

December 2011 Cactus Comments Newsletter

Welcome to the December 2011 issue of the CSI Phoenix Chapter Cactus Comments. We are experimenting with a new format. The email sent on the first of the month (typically!) will be more of a digest. You can skim the articles and click on the ones you want to read. Or you can come to the web site to the monthly newsletter page and see of the articles. All articles will be archived on the site.

Our goal with this change is to make the newsletter less bulky. We've been running 30+ pages with lots of forms and flyers in addition to the articles. We want to trim it down. We also want to increase traffic on the web site. This site should be the hub of all Chapter activities.

What do you think? Give us your feedback at webmaster@CSIphoenix.org

Fundraiser for Teri Hand's Son and His Family (December Update)

CSI Phoenix is continuing its fundraising effort through the December holiday party. Please bring all of your loose change to the party! We will gather it all and donate the funds to the Barry Lundquest Benefit Fund. Every dollar we collect will help Barry and Amy as Barry recuperates.

Teri's son was injured in a motorcycle accident on September 24th. He has suffered serious brain injuries and faces a long recovery. His diagnosis at this time is really unknown. He has made some amazing progress but we know this is going to be a long rehabilitation.



Barry is married. He and his wife, Amy, have three children: daughters Harley (5 years old), London (4) and son Hunter (20 months). Barry is employed by the Army National Guard. Amy is still on active duty with the Guard. Many of you have followed Barry through his two tours in Iraq as a Marine. His co-workers donated 225 hours of vacation time to help the family but that has run out. Luckily, Barry is covered by Amy's medical insurance. Since he is a civilian he will be able to stay in the Banner Hospital – Scottsdale facility which has a highly respected neurology department. Medical expenses are covered but Amy will have to support the family soon on one income.

In appreciation of Teri's 15+ years of service to the Phoenix chapter (President, Treasurer and many other positions), the Southwest region (Regional Director, Treasurer and many other positions) and the Institute (Fellow as of Sep. 2011, Finance Committee and many other positions), the Phoenix chapter is holding a fundraiser to raise cash for the family. We can make a real difference simply by providing cash for groceries, gas and the daily necessities we too often take for granted.

Credit card donations can be made <http://www.barrylundquest.bbnw.org/> This is a special PayPal account set up for the family. You can use any credit card at this site.

Cash or check donations can be at The Reference Library or at the CSI monthly meeting on December 8th. Checks should be made out to Teri Hand with a memo indicating the funds are for Barry Lundquest.

Checks made out to "Barry Lundquest Benefit Fund" can be mailed directly, if you prefer, to TruWest Credit Union, PO Box 3489, Scottsdale, AZ 85271-3489.

The fundraiser was kicked off at the chapter meeting on October 13th. To date the chapter has raised over \$2100!

We can help a young family who is facing difficult days and possibly years. Every quarter, dime and nickel will make a difference!

Please share this information with other people who have been touched by Teri's tireless efforts for CSI and by her constant smile. Tweet a link to the CSI Phoenix home page. Post the link on your Facebook page so other CSI members can see it. Include the information in chapter emails, web sites or newsletters.

If you have any questions, please contact Pamela Bir at Pamela@YourComputerLady.com or 480-929-0335.

December 2011 President's Message – Odds and Ends
By: Stephen Smith, CSI, AIA, CSI Phoenix Chapter President

It amazes me when this time of year rolls around as to where the rest of the year went! I guess that's part of getting older. So with that in mind I will keep this message short so everyone can get back to shopping for gifts, getting the holiday decorations and tree out and up, addressing the cards, sitting back with a cup of holiday spirit or whatever else you might be trying to accomplish in the last few days of 2011.

As you read this message for the first time you will have a maximum of 23 shopping days before Christmas. This also means you have 6 days until the CSI Holiday Party. Hopefully you and your spouse or guest will be able to attend. The party will be on Wednesday, December 7th at the Scottsdale Chart House. It is located at 7255 East McCormick Parkway in Scottsdale. A cash bar will be available at 5:30 pm with dinner starting at 6:30 pm. We will also continue the tradition of the white elephant gift exchange. The value of the gift should not exceed \$25. Just remember don't bring a gift that you wouldn't mind taking home if you received it.

During our Regional President's conference call on Friday, November 11, 2011 it was decided that the CSI SW Region will contribute \$1.00 for each member to the Barry Lundquest Benefit Fund. There are 690 CSI members in the SW region. For our charity this holiday season the Phoenix Chapter will continue to raise funds for Barry and his family over the holiday season. Please bring all that pocket change & coins to the Holiday Party and we will have a coin collect for the Benefit Fund. Additional information has been provided in this newsletter.

