

April 7, 2017

PROJECT SPOTLIGHT

Arcadia-Desoto Habitat for Humanity Certifies Its First FGBC Florida Green Home



Everyone deserves a safe place to call home. Beth Martinez, a mother of 3, lived in a rental house that had asbestos siding falling off, sloping floors, no air conditioning in the bedroom and bath, and pests infestation untreated by the landlord.



Her boss saw Beth working hard to provide for her kids on her own, and suggested she look into Habitat for Humanity. Beth had never considered this option and was hesitant to ask for help. Finally, after much encouragement she attended an orientation and submitted an application. Since then she's worked over 300 volunteer hours for Habitat.

In February of this year, Beth's new home earned a gold-level FGBC 'Florida Green' Home certification. It was the first green certified home built by [Arcadia-](#)

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In This Issue

[PROJECT SPOTLIGHT: Arcadia-Desoto Habitat for Humanity Certifies Its First FGBC Florida Green Home](#)

[Virtual Reality in Construction is Here!](#)

[Google Tool Calculates Roof's Potential Solar Output](#)

[Transparent Wood Windows Could Reduce Cooling Costs](#)

[Freddie Mac Issues New Mortgage Guides For Homes with Solar Panels](#)

[More Cities Move Towards 100% Renewable Energy](#)

[Optimizing Asphalt Pavement Recycling: Environmental, Life-Cycle & Cost Benefits](#)

[CxEnergy 2017 Conference & Expo Highlights Building Commissioning & Energy Management](#)

[UCF Researcher Issa Batareseh Earns Position In Florida Inventors Hall of Fame](#)

ARTICLES OF INTEREST

[Electricity Demand Scenarios for the Southeastern U.S.](#)

[Housing Funding Will Be Included in Infrastructure Bill](#)

[Florida Homebuilding Legend Rutenberq Dies at 89](#)

[Quick Links](#)

[FGBC Welcomes New Members](#)

[Desoto Habitat for Humanity](#) and the first FGBC certified home in DeSoto County. Pretty good for a "first try." FGBC Certifying Agent Michael Sollitto, working with Calcs Plus in North Venice, guided the Habitat team through the green construction and certification process.

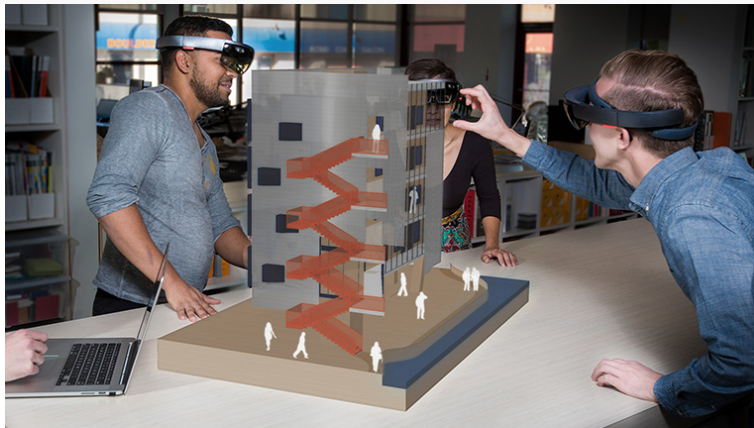
Energy efficiency approaches, such as ensuring the HVAC ducts are sealed properly and free of leaks, resulted in a Home Energy Rating Score (HERS) of 63, which is 37% more energy efficient than a typical home built to code standards. Expected annual savings on energy is over \$420, a significant amount of discretionary funds for affordable housing occupants.

Low-flow plumbing fixtures, insulating hot water pipes, installing an EnergyStar certified washing machine, and using drought tolerant turf in the landscape all helped reduce the amount of water used.

To protect the occupants health, indoor air quality was improved by sealing all slab penetrations, providing special moisture control for the tubs and showers, and using Zero VOC paints. Other material selections contributing to air quality were healthy flooring and insulation.

TECHNOLOGY UPDATE

Virtual Reality in Construction is Here!



