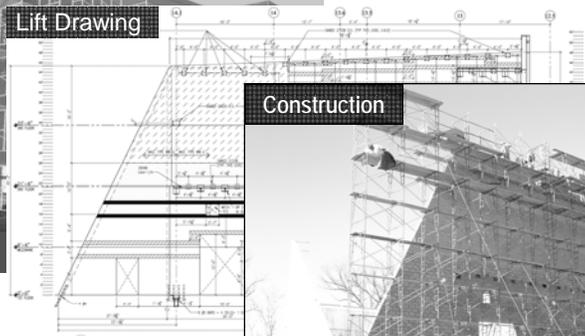
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Composite Model



Lift Drawing



Construction

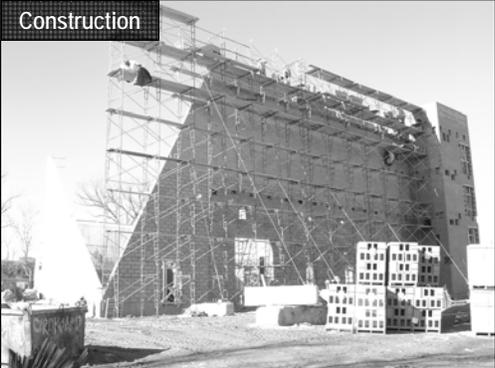
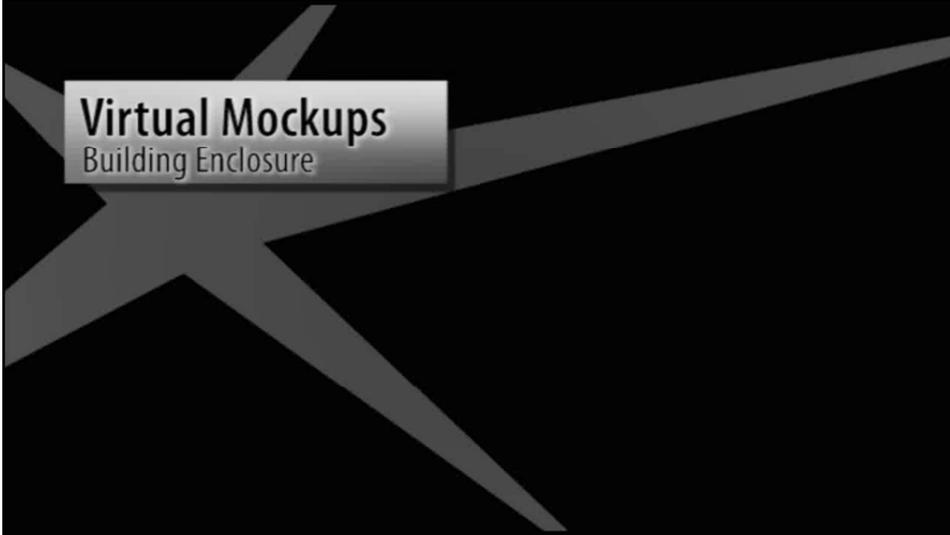


Image source: Mortenson

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Virtual Mockups
Building Enclosure



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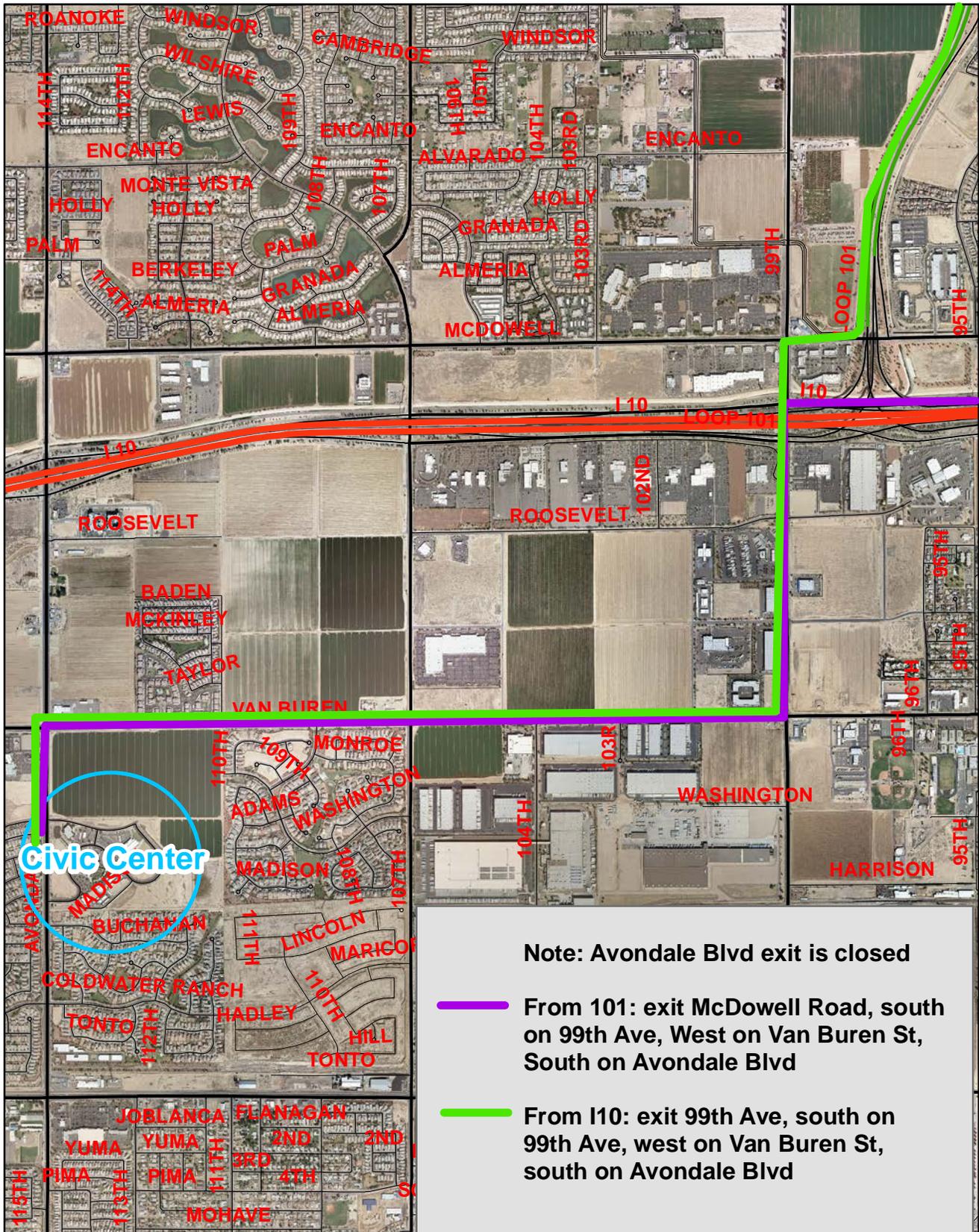
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City of Avondale Civic Center Location and Parking



Avondale Civic Center, 11465 W. Civic Center Drive, Avondale, 85323, 623-333-1200

City of Avondale Civic Center Location and Parking



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