I would like to acknowledge those individuals that successfully passed the recent fall administration of the CDT exam. We had six individuals from around the Phoenix area and one from Tucson that were successful. The list includes Gerald Gagnepain (Scottsdale), Jon Hammond (Phoenix), Brian Laspisa (Mesa), Charles Moses (Casa Grande), Michael Torrison

(Goodyear), Brenda Wentworth (Paradise Valley) and Randall Harris (Tucson). Please congratulate each of them the next time you see them.

I mentioned this last item during my announcements at our November Chapter meeting, but I want to make sure everyone knows about it. CSI Institute has launched a Buy One / Give One Member Referral Campaign. When you recruit one professional member who joins, CSI will provide you with one membership to GIVE to a potential new member. Please note Chapter dues are not covered by this offer, so there is some expense for the new member. Additional details from the November 8, 2011 CSI Weekly article has been provided within this newsletter.

As the title indicates, I had a few odds and ends to wrap up before the end of the year. But before I close I would like to wish all the members of our Phoenix Chapter and their families, all those serving on committees and all those on the Board a very Merry Christmas, Happy Hanukkah, Festive Fesivus, Mirthful Omisoka or Delightful Winter Solstice (just some of the December celebrations). Most of all, I wish everyone a prosperous and Happy New Year!

Changes in the 2012 International Energy Conservation Code

By: Ronald L. Geren, CSI, CCS, CCCA, AIA, SCIP
Phoenix Chapter Technical Committee Member
Institute Director, Southwest Region

In mid-August of this year, the International Code Council (ICC) released the latest round of code documents—the 2012 I-Codes. Among those issued is the 2012 International Energy Conservation Code, or IECC. Code users familiar with previous editions of the IECC will find numerous changes within the covers that affect both commercial and residential construction.

The change that will immediately present itself to past IECC users will be the overall format of the code book itself. Although a single bound volume, the 2012 IECC is now, in essence, two separate codes—each with its own table of contents and scoping, administration, definitions, and general requirements sections.

The primary reason for the organizational format change was to align the residential energy efficiency requirements in the International Residential Code (IRC) with those in the IECC. Unlike the International Building Code (IBC), the IRC is intended to be a standalone code; thus the need to have energy efficiency requirements within the IRC document. However, in past editions of the I-Codes, the IRC and IECC had separate requirements, which in some cases conflicted with each other. In the 2012 I-Codes, the energy efficiency requirements for residential construction in the IECC are identical to those in the IRC.

Changes to the Commercial Provisions

The commercial provisions in the IECC saw some significant changes, including entirely new sections on efficiency package options and system commissioning. A detailed list of notable changes is provided below:

- Added requirements for visible transmittance (VT) for fenestration products.
- Added requirements for skylight curb insulation. Provisions require an R-value equal to roof or R-5, whichever is less. This does not apply to curbs that are integral to skylights rated by National Fenestration Rating Council's standard NFRC 100.
- Added requirements for roof solar reflectance and thermal emittance for roofs with a slope less than 2 units vertical in 12 horizontal that cover cooled conditioned spaces in Climate Zones 1, 2, and 3 (Maricopa County is in Climate Zone 2).

- Reduced maximum U-factors for roofs and walls above grade, reduced maximum C-factors for walls below grade, and reduced maximum F-factors for heated slabs-on-grade and slabs-on-grade in cooler climate zones.
- Increased minimum R-values for metal building roofs, mass floors, and opaque swinging doors; increased minimum R-values and/or addition of continuous insulation for walls above grade; and, changed from U-factors to R-values for roll-up and sliding doors.
- Increased allowable fenestration (30% to 40% of gross above-grade wall area) in Climate Zones 1 through 6 (Arizona includes Climate Zones 2 through 5) when prescribed daylighting controls are provided.
- Added requirements for minimum (yes, minimum) skylighting area for spaces greater than 10,000 square feet directly under a roof. This applies only to the types of spaces indicated, which include, but are not limited to, open offices, lobbies, atriums, warehouses, gymnasiums, and retail stores.
- Added air barrier requirements (including material requirements) to the mandatory air leakage provisions. The air barrier requirements are not applicable in Climate Zones 1, 2, and 3.
- Reduced maximum allowable air leakage through some fenestration assemblies, such as windows, sliding doors, skylights, curtain walls, and storefront systems. Added air leakage requirements for garage (sectional) and rolling doors.
- Added requirements for air leakage through openings between conditioned spaces and shafts, chutes, stairways, and elevator lobbies.
- Changed water-cooled centrifugal chilling packages from an exception to the HVAC equipment performance requirements to actual provisions, and the formulas for calculating full load and NPLV (Non-standard Part Load Value) ratings changed from maximums to minimums.
- Increased SEER (seasonal energy efficiency ratio) ratings for electrical unitary air conditioners, condensing units, and heat pumps. Also includes additional equipment types.
- Increased EER (energy efficiency ratio) ratings for packaged air conditioners, heat pumps, and room air conditioners.
- Increased minimum efficiencies for boilers.
- Added requirements for minimum efficiency of heat rejection equipment.
- Expanded requirements for energy recovery ventilation systems.
- Expanded requirements for minimum pipe insulation. Insulation selection is based on minimum conductivity of the insulation, temperature of fluid in pipe, and nominal pipe size.
- Changed requirement to add economizers to all cooling systems greater than or equal to 33,000 Btu/h (Previously was 54,000 Btu/h), added new exceptions when economizers are not required, and added specific requirements for air economizers.
- Expanded requirements for pools and spas and made them mandatory.
- Expanded interior lighting requirements to add new provisions for automatic lighting controls, such as occupancy sensors, manual and automatic daylighting controls, and multi-level lighting controls. Also included controls for specific applications, such as separation of display and accent lighting from other lighting, master control device located at main room entry that controls all lighting in a hotel and motel sleeping unit, and individual controls for supplemental task lighting.
- Expanded interior lighting power requirements by creating two methods: the Building Area Method (used in previous editions) and the Space-by-Space Method (new for the 2012 edition), which establishes interior lighting allowance on the specific use of each space.