Virtual reality (VR) is set to revolutionize the construction industry. The emergence of Virtual Reality headsets, interactive hand controllers and movement sensors will enable end users to navigate and interact with the building before any work actually starts on site, thus speeding up and optimizing feedback and enabling

[Education Opportunities](#)

[Calendar of Events](#)

[Certification News](#)

[Recent Certifications](#)

[FGBC Committee Meetings](#)

[Funding Opportunities](#)

[Job Opportunities](#)

Articles of Interest

[Electricity Demand Scenarios for the Southeastern U.S.](#)

[Housing Funding Will Be Included in Infrastructure Bill](#)

[Florida Homebuilding Legend Rutenberg Dies at 89](#)

Quick Links

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FGBC Welcomes New Members

Jerry Colton
[Harbourside Custom Homes](#)
Fort Myers

Charles Flask
[MES Group, Inc.](#)
Tampa

Education Opportunities

April 15-16, 2017
Florida Water Star Verifier Training
Jacksonville
[\[More\]](#)

May 11, 2017
FGBC Certifying Agent Annual Verification Class
Fort Myers, FL
[\[Register\]](#)

August 10, 2017
FGBC Certifying Agent Annual Verification Class
Gainesville, FL
[\[Register\]](#)


better more informed design decisions early in the design process. 5 Steps to Using Virtual Reality] Believe it or not, many construction professionals have already experienced a virtual environment, although these virtual environments are usually explored using the pan and zoom tools on our keyboard and mouse and come in the form of a 3D BIM Model. As the industry continues to develop its 3D BIM skills there is more opportunity to link these computer-generated 3D images with Virtual Reality technology.


With the emergence of 3D laser scanning and drones in construction possibilities for VR will continue to evolve in the construction industry. The ability to fly a drone around a construction site to 3D laser scan the area is something that could tie in perfectly with VR.


Many large tech companies such as Google, Microsoft, Facebook and Samsung are getting involved with Virtual Reality, each creating their own spin on the virtual reality headset and system. The headsets and systems come in a range of functionality and price, and therefore, a few of the best tools for construction have been listed [[Here](#)]

Google Tool Calculates Roof's Potential Solar Output

This Google tool will help you calculate a roof's solar energy output anywhere in the US. It's as easy to use as google maps. You just need to locate your house and the app will do the rest. It will calculate your power potential, as well as the savings you would make. Below is the calculation for the FGBC office:

 Analysis complete. Your roof has:

 **1,206 hours of usable sunlight per year**
Based on day-to-day analysis of weather patterns

 **1,357 sq feet available for solar panels**
Based on 3D modeling of your roof and nearby trees

\$2,000 savings

Estimated net savings for your roof over 20 years

There are currently over 60 million buildings in its "solar index" and more are added on a daily basis. And as you can imagine, the google tool is quite advanced and

October 23-24, 2017
FGBC Certifying Agent Designation Course
Cocoa, FL
[[Register](#)]

November 9, 2017
FGBC Certifying Agent Annual Verification Class
Tampa, FL
[[Register](#)]

[Energy Star Webinars](#)

[Florida Solar Energy Center \(FSEC\)](#)

[Building America Webinars](#)

[Build Your Future Scholarships](#)

[Multi-Family & High-Rise Webinars](#)

Calendar of Events

April 20-21, 2017
Florida Association of Native Nurseries Native Plant Show
Bradenton Area Convention Center
Bradenton, FL
[[More](#)]

April 24-27, 2017
CxEnergy Conference & Expo
Omni Orlando Resort At ChampionsGate
Orlando, FL
[[More](#)]

April 27-29, 2017
AIA Annual Convention
Orange County Convention Center
Orlando, FL
[[More](#)]

May 31-June 3, 2017
FCCMA Conference
Hilton Orlando
Orlando, FL
[[More](#)]

June 5-7, 2017
Environmental Leader's 2017 Conference
Hyatt Regency Denver Tech Center
Denver, CO
[[More](#)]

accurate. It takes into account a lot of things that go into the amount of sun rays that hit your rooftop. The position of the sun throughout the year, average weather patterns, the neighboring houses and trees are all considered to give you the best possible estimation.

[\[More\]](#)

Transparent Wood Windows Could Reduce Cooling Costs

Scientists in China have turned wood into a transparent material that could be used as a replacement for glass in energy efficient buildings.

Windows are a key factor in making buildings more energy efficient, by helping to control heat and light levels. For instance, windows that transmit visible light but block infra-red light could reduce the need for air conditioning in buildings. 'Lighting and air conditioning account for 30-40% of the total energy used in buildings, most of which is exchanged via windows,' says Yanfeng Gao, one of the authors of the research and a professor at Shanghai University.

Coatings have been developed to make glass windows more energy efficient, but glass is also heavy, fragile and expensive to transport. Although it may not seem an obvious choice, wood could provide an environmentally-friendly solution to these shortcomings, due to its light weight, ready availability, low cost, and recyclability.

Of course, wood's major drawback is that it is not transparent. However, researchers have previously solved this problem by stripping out the light-absorbing lignin from wood and filling the space with a transparent resin, such as poly methyl methacrylate (PMMA). To make the windows in this study better at blocking infra-red light, Gao and his team have now added CsxWO3 nanoparticles to PMMA. The nanoparticles are dispersed in the resin at concentrations that absorb near infra-red light, while maintaining a high optical transparency. [\[More\]](#)

Freddie Mac Issues New Mortgage Guides For Homes with Solar Panels

Due to the increased market size of homes with solar panels, Freddie Mac has issued new underwriting [guidelines](#) to assist sellers of single-family homes in this

**July 27-28, 2017
Southeast Building
Conference (SEBC)**
Gaylord Palms Resort &
Convention Center
Kissimmee, FL
[\[More\]](#)

**July 27-29, 2017
AIA-Florida Convention**
Naples Grand
Naples, FL
[\[More\]](#)

Certification News

Homes
Registered: 14,764
Certified: 14,667

Commercial
Registered: 48
Certified: 15

High Rise
Registered: 58
Certified: 20

Land Developments
Registered: 62
Certified: 13

Local Government
Registered: 88
Certified: 64

Recent Certifications

St. Lucie County
Location: Fort Pierce
Type: Local Government
Certified: 1/30/17
Score: 46
Level: Silver

Centro
Location: Miami
Type: High-Rise
Certified: 12/16/16
Score: 154
Level: Silver

Recent Registrations:

Wisdom Village Crossing
Location: Fort Lauderdale
Type: High-Rise
Size: 79,937

Cudjoe Key Fire Station
Location: Cudjoe Key

segment. Effective for mortgages issued on or after March 1, 2017, new requirements will cover the following:

- Establish property eligibility requirements for mortgages secured by properties with solar panels owned by the borrower
- Establish property eligibility requirements for mortgages secured by properties with solar panels that are owned by a third party and subject to a lease agreement, power purchase agreement (PPA) or similar type of agreement
- Revise underwriting requirements to permit the exclusion of payments for solar panels from the borrower's debt payment-to-income ratio, under certain conditions; and
- Update appraisal requirements for the valuation of properties with energy features and for high-performing energy-efficient properties [\[More\]](#)

Type: Commercial
Size: 8,038 s.f.

Sheridan Warehouse
Location: Hollywood
Type: Commercial
Size: 90,000 s.f.

Village of Pinecrest
Location: Pinecrest
Type: Local Government
Population: 19,055

FGBC Committee Meetings

Board of Directors
2nd Wednesday
Monthly
3 p.m.

Commercial
1st Tuesday
Monthly
2 p.m.

Education
1st Thursday
Monthly
3 p.m.

High-Rise
3rd Tuesday
Monthly
11 a.m.

Homes
2nd Tuesday
Monthly
2 p.m.

Land Development
4th Wednesday
Bi-Monthly
2 p.m.

Local Government
3rd Thursday
Monthly
10:30 a.m.

Programs & Promotions
3rd Tuesday
Monthly
3 p.m.