- Added requirements for efficiency packages that offer overall performance for a building based on 3 options: 1) Efficient HVAC Performance, 2) Efficient Lighting System, or 3) On-Site Supply of Renewable Energy. All buildings shall utilize one of the options.
- Added requirements for system commissioning for mechanical and electrical systems.

Changes to Residential Provisions

The residential provisions did not change as much as the commercial provisions did, but since the changes are also reflected in the IRC, the energy efficiency requirements in the IRC saw significant change, and the option of complying either with the IRC or the IECC for energy efficiency is no longer available. A detailed list of notable changes is provided below:

- Added requirements for visible transmittance (VT) for fenestration products.
- Reduced maximum U-factors for fenestration and skylights.
- Reduced maximum solar heat gain coefficients (SHGC) for glazing.
- Increased R-values and/or added continuous insulation for wood-frame walls in Climate Zones 3, 4, and 5.
- Increased R-values for steel-frame walls.
- Deleted visual inspection option for verifying air leakage rate and insulation installation. Testing remains as the only method for verification.
- Added compliance with the International Mechanical Code (IMC) in addition to the IRC for sealing of ducts, air handlers, and filter boxes.
- Reduced allowable leakage in ducts as determined by testing at the postconstruction stage or at the rough-in stage.
- Expanded requirements for hot water pipe insulation.
- Added requirement to provide an accessible manual switch for turning off hot-water circulating pumps.
- Increased the minimum number of permanently installed light fixtures required to have high-efficacy lamps from 50% to 75%.

Energy Codes in Arizona

Adoption of an energy code is not consistent throughout Arizona. Currently, based on research conducted by the Phoenix Chapter's Technical Committee earlier this year, only half of Arizona's counties have adopted an energy code and more than 40% of the cities researched by the committee (a total of 49) indicated they did not adopt an energy code. It is understandable—why increase construction cost for energy efficiency when Arizona has one of the lowest energy expenditures per person of all fifty states at \$2,662.45?—only Utah has a lower expenditure rate.

Fortunately, the more populated areas of Arizona have adopted some form of energy code based on earlier editions of the IECC. The future adoption of energy codes in smaller jurisdictions of Arizona will likely increase when building life cycle energy costs start to overtake initial construction costs for code-required energy improvements. It is unknown as to when or if the 2012 edition will be adopted by jurisdictions in Arizona, but it is clear that either the 2012 or a later edition will eventually be adopted by larger Arizona metropolitan areas, thus the requirements will likely get more restrictive.

**CONSTRUCT 2012
Call for Presentations**

On the heels of a successful show in Chicago, CONSTRUCT has opened the Call for Presentations for next year's event, September 11-14, 2012 at the Phoenix Convention Center in Phoenix, AZ. There are some changes to the submission and selection process providing more time to gather presentations while rewarding individuals who submit early.
[Read More...](#)

CSI Buy-One/Give-One Member Referral Campaign

You know CSI is a good investment. Now you can share CSI with others who haven't yet experienced the benefits of membership. When you recruit one professional member who joins, CSI will provide you with one membership to GIVE to a potential new member. You'll be able to sponsor another colleague in CSI and make your network and chapter that much stronger.

The Reference Library December Box Lunch Schedule

**CSI Academies, March 1-3, 2012 in San Diego, CA at the Westin San Diego
Early Registration Deadline: Feb. 1, 2012**

This event sold out before the early registration deadline last year, so don't put off registering!