Funding Opportunities

[St. Johns River WMD Water Programs](#)

[South Florida WMD Water Programs](#)

More Cities Move Towards 100% Renewable Energy



A total of 25 U.S. cities have now committed to 100% clean, healthy, affordable, renewable energy like solar and wind. This movement has never been based on which party is in control of the White House or Congress, but in communities coming together to advance choices and solutions that reflect community values. Major metropolises like Los Angeles and Denver are also studying pathways for how they might be able to make that transition.

"The transition to completely clean energy is an economic, moral, and public health imperative," said Los Angeles Councilmember Mike Bonin, who authored

legislation to move Los Angeles toward 100% clean energy.

The St. Petersburg City Council Committee of the Whole recently allocated \$250K of BP Oil Spill settlement funds to an "Integrated Sustainability Action Plan" (ISAP), which will chart a roadmap to 100% clean renewable energy. The plan also incorporates components of a climate action plan and a resiliency plan.

"With an obstinate state legislature and the gridlock in Congress, it's really up to the cities to look beyond partisanship and it's up to us to work on real solutions," said Darden Rice, Vice-Chair of the St. Petersburg, Florida City Council. " [\[More\]](#)

Optimizing Asphalt Pavement Recycling: Environmental, Life-Cycle & Cost Benefits

Reclaiming and reusing asphalt has many benefits, including waste prevention, reduction of greenhouse gas emissions, and lower lifecycle impacts compared to virgin asphalt material use.

Tremendous life cycle benefits come from maximizing the use of reclaimed asphalt pavement and minimizing the use of virgin asphalt. Cold-in-Place recycling, the rarest form of asphalt pavement recycling, **can reduce carbon dioxide emissions by as much as 95 percent per lane mile and save a lot of money** - as much as **40 percent compared to conventional techniques**. More common warm mix asphalt can reduce carbon dioxide emissions by 15 percent compared to conventional paving, and increase proportions of RAP used. In our report, we provide sources for these figures, as well as recommendations to greatly increase the recycling of asphalt. [[More](#)] [[March 2017 Report](#)]

CxEnergy 2017 Conference & Expo Highlights Building Commissioning & Energy Management

With so much current focus on building performance, attending the CxEnergy 2017 Conference, set for April 24-27, 2017 in Orlando, is a don't miss event. It's the only conference and expo dedicated exclusively to building commissioning and energy management. Earn the CxA (Commissioning Authority) or new EMP (Energy

[Southwest Florida WMD Water Programs](#)

[FHFC Multifamily Energy Retrofit Program \(MERP\)](#)

Job Opportunities

[APA Florida Job Board](#)

[Green Dream Jobs](#)

[Florida Facility Managers Assn Job Board](#)

Management Professional) designations; attend [technical sessions](#) on topics ranging from commissioning best practices and case studies; to energy management and data analytics; to the latest on relevant standards; and build relationships during the many networking opportunities.

[[Download the Conference Brochure](#)]

Members of the Florida Green Building Coalition receive 10% discount off an attendee registration for CxEnergy. To register, visit www.CxEnergy.com and enter promo code FGBC10.

UCF Researcher Issa Batarseh Earns Position In Florida Inventors Hall of Fame



[Issa Batarseh](#), a University of Central Florida engineer who is recognized worldwide as a leader in power electronics and whose work led to the creation of the first compact single-solar photovoltaic panel has been named as a 2017 inductee to the Florida Inventors Hall of Fame.

As a passionate entrepreneur and innovator, Batarseh co-founded two successful solar-focused start-up companies: Petra Systems and Advanced Power Electronics Corp. (APECOR), both of which are now operating nationally and internationally. Petra Systems launched in 2007, by licensing Batarseh's patents from UCF. Today, Petra design and manufacture the first smart-grid interactive solar power system for installation on utility distribution poles. And, the Florida-based APECOR is a leading designer of solar chargers for military applications. Batarseh is a Fellow of the National Academy of Inventors, AAAS, and IEEE, and holds 29 U.S. patents. [[More](#